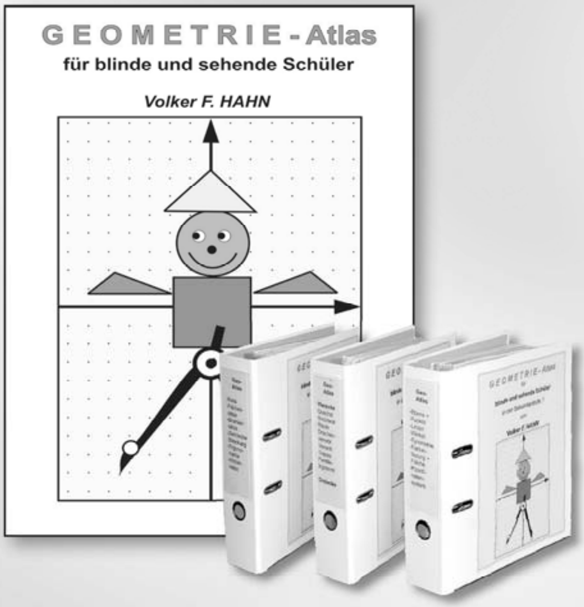
Chemnitz
European Conference 2005
ICEVI

Conference Report

Education - aiming for excellence

ICEVI European Conference
14 - 18 August 2005 Chemnitz, Germany


GEOMETRIE-Atlas
für blinde und sehende Schüler
Volker F. HAHN


RECHNEN
mit der
ZAHLENRAUPE


The funny
Animal-ABC
A picture book to feel
raccoon
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ABCDEFGHIJKLMNOPQR


Le drôle
ABC d'animal
Un livre d'images à toucher
escargot
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Conference report

ICEVI European Conference

"Education – aiming for excellence"

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Germany

We have included the lectures as they were delivered to us which implies that no correction with regard to the English language was made. Please realise that many of the speakers and presenters are non-native English speakers.

Impressum

Published by:
SFZ Sächsisches Förderzentrum Chemnitz gGmbH
ICEVI International Council of Education for People with Visual Impairment
November 2005, Chemnitz

Content

Opening speech - Sunday, 14 August 2005

Assessment / Low Vision - Monday, 15 August 2005

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Orientation and Mobiblity / ADL - Wednesday, 17 August 2005

Social Competence / Family - Thursday, 18 August 2005

Final Plenary Session - Thursday, 18 August 2005

Dear colleagues and friends,

although the 6th European conference finished two month ago, what we learned, as well as the friendships made during the conference, are still very present in our thoughts. I have very great pleasure in presenting you with a printed copy of the proceedings of the conference. The proceedings are also on our website at www.icevi-europe.org. I recommend that you take some time to have a look at these articles which might remind you of the quality of the contributions at the conference and their valuable outcome.

Due to availability of presentations and the format of the presentations, as well as the space available, we had to make some choices over what has been included in this book. So we ask you for your understanding that possibly you will not find all the presentations you participated in, in this book. You will understand that we have put a lot of time and effort into publishing these proceedings in print as well as on the website. We have learned from past experience that having something you can hold in your hand to read is still more valuable, for many people, than only having it on the website.

This book is worth reading, and I wish you a pleasant and interesting time both reading it and enjoying the memories it brings back to you of the happy, fruitful and valuable days we spent together in Chemnitz.

Würzburg, November 2005

Eberhard Fuchs

Opening speech

1 Making the most of functional vision in children with visual impairment

By: Prof. Dr. Degenhardt, S.
From: Germany
Organisation: University of Hamburg, Department of Psychology

Dear colleagues and friends,
I actually planned to welcome you all in your mother tongues but I don't think it would sound very nice, and as I'm not really sure what languages are present, I decided just to leave that idea. I'd like to thank our interpreting colleagues. I know from the work I have done with interpreters for the deaf that the work they do is not easy and they promised to let me know if I speak too fast. I'm very pleased; indeed it is my honour, to give the keynote address. I will use a PowerPoint presentation that has quite a lot of information because I have done it in German and English. But for those who cannot read it, don't worry; I will say it all as well. Actually, the PowerPoint slides are really a prompt for me.

"Education - aiming for excellence" How do you translate that into German? I chose "Das Ziel ist Exzellenz", another way of saying aiming for excellence, and when I take on a task like this, then I always try to look for a picture of something, a mental image. And when I'm talking about excellence it's quite clear, it's a lighthouse. And growing up in Germany and teaching in Hamburg you look in all possible sources. Thankfully there is Google and many other search engines, and you look for the lighthouse that you are imagining in your mind. And that is the lighthouse in Westerhever that was built in 1906. I think it was in operation until 1987 and in 2000 it was renovated and now it has a registry office located in it. So how do I come to use a lighthouse to symbolise excellence? There's a chain for me and this is because for the last three years I have been working in research in the area of education research in Hamburg and there is a chain called "Excellence-visibility-lighthouse". I know, it's a bit of a tongue-twister.
So, what lighthouses have to do with excellence is perhaps not very clear, but I will try to explain it with one or two examples. With a subject like this, first you have to try and define what excellence is and that is the first problem.
You can look in all the relevant dictionaries and you will find a simple explanation.
It's like a great achievement or great efficiency. In the German language it can be masculine or feminine but it's exactly the same word - Excellence. But it's not about a personal view; it's about excellence itself. Perhaps the best way of describing is to say it is a synonym.
And we can expand this point by asking ourselves, for example, what is excellent research? In Germany there is a foundation called the German Research Foundation for promoting research. And if you ask there what excellence or excellent research is, they would say excellent research is the research that we promote. That has a certain appeal for the people who work there, but is perhaps a bit hurtful for you if don't work there. This example shows that there are many definitions of excellence and what is decisive is being able to define it, or having the power to define it. In other words, excellence always has something to do with who has the power to define it. To give you a second example: In Germany the Länder have autonomy in education matters and there is a committee of the ministers of education and cultural affairs, and they have set up a

network of excellence. And in Hamburg our project for structural development was called “Excellence by Networked Diversity”.

What does that tell us? It shows us that excellence never exists on its own. It has something to do with networking. If someone says “I am excellent”, that should probably make us a bit cautious. I didn’t really manage to solve the problem of defining it – of defining excellence and that reminds me of the discussion we had in Germany. There is a saying in Germany, it’s like chasing a pig though the village and we can liken defining excellence to this, where we notice that it is very difficult to define excellence. So what does that have to do with quality? I will give you an example here: There is a book by Robert Pirsig from which I would like to read you a small excerpt. The English translation is not translated by me but by professional translators. So as Robert Pirsig says:

Excellence, you know what it is, yet you don’t know what it is. But that’s self-contradictory. But some things are more “excellent” than others, that is, they have more excellence. But when you try to say what excellence is, apart from the things that have it, it all goes poof! There’s nothing to talk about. But if you can’t say what excellence is, how do you know what it is and how do you know that it even exists? If no one knows what it is, than for all practical purposes it doesn’t exist at all. But for practical purposes it really does exist. So round and round you go, spinning mental wheels and finding nowhere to stop, no starting point. What the hell is excellence? What is it?

With such an ambiguous definition, we could say perhaps it is only interesting in the political or scientific context. I think there is a danger in having an ambiguous definition. I already indicated this that it’s dangerous to say that the power to define it is derived from the profession, from one’s own competence, that excellence in educational work with blind children is the work which we perform.

I am often asked why I’m asking for excellence, but this is not what it’s about. It is not enough to say that because I am educator in the area of the visually impaired that my work is excellent. This would be a dangerous assumption. So I’d like to come back once more to the book by Robert Pirsig. He asked himself:

What is a good mechanic? Why do you always go to one mechanic? And he said that the difference between a good mechanic and a bad one is like the difference between a good mathematician and a bad one; it’s precisely this ability to select the good facts from the bad ones on the basis of quality. He has to care!

For us it is important to look and see where the roots are. Where are the fundamental questions? What makes parents say, yes, this educational measure is great, I want this for my child, whether it’s the people, the team, the institution or the environment in which I put my blind or visually impaired child. And this is more than just gut instinct. It’s more than just an institution. It’s more than just a school. I’d like to propose three steps to you. This comes up quite a lot and this confuses me a bit but I hope we will manage to distinguish between the three steps.

The first question I would like to ask you to ask yourselves is: What is the core of special education and services for children who are blind or visually impaired? And, building on that, where is the link to excellence during this process? And this brings us to the question of how we can develop excellence in special education and services for children who are blind or visually impaired.

Colleagues who have heard me speak recently will say: "Yes, I heard that before! And of course it's quite nice that you always say the same thing but what is the core of special education and services for children who are blind or visually impaired?

When you look at this philosophically, you could say that determining the scale and structure of special education needs in the field of vision is the analysis of the visual based environmental information that is the educational diagnostic. I think it is important that diagnostics don't stop at diagnosing the child's sight. We also have to look at what situation the child is in and how he or she deals with the sight they have. And arising from this challenge we need to develop a basis for action, potential room for development and the ultimate goal is the maximum possible autonomy. Where in this process of educational diagnostics is the promotion of excellence? I think it lies in the efficient and case-related exposing and demolishing of barriers to participation in education. This contains two terms which have been said so often one is almost scared of using them. I think "efficient" and "case-related" are things we will have to deal with in greater detail.

What are barriers to participation? That is the area of tension between the education on offer for sighted people and for the visually impaired, between visual possibilities and the concrete visual restrictions.

How can excellence develop in special education and services for children who are blind and visually impaired? How can we develop these services? I'll come back to efficiency. Those of you who have had a lot to do with efficiency recently, especially in the area of quality and trying to cut back on resources, may find it more difficult to follow my theory but I will try and stick to it all the same. I don't believe that quality and resources are directly related. When resources are cut back it doesn't mean that quality will suffer as well. Conversely just because you get more funds doesn't mean the quality will improve either.

And I think that this idea that they are directly proportionate to each other is wrong. In saying this I don't wish to encourage politicians to make even more cut-backs. I just think we need to be more honest in this area. The second point is about the case-related strategy. In other words, it's not just about the child and his/her visual impairment, it's also about his environment. I recently had a colleague who wanted to write a paper on the motor functions during swimming. When asking the children it would not be enough to say the usual things said to children. If I want to learn swimming with a child it is of no importance whether the children's parents were alcoholics or whether the child was breast-fed or other background information. When asking about family background, you have to ask does the child get stimulus in its family environment. You have to ask what the requirements of the child are, for example a bright room with low contrast. These are case-related peaces of information which interest me, not general five line descriptions that there are often written about children, standard descriptions. This is not what I would like to see. So the next question is: how can excellence be developed in the European context. We are educators for the visually impaired. Perhaps we should build on our strengths. That's the second thing we should do. I also worked as a lecturer and learned about time management and one of the most important aspects of this was prioritizing tasks and challenges. It is also something we should do. Thirdly I would like to invite you to consistently pursue solutions. Building on strengths, of course, this has already been said, I just want to reiterate it.

In Europe we have such a tradition, such a successful history of education for the blind. We have common roots. We have common history in the area of institutionalised education for the blind. I would ask you please to forgive me, any of you who come from countries where if I haven't mentioned your key data regarding development, the start of education for the blind. Of course, it reached its climax with Louis Braille. We've already heard about the Royal Institute for the Blind here in this area. It's not just about the first school that was built. We also have to remember in Saxony we have a great history in terms of culture and philosophy as well. There are great cultural resources in us. And if you ask teachers about the way they see themselves, they would say things that we would find from 100 years ago at the beginning of development of education for the visually impaired.

In Europe we have similar cultural attributes. Similar understanding of the word "blind", for what this means. I have experience in Asia as well and when you have complete opposites this make the situation more difficult. So this is definitely something positive. We also have a change in the point of view in Europe, away from special schools to special needs of education. We're moving away from the view that when a blind child goes to school that that is enough. So we are looking more at their special educational needs. In Europe we also have a readjustment of financial resources even if this goes in both directions, even if this encompasses downgrading and upgrading. I think there are 2 groups of countries, countries learning to try and get by with less money and countries where institution or schools for the blind are growing in importance and are therefore finding they have more financial clout.

And the last point in this list, in political Europe we have a unique opportunity: we have a prolonged period of peace, we have free trade and we have a liberal cultural and scientific exchange. We should make the most of this opportunity to put forward various proposals from disabled peoples in society to discuss these. If we manage to do this than I think we will have exploited the strengths that Europe has. A third point, we said before we do not really know what excellence is, but we know it has something to do with a network. And that means we are on the right track: the very fact that we are all together here today is proof we are on the right track. The ICEVI is a network. Of course there are European programs like Socrates, low vision in early interventions, or *fluss*. And I am sure there are many other European programs and projects - I mention just a few.

The next point is about prioritising challenges. There are also three sub-points here that I'd like to outline. The first is making the specific German problems clear. It is not enough to say "I am a lighthouse". It is not even enough for the biggest and most prominent institutes to say this. Just because I am very big doesn't mean I am a lighthouse. You also have to power it, you have to make it visible. And in Germany there are specific problems. I hope you will forgive me for looking more at German problems, but obviously that's what I am concerned with.

In Germany we like to classify things; perhaps it is part of our Prussian history. The standing conference of the ministers of education and culture affairs has a system of classification. They have a category for all children with special education needs and there is a category for support in the area of behaviour, or language, or auditory skills. You see, if there isn't a pigeon hole for you, the Germans will make one. Setting up such pigeon holes could raise the impression that special educational is really not what we require it to be.

To take another example, we can look at the situation of the universities. We train at four universities. There is a basic study program and an advanced study program in all subjects for the disabled. Many people in Germany wrongly believe that when a student attends one of these institutions, he or she doesn't need any special education. If there is integration, I don't need any special education for the blind, they say. And I can see, you are shaking your heads and saying what sort people do you work with? But from their standpoint this is logical. Integration, or inclusion as it is sometimes expressed, makes people think that this is right and that there doesn't have to be individual needs. And we are trying to make it clear that this 'lighthouse' problem is about making things visible. Why there is a difference between the teaching forms for somebody wants to be an educator for the blind or someone wants to work in the area of education and speech problems? This is a problem which we have with the bachelor and master programs at the moment and I think we should try and find the best solution in this area. The second problem regarding visibility is that there are too many Federal States that say that when a child with multiple disabilities is in an institute for his or her 'pigeon hole' then we are catering to his/her needs and then when someone says he or she also needs education in the area of vision, one gets the answer that the people there will do it, that they are professionals. You cannot say that these people are not professionals, it's just that they're not professionals in providing special education in the area of visual problems.

And, of course, there's much misunderstanding and people say "Yes, we know, we heard about this" and maybe you're thinking, what is he talking about? But, for example, when I go to an institute and say "let's work together", and I ask what is specific about the work with a multiply disabled child? If the answer is, "we work with them", then we can say perhaps the communication wasn't right and maybe I'll have to ask again and be more charming. But the problem is that it is increasingly difficult to understand that this question is not an attack on the way somebody works. Rather, we are asking, do we want to become lighthouses or not? And I think it's something we can all aim to work towards.

Points 2 and 3

Regarding the question of prioritizing challenges, the second point, which I find incredibly important, is improving the quality of individual education plans. In our work we could always tell who wrote a report. In other words, recommendations in the report are derived from the expert teacher's profession. It says more about the person writing the report than the child concerned. And, of course, that is the problem. And maybe this gap is something we can bridge in the area of visual impairment, but for the other difficult areas of speech and behaviour therapy it is important that we have one report and not three depending on what colleagues are involved. What I want to say is that overall, despite the successes we can claim, we have a lot to do in the area of individual training plans.

We need to make educational more transparent. That means making people who aren't directly involved able to understand them as well. I often hear, “I know that”. I'm not trying to question that the colleagues know the area they are working in, but in context of visibility this does not serve the excellence of this process. Because I can't run from colleague to colleague when I want to know something about the child. The third area is school development. I have summarised this a little because this is very different in the various Länder in Germany. But there are three key words, first of all the inclusion debate.

I visited colleagues in Finland, who are a sort of role model for us since they were the leaders in the PISA study. People often say, look at Finland, there are no more disabled people there! And then we look a bit puzzled and say, yes, it's just not structured as it is in Germany. We have to stop doing that, we need integration. They have a different approach. Finish people talk a lot about their models. And when I ask about blind people they don't really have the same answers. What we can see from this is that when children are blind or hard of hearing there is no particular educational history or pathway for them, a standard way or guidelines and we have a lot of progress to make here. The second point is the centres of excellence. There's a discussion in Germany just now regarding this point and I know from colleagues in Europe that it is not simple to say I go from a blind school to a centre of excellence where I then discover integration as a field of work. I think there is much more involved and those of you already involved in this area will be able to report on this as well. And the third point, which is very important to me, is education and continuing education. In our association we introduced a further education certificate with which we wanted to make it visible that there is a specific education for the education of the visually impaired and blind. It should make it clear that our educators are not just learning the material and putting it aside. We don't need to hide our work, we need to make it more transparent. I think we are on the right tack here and I think there are very different models being used. And let me come to the next point which regards possible methods and solutions. I would like to refer to the ICF, the international classification of functioning. It is an instrument for a physical, psychological and social system of classification as a basis for action.
That is the official explanation and I think we should use it. I say that also taking into account my history in this field of work. I think there is a lot of room for applying the ICF more. Perhaps there are people who are not aware of it. But that's not the case here, so I will continue. The vision of the ICF is to classify environmental factors instead of just the child itself. Critics say that that is terrible in the area of assessing health conditions, that the child should be classified. But then how do I work? Whether I place the emphasis on the child or on the environmental factors changes the factors that I need to take into account.
I strongly believe that the ICF aims to be a comprehensive instrument and can help us. And to illustrate this point I would like to tell you a story.

I worked on a Misereor project. Misereor is the biggest NGO in Germany and it is a positive example against the tendency of some NGO's to hold back in the education of the visually impaired and blind. Misereor is actually working in this area. They're also working in China in the area of visual rehabilitation. I hoped that **Larry Campbell** would be here but even if he's not I can tell you we learned a lot about cultural backgrounds.
We hoped that ICEVI would be a patron of the second project in China but unfortunately this is difficult. There are certain distortions in Chinese society that makes it difficult. China needs to know that an NGO is really an NGO and not supported by the state. Perhaps we lost out there but we have found a new provider. So it will be continuing from 2005 to 2008. Where could the ICEVI help in this area? Through the ICEVI, one can communicate through children, about children's backgrounds, about

their histories, without knowing the language. It is possible to have a conversation about a specific case without knowing the language through the coding. And this is, of course, a very positive experience when you're used to just working with books and papers and trying to describe something. This is really a great aid in trying to describe the life of a disabled child. A second point for China, ICEVI has placed great emphasis on reinforcing empowerment and autonomy of the child. This matters in China if you can work with a strategy that has been approved by the country itself and by the Chinese government. The Chinese government indeed approved this paper. That is why it has been a positive experience.

Florian Hilgers works in this area, specifically in the area of parental care, and told me about three areas which are very useful in Chinese culture. There is a close proximity to healing. People say that you can go there and receive health treatment. What is the reason for the Chinese culture's different relationship to healing? It was helpful to be able to speak to parents and it was not about healing blind people. It was about making lives desirable and achievable. There are concrete areas where action can be taken. With the doctors, with parents, with teachers etc. So how can we relate this to the situation in Europe? I think that it is a chance for reporting. You will remember that I mentioned the quality of many reports. One of the largest problems is having something like a system to try and make the problems as small as possible. The ICF is a chance to improve the quality of the reports. If I have an instrument which allows me and helps me to describe the situation the children are in, then there will be fewer things I will forget. There is a second opportunity in the external system I already mentioned. In Germany educational affairs are regulated at the state level and that has been problematic in the past: it has proven difficult to agree on certain issues and you end up using the smallest common denominator. Of course cooperating internationally is a very interesting idea. If we work together, we will produce products that are not just useful on the national level or that make sense on the national level but beyond this well. Finally, orientation on life situation means getting away from the actual diagnoses of the child's sight and instead looking at the child's concrete possibilities for seeing, how he or she gets on in his educational surroundings. Of course, the ICF is not a magic solution and it doesn't describe it exactly, but it is open in its concept and invites you to develop the concept further. I think for us, on the European level that task is very important and developing such systems is a very good idea. It is one of the challenges. I see that some of you are already doing it and I would like to encourage you to continue. It's about drawing up a practical diagnoses system for functional vision based on interdisciplinary scientific cooperation. There are many people here who been working in this area for a long time and who have been calling for such a tool.

I think the ICF is a chance to continue systematically in the future. To come back to my lighthouse analogy, allow me to say that I am convinced that we can become a lighthouse and not just a small candle in a little glass jar, but a real lighthouse with a great illuminating power to provide great visibility, not just to warn ships to stay away but to provide orientation. And I would like to wish you all interesting exchanges during the next few days, I hope this will help us in our aim to achieve more orientation. I would like thank you for your work.

Keynote speech

2 Assessing Developmental Differences in Blind versus Sighted Children

By: Prof. Brambring, Michael

When explaining differences in development between children who are sighted and blind, research draws on one of two theoretical models: either the deficit-oriented or the adaptive-compensatory model. The majority of studies take a deficit-oriented approach, whereas only a few try to explain the differences in development through adaptive and compensatory strategies.

The deficit-oriented approach is limited to ascertaining that children who are blind cannot (or cannot yet) perform certain skills that their sighted peers have already acquired. It generally does not assess when blind children acquire them. The deficit is explained purely through lack of vision, thus pinpointing the importance of vision for development in sighted children. These studies confirm the advantages of sighted children through deficits in the blind. If the deficit-oriented approach makes any mention at all of goals in promoting the development of children who are blind, then it refers to the greatest possible approximation of development in the blind to that in the sighted.

The adaptive and compensatory approach, in contrast, emphasizes the different and special path of development in the blind. Although mid- and long-term developmental objectives are comparable in both the sighted and blind populations, the blind take different paths and follow a different tempo of development. In this approach, it is necessary, first, to ascertain when blind children have acquired each developmental skill; and, second, to analyze the causes for the observable differences in development between blind and sighted children. In other words, it is necessary to examine which strategies sighted and blind children use to acquire each individual skill. The goal of such studies is to determine the alternative strategies that blind children apply to solve tasks and use this knowledge to derive blind-adequate recommendations for promoting their development.

Two examples will clarify the different paths of development in blind and sighted children and the alternative strategies they apply when solving tasks.

1. Sighted infants acquire the skill of "building a tower with three toy blocks" at about the age of 15 months; "normally developing" blind children, in contrast, not until about 29 months. The explanation for this difference is that sighted children learn the task under visual control and feedback conditions. They can see whether one block is sitting exactly on top of the one below it, and if the tower collapses, they quickly learn that this is because they have not positioned their blocks exactly enough. Without the possibility of visual control, blind children can only learn this task when they have "understood" that blocks have to be placed exactly on top of each other if a tower is to stay up. Hence, they have to solve this task cognitively, whereas sighted children solve it visually. A cognitive solution requires a longer process of development, and this explains the developmental difference in mastering this task.
2. Sighted children can solve the task "find two identical objects in a set of five objects" at about 26 months; "normally developing" blind children, not until about 42 months. The reason for this difference is that sighted children can recognize and compare all five objects at a glance. It is a task that makes relatively low cognitive demands on them. Blind children, in contrast, have to carefully feel all five objects one after the other before they can identify the two that are the same—a relatively advanced cognitive achievement. One and the same task differs in task difficulty for sighted

versus blind children because presentation becomes simultaneous versus successive. This explains the difference in the ages at which the two groups acquire this skill.

Both examples clarify the ways in which the demands imposed by the same developmental task may differ for blind and sighted children. The only way we are able to recognize these differences is by comparing the ages at which these two groups acquire a skill and analyzing the reasons for the developmental gap.

Even today, after decades of research and special education for children who are blind, we still do not know enough about the alternative paths of development they take during infancy and preschool age. There are at least three reasons for this:

1. Sighted parents and sighted experts—be they early interventionists, teachers, or scientists—predominantly think within the categories of sighted persons when analyzing development in the blind. However hard they try, they can only guess which information and incentives may promote blind children and which experiences may eventually threaten or inhibit it. The world of the congenitally blind child remains broadly inaccessible to a sighted person.
2. Because of the difficulties in recalling early infancy, adults who are born blind and thus possess the necessary experience are also unable to give us information on their early learning strategies.
3. Because they are still unable to communicate verbally, congenitally blind infants can give us no or only insufficient indications regarding which conditions promote or inhibit their development. Hence, the only way for us to determine the specific developmental trajectories of blind children is to observe them closely and use differentiated analyses to work out the reasons for their different course of development.

Our own study based on the adaptive and compensatory concept analyzes the reasons for the observable differences in development between sighted and blind children. Taking data from the Bielefeld longitudinal study (Brambring, 1993/2000, 1999/in press; 2004, 2005, Brambring, et al., 1995), we selected 107 developmental skills for which age reports are also available from four developmental tests for sighted children (*Bayley Scales,* Bayley, 1969; *Griffiths Developmental Scales*, German version: Brandt 1983; *Denver Developmental Screening Test*, German version: Flehmig et al., 1973; *Entwicklungskontrolle in der frühen Kindheit,* Zwiener & Schmidt-Kolmer, 1982). This comparison only used data from those members of our blind group who were "developing normally." At the end of Bielefeld longitudinal study, the 10 participants were aged 5-6 years. An examination of their developmental trajectories, an intelligence test, and teachers' ratings (Brambring, 2005) allowed us to assume that 4 of them were developing normally. Three of these four children were completely blind (microphthalmos, anophthalmos, and retinopathy of prematurity) and one possessed minimal light perception (Leber's amaurosis). None of them exhibited any further disorders. We did not use data from the other blind children to ensure that differences between blind and sighted children were due to blindness alone and not to other factors.

To ascertain and classify differences in development, we first tested how far the ages at which sighted and blind children acquired these skills overlapped in the 107 comparisons. We formed four categories: (a) *Extreme developmental delay* when the age of acquisition in blind children lies outside the norms for sighted children; that is, when all four blind children acquire the skill later than 95% of sighted children. (b) *Strong developmental delay* when the age of acquisition in one blind child lies within the norms for sighted children, but the mean age for blind children is higher than that for 95% of sighted children. (c) *Slight developmental delay* when the mean age of acquisition for blind children lies within the norm range for sighted children but is later than the sighted mean. (d) *Developmental advantage* when the mean age of acquisition in blind children is earlier than that in sighted children.

Table 1 reports the distribution of developmental differences between blind and sighted children on these 107 developmental skills across these four categories. It shows that blind children have developmental delays on the majority of skills: These delays are extreme for about one-third of the skills, strong for about one-third, and slight for about one-quarter. However, for nine skills (8.4%), the mean age of acquisition was earlier in blind children. This classification indicates that there is no consistently parallel delay in development in blind compared with sighted children across all developmental skills.

Table 1Distribution of the 107 Developmental Skills

Developmental difference	Number of skills	%
Extreme delay	37	34.6
Strong delay	35	32.7
Slight delay	26	24.3
Developmental advantage	9	8.4
Total	107	100

Table 2 goes into more detail and reports the extent of developmental differences split according to four developmental domains. It shows that the majority of extreme and strong developmental delays in blind children are found in manual, daily living skills and gross-motor skills. In contrast, delays are only slight in social and verbal skills, in which the blind occasionally even show an advantage.

For a number of reasons, it is not possible to gather comparative data on sighted versus blind children in all developmental domains. For example, there are no reports on the acquisition of spatial orientation—a fundamental developmental challenge for blind children—or cognitive skills. Most developmental tests for sighted children contain no items on spatial orientation, making a comparison impossible. Although all developmental tests of sighted children contain items on cognitive development, these are generally assessed with pictorial materials or manipulative tasks—forms of presentation that are unsuitable for the blind. Most of the items in our own study for assessing cognitive abilities in blind children used auditory or tactile materials, so that this data could not be compared with sighted children.

Table 2 Developmental Differences between Blind and Sighted Children Split Into Four Domains

Developmental domain	Developmental difference	
Manual and daily living skills (*n* = 33)	Extreme delay	(62.5%)
	Strong delay	(34.4 %)
	Slight delay	(3.1 %)
Gross-motor skills (*n* = 29)	Strong delay	(52.0 %)
	Extreme delay	(32.0 %)
	Slight delay	(16.0 %)
Social-interaction skills (*n* = 14)	Slight delay	(46.2 %)
	Strong delay	(23.1 %)
	Developmental advantage	(15.4 %)
	Extreme delay	(15.4 %)

Language skills (*n* = 31)	Slight delay	(45.2 %)
	Developmental advantage	(22.5 %)
	Strong delay	(16.1 %)
	Extreme delay	(16.1 %)

Note. n = Number of tasks per developmental domain. Percentages are drawn on the subtotal in each specific developmental domain.

Table 2 reports not only differences *between* developmental domains but also the variation *within* each developmental domain. Two examples will point out and analyze the reasons for differences in the age of acquisition *within* one developmental domain.

The manual developmental task of "beats a drum rhythmically with two drumsticks" reveals the most extreme delay in development in our comparison: Sighted children acquire it at circa 11.0 months; "normally developing" blind children, at circa 37.0 months. Mastery of this task requires an adequate use of tools (drumsticks), coordinated performance of alternating arm movements, and accurate hitting of the drum (spatial demand). All three components of this activity are learned through visual guidance, feedback, and imitation. However, blind children have to comprehend this task cognitively before they can perform it on the basis of verbal explanations and having their hands guided from behind. Mastering this type of task requires a far more advanced cognitive development than the visual solution for sighted children, and this explains the extreme developmental delay in the blind.

Another manual skill, "wipes mouth or nose with cloth," in contrast, reveals only a slight developmental difference: Sighted children can do this at approximately 16.0 months; blind children, at approximately 23.0 months. This is a body-related act, that is, one's own body serves as the spatial reference point, evidently making it much easier for blind children to perform.

The second example comes from the verbal domain. On the skill "names three objects correctly when asked," the four blind children in our longitudinal study revealed a develop-mental advantage over sighted peers. On average, they could do this at 22.5 months compared with 24.0 months in sighted children. Probably, this developmental advantage can be explained through the special way in which mothers communicate with blind children (Campbell, 2003; Kekelis & Andersen, 1984; Kekelis & Prinz, 1996; Moore & McConachie, 1994; Pérez-Pereira & Conti-Ramsden, 1999). They use significantly more imperative phrases in order to draw their child's attention to objects in the environment. This type of verbal interaction probably encourages object naming.

In contrast, blind children show extreme delays in acquiring the possessive pronoun "my." They do not use it correctly until they are 36.5 months old—compared with 19.0 months in sighted children. Several studies have confirmed such a strong delay in the acquisition of personal and possessive pronouns (Fraiberg, 1977; Fraiberg & Adelson, 1973; Pérez-Pereira & Conti-Ramsden, 1999). The lack of vision seems to make it harder to distinguish between self and others. Sighted children learn this distinction through the visible separation of persons in space as well as the reciprocal exchange of eye contact and facial cues.

These findings confirm that the type of developmental differences between blind and sighted children and the reasons for them are far more complex and differentiated than previously assumed. Of course, we can name developmental domains in which blind children generally show more extreme delays than in others. However, the variations *within* each developmental domain are so great that only a precise observation of each individual developmental skill will reveal the impact of congenital blindness on its acquisition.

The practical implications of these findings point to the need to get to know the complex pattern of different and strongly varying ages at which blind children acquire each developmental skill in order to promote their development at the right time.
Finally, Table 3 uses the example of the age at which blind children acquire gross motor skills to show the high level of agreement between our research and other studies (Ferrell, 2000; Fraiberg, 1977; Norris, Spauling & Brodie, 1957). This level of agreement remains astonishingly high when we consider the long time intervals between our research and Fraiberg (1977) or Norris et al. (1957) and the accompanying changes in the medical and early intervention framing conditions of care for blind children and their families. Such consistency across time and cultures suggests that our findings are stable and representative. It also encourages us to assume that the other developmental data on approximately 350 skills from the Bielefeld Longitudinal Study reported in the observation scales (Brambring, 1999/in press) are also representative findings on the development of children who are congenitally blind.

Table 3 Comparison of Own Developmental Data With Other Studies

	Own study	Other studies	Sighted norm
Pulls up to standing position	13.0	13.0[1]	8.8
Walks holding onto one hand	15.0	15.0/18.0[2]	9.6
Walks along furniture	15.0	15.0[2]	9.7
Stands confidently	14.0/16.5	13.0[1]/18.0[2]	11.3/12.3
Walks alone at least 3 steps	16.5	15.25[1]	12.4
Walks alone at least 10 steps	18.0	19.25[1]/19.8[3]/24.0[2]	13.7
Climbs up steps, one step at a time	33.0	33.4[3]/30.0/36.0[2]	17.1

Note. 1 = Fraiberg (1977); 2 = Norris et al. (1957); 3 = Ferrell (2000). Reports in months. Two reports indicate that two similar skills were assessed.

The challenge for the future will be to increasingly improve and differentiate our understanding of the alternative paths of children who are blind. Lev S. Vygotsky (1896-1934) already formulated the need for this approach in 1920 -1930 (individual publications)/ 1993 (collected works).

> It is still absolutely necessary to take into account the specific developmental characteristics of a child with a defect. The educator must become aware of those specific features and factors in children's development which respond to their uniqueness and which demand it. From a pedagogical point of view, a blind or deaf child, may, in principle, be equated with a normal child, but the deaf or blind child achieves the goals of a normal child by different means and by a different path.
> A defect is not only a weakness but also a strength. (pp. 58, 60)

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Keynote speech

3 Making the most of functional vision in children with visual impairment

By: Prof. Dutton, Gordon N.

(Each number refers to the number of the slide in the lecture)

1 Ladies and Gentlemen,
2 Thank you for your kind invitation to speak at your conference. Today I would like to talk about how we can use our knowledge of the vision of the child to ensure that impairment of vision as an obstruction to learning, is minimised.
3 The picture, which we hold in the mind, is a kind of reflection of reality
4 but when vision is disturbed the picture is degraded, and we need to know the nature and degree of that degradation so that all that we communicate is perceived and understood.
5 The two main elements of the way we see the world around us comprise the input of information to the brain, and the processing of that information by the brain
6 The eye is like a digital video camera. The image is brought into focus on the retina at the back of the eye where it is segmented into millions of elements, like pixels, by the receptors in the retina, the rods and cones.
7 If the eyes are out of focus due to refractive error it is important to ensure that the correct spectacles are worn (except for the child who takes his spectacles off to read, and holds the text close to his eyes – as this provides magnification). Correction of even small amounts of long sight can help a child a lot, partly because these glasses give magnification as well as improved focus. In early childhood, failure to wear glasses in the long term causes permanent visual impairment. The brain has to be programmed to see in early childhood. If the picture is blurred, the brain will only learn to see to that level of blur. This is called amblyopia.
8 We take our ability to focus upon what we see, or accommodation, for granted. However, the majority of children children with Down syndrome and many children with brain damage causing poor vision, do not focus well and can benefit from reading glasses. (Tell story………)
9 Obstruction of vision by cataract for example degrades the clarity of vision because it interferes with image clarity. If a child is born with cataract, removal of that cataract within the first month of life is needed to prevent amblyopia, because the programming of the brain starts at that time, and time lost is vision lost.
10 Damage to the retina can impair vision.
11 In this picture the retina is normal
12 but in this picture the centre of the retina is damaged leading to impairment in central vision because the 'film' in the camera of the eye is damaged.
13 The picture, which is seen is converted by each photoreceptor in the retina into electrical signals and the information is passed along the optic nerves to the brain. (There are over a million fibres in each nerve.)
14 Damage to the optic nerves causes poor vision and makes the nerves go pale, as shown in this picture.
15 The two optic nerves join at the chiasm and then the nerve fibres pass to the brain. Vision on the right is handled by the back of the left side of the brain and vision on the left is handled at the back of the right side of the brain.
16 If there is damage to the left side of the brain at the back, the result is inability to see on the right with both eyes.

If there is damage to the top of the brain at the back, the result is inability to see the ground ahead.

17 The input to the brain can be broken down into acuity (or clarity), colour, contrast, 3D or stereo vision, the visual fields and movement perception. All these elements need to be investigated and the measures applied to all the educational material being used. (There is no point in teaching a child with material, which cannot all be seen.)

18 Acuity is a measure of the ability to see two elements of an image (at maximum contrast – black on white) as being separate. At this threshold, reading, for example is very slow and laboured. On the other hand, for education, functional visual acuity is a measure of the size of text, and detail in pictures which can be seen at maximum speed. (Show example to audience?)

19 Contrast sensitivity is a measure of the ability to see a shade of grey against a white background. Practically it applies to dark shades like dark blue, adjacent to light shades like light blue, and is relevant to this type of colour discrimination, as well. Colour vision discrimination also needs to be tested.

20 The visual field is an assessment of the area over which we can see. (The commonest visual field defects are due to brain damage and impair either the lower field or one side or the other, but many other types of visual field defects can be seen.)

21 The ability to detect movement is another basic visual input function, which we take for granted, but must be included in any assessment strategy. A very basic way of doing this is to ask the child to count fingers on a moving had which is gradually slowed down.

22 In addition to visual input, the elements of vision also include the way the brain handles the incoming visual information.

23 This information is processed primarily in the occipital lobes, …

24 with motion being processed separately more anteriorly.

25 The temporal lobes of the brain are responsible for recognition, with the right temporal lobes mainly serving face and animal recognition and orientation, while the left temporal lobes are responsible for recognising shapes and objects.

As I look round this audience there are people I know. (Hello) and there are people who I do not know (Hello). For each person I have compared their face with my image store in the temporal lobes. Arguably, the most remarkable computing exercise by the brain is not to know someone. (People with damage in this area can falsely recognise someone that they do not know as someone who they do, as well as being unable to recognise people that they do.)

26 The temporal lobes store the images of our past experience so that we can recognise what it is we are looking at.

The top of the brain at the back is called the parietal lobes. This area is responsible for handling the complexity of the visual scene, giving attention to chosen elements of the scene, and planning our motion through the scene. (The picture of what we see is of course, is in our brains. We then 'clothe' what we see with the picture in our minds and hopefully this will be coincident with reality. In this way we are able to move through the visual scene, as it is the parietal lobes which provide the coordinates in 3D space of what we are looking at and passes this information to the part of the brain responsible for moving the body, the motor cortex.

27 It is the floor of the frontal lobes which makes the choice of what we give attention to.

28 Having done this we can pass the information to the motor cortex to bring about our motion and to the frontal cortex to make fast head and eye movements towards what we are interested in.

29 The pathway for recognising what we are looking at is known as the ventral stream, and the pathway for giving attention and planning motion is called the dorsal stream, and either can be damaged in children with brain damage, (the dorsal stream most commony).

30 If there is damage to the dorsal stream there are problems handling the complexity of the visual scene, inaccurate limb movements (particularly of the feet and legs), and difficulty giving attention. This is commonly associated with impairment in the lower visual field.

31 We all have difficulty handling complex scenes. If I asked you to find the little man called Wally in this picture (who has a red and white hat) you would find it difficult. Children with this problem have much greater difficulty with even simple scenes.

32 As I said, the ventral stream is responsible for recognition and orientation

33 You will not recognise this lady because she is my mother

34 but you may recognise this lady who was the mother of our queen in the UK. You compared her with your store of faces and if there was a match you recognised her

35 You recognise these objects

36 and you would be able to use this signpost to find your way around

37 Let me tell you about three children. Tom is a twin who was born at 24 weeks. He has good vision in his right eye, but his left eye is myopic. At the age of 5 he was always tripping over things. He would walk into door frames and lamp posts, he could not find a toy in a pile of toys, nor could he see something pointed out in the distance. In supermarkets he is uncontrolled. The red arrows show that there is damage to the white matter of the brain in the parietal lobes

38 Kirsty is 8. She was born at term but the umbilical cord was round her neck and she had jaundice. As a toddler she tripped a lot. Her acuities were 6/12 but she had lower visual field loss. She could not walk over irregular surfaces and she had difficulty crossing floor boundaries. She reached inaccurately for things. She cannot cope with complex visual scenes and she easily loses her way in new places. She has extensive damage in her visual brain

39 Which you can see in this picture affects her parietal lobes as well, the brown box in my earlier diagrams.

40 Gordon was born at 38 weeks, but had low blood sugar at birth and stopped breathing at 72 hours. He was said to have a normal MRI. At two centres he was diagnosed as having pale optic discs or optic atrophy. But he has an absent lower visual field, finds stairs difficult, hates crowded areas, cannot see objects in the distance, and finds patterned backgrounds a problem, but he has no problems with recognition. When the MRI was looked at again, it was clear that he had dorsal stream damage as well.

41 We need a practical means of assessment, which will detect these problems By means of careful history taking from parents and carers, and observation of the child's behaviour it is possible to characterise the nature and degree of the majority of visual difficulties.

42 The commonest problem is one of being able to find things when there is either a lot to see in the foreground or in the background. This has been called impaired figure ground discrimination. It has also been called impaired simultaneous perception. Children with impaired simultaneous perception may not see a parent in a group of other adults. The further things are away, the more there is to see, and things in the distance may not be seen. They may not see an object on a patterned carpet or bed spread, they cannot find a toy in a toy box, unless the toys are spread out, and cannot find an item of clothing in a pile of clothes. In supermarkets they can be uncontrolled or frightened. They may only be able to see one or two words at a time. In our

experience different children have different varieties of difficulty. Some children who cannot see their mother in a group of mothers or cannot find their shoes in an obvious location have no difficulty handling tasks involving the printed page. On the other hand we have seen children who have the opposite combination of having no problem finding their mother but being unable to see more than a few words at once on a printed page. The commonest scenario is to have an overall problem with all aspects of crowding of the visual world.

43 If the child is already looking a distant object may be seen. It is easy to get lost in complex environments. It is easy to lose things, and children are best when wide awake but worst when tired. The impaired attention can appear like visual field constriction and it is difficult to change focus from one thing to another. There may be difficulty moving the eyes form one thing to another, called psychic paralysis of gaze

44 Difficulty with visually directed movement (or optic ataxia) leads to tripping walking off the edge of a kerb, and problems going up kerbs because the foot is too high, too low , too short , or too long of the side of the kerb. Stairs are difficult to cope with. When walking with someone, the child may hold onto their clothing, pulling down, as this gives a tactile guide to the height of the ground ahead. Reaching may also be inaccurate.

45 Children with this problem compensate by memory, and remembering where things are. The evidence for this is that they have no problems in well known environments, but if one moves the furniture, it is bumped into and this causes frustration and anger.

46 History taking for ventral stream problems asks about recognition of people and their facial expressions, and the ability to recognise shapes and objects, as long as the acuity is good enough. The ability to name colours is sought. Orientation is enquired about, outside, inside and in the immediate surroundings.

47 Every child with visual impairment is different. Careful assessment provides the visual limitations. But what action should be taken?

48 The principles are that children know their vision to be normal, to them. One can't see anything outside one's thresholds for perception, so everything shown to a child needs to be within threshold.

49 What are the thresholds? The main thresholds of visual input are the functional visual acuity, which is the size of image and text which can be seen most quickly and easily, the limitations of colour and contrast, and the visual field boundaries. The main thresholds of visual processing comprise how much can be seen at once (or simultaneous perception), visual attention, the accuracy of visually guided motion and the limitations of recognition and orientation.

50 Clearly the approaches which should be taken ar to ensure that everything is within these thresholds for vision, or to circumvent the thresholds or to train the child in ways to cope.

51 So what are the input thresholds, and how does one work within them?

52 One needs to consider acuity, colour and contrast

53 This picture has fine detail and is of low colour contrast and when it is de focussed nothing can be seen.

54 This picture is of high colour contrast and when it is defocused it is only the fine detail like the eyes which disappear.

55 Considering the visual field boundaries, everything which is shown needs to be within these boundaries, or one needs to circumvent the thresholds by using alternative strategies, or should we be training the children to move their head and eyes to compensate?

56 Lack of vision on the right means that the next word is not seen, while …

57 lack of vision on the left means that the beginning of the next line cannot be seen
58 We have found that a number of children found that they are able to read much more easily if they read text vertically downwards if they have a right hemianopia and
59 vertically upwards if they have a left hemianopia, because these approaches mean that it is the text which has just been read which is covered over.
60 Hemianopia is also important to consider from the point of view of safety and mobility.
61 Unless the head is turned like this in order to make sure that the road is clear, there is a significant risk of an accident. It is clear that children with hemianopia need mobility training even if they have clear central vision.
62 Lower visual field loss is characteristic of damage to the white matter of the brain above the water spaces in the brain, the lateral ventricles. It is common but often missed and accounts for children tripping over objects. It is easier to go up stairs and slopes than down them. Food on the plate closest to the child can be missed. For mobility affected children need a tactile guide to the height of the ground ahead and this is not provided by holding their hand. They need to hold on to clothing (pulling down) or a belt or pocket or an elbow. They like to wheel wheeled toys as this also lets them feel the height of the ground. A policy of training children to 'slow, look check and go' when approaching kerbs and other obstacles can prove very effective. Children like to look down on uneven ground, which can be in conflict to the advice given by physiotherapists, to hold the head up straight. A compromise is required! For access to information it can be helpful to have a work station which is tilted up.
63 The principle area in which training has been recommended is to help those who have hemianopia, and do not see on one side. By teaching a strategy of scanning the scene, some success has been claimed here in Germany by Zihl and colleagues.
64 Damage to the visual brain and certain disturbances of eye movement can, in some children, result in disability in being able to see objects which are moving quickly, such as cars. Such children prefer to watch television programmes in which there is limited movement, such as the weather man! They may have difficulty recognising people when they are moving quickly. Recognition of this problem is important as it provides an understanding that fast moving targets may not be seen, and, for example, television may have limited educational value.
65 We now need to consider the thresholds or limitations of vision caused by damage to the dorsal stream, and how we can help children to work within these thresholds and adapt to them.
66 A toy on a patterned carpet or bedspread may not be seen
67 Or a toy amongst other toys may not be seen
68 But when it is against a plain back ground it stands out much more, as you can see here. The same applies to this underwear
69 which is lying on a patterned bedspread, which becomes much more obvious when it is
70 lying on a plain coloured sheet. It is therefore important for children who have difficulties handling complex visual scenes to be taught in an environment in which 'clutter' and background pattern is kept to a minimum. This also assists concentration. It is important to stress that this is the commonest visual problem which we see, and affects a large proportion of children with cerebral palsy, particularly if all four limbs have impaired movement.
Most classrooms are over decorated and cause distraction even for normal children. Those who have difficulty handling complex scenes need quiet, calm environments with limited distraction for their best performance.

71 Clutter like this needs to be removed from the bedroom and only a few items are needed in each drawer so that the affected children can learn to find things. Shoes in particular are a problem.
72 Supermarkets may be frightening. If so it is much easier to go shopping early when it is quiet.
73 The further things are away,
74 the more there is to see. So children with problems handling a lot of visual information at once may find it difficult to see something pointed out in the distance. Taking the child to see things close up, or using a zoom lens on a video camera to whoe the child what is being pointed out can be very helpful.
75 Some children with dorsal stream dysfunction cannot read unless surrounding text is masked. Software which allows words to be read one at a time includes AceReader and Zoomtext.
76 Copying is profoundly difficult for these children and unless they are receiving training in copying they should not be asked to copy, but given the information in another way. A very recent development, I understand, is to provide the child with a lap top with a camera which they can import pictures off the blackboard.
77 Impaired visually guided movement sets another visual limitation. Steps and stairs are difficult to dea l with, and may require banisters,
78 while floor boundaries can be difficult to cross.
79 allowing the child to hold an elbow, belt or pocket, or the clothes of an accompanying person provides a tactile guide to the height of the ground ahead,
80 and allowing the child to use banisters is important. Younger children may well benefit from playing in soft play areas.
81 Visually guided movement of the hands, requires occupational therapy assistance. Training in hand eye coordination skills can be very important
82 Fortunately, progressive improvement in dorsal stream dysfunction takes place, in our experience, in the majority of children, and such children need to regularly assessed and curriculum delivery modified accordingly.
83 The ventral stream thresholds are those of recognition and orientation
84 Impaired recognition of faces can cause problems. Whether this is due to reduced acuity, reduced contrast sensitivity or reduced facility to recognise faces
85 all the children in the class need all the class to know that there is a problem with vision, so that they learn to introduce themselves to the visually impaired child. In some cases, the teacher may need to wear an identifier, such as a coloured silk staff.
86 Recognition of facial expressions can also be problematic.
87 Can the child tell the difference between a smile…
88 or a sad look? In my practise I regularly determine the facial expression recognition distance. Ask the child to identify your facial expression at increasing distances, and determine the distance at which expressions can no longer be seen. Some children who have damage to the visual brain are unable to recognise the language of facial expression despite good vision. They often get into trouble because they can misinterpret what is being communicated to them.
89 Orientation can be disturbed on account of poor vision.
90 It can be problem in busy places for children with damage to the dorsal stream, because there is too much to see and land-marks cannot be identified. These children need training in searching for landmarks.
91 Children who have ventral stream damage can have profound problems getting lost due to problems with orientation. Which door should one go through? They med doors to be labled. Some children can be helped by composing songs which sequence the route. (singing) I go to lamp post number three and then I look for the big green

tree. Was the first line of a song which helped one child I have looked aftr find her way to school.

92 Problems with orientation also include knowing which drawer is which. Labelling drawers, and being very tidy, with everything having its place can make a big difference for children with these problems.

93 Some children with ventral stream damage have problems recognising objects. Feeling the objects and training them can prove very helpful

94 Damage to the back of the brain on the right can give rise to an inability to name colours. This is called colour anomia. Linking words of things which have well known colours can eliminate this condition in most children. For example using the terms grass-green and lemon-yellow. Eventually when the terms grass and lemon are no longer used the child thinks about grass and lemons and uses the correct colour words.

95 Clearly, a fundamentally important part of helping children with visual impairment is to recognise the importance of language training. Language is very visual. If I say oranges, or bananas, what do you see? How should we talk with blind children? The main principle is, of course that the language which is used should refer to the child's experience. As the child picks up an object that object is named. What one should avoid using one's own vocabulary like 'isn't it a sunny day today'. As this sentence has no meaning to the child he is likely to simply repeat it… which is the start of repeating language in a meaningless way or echolalia. Children who have brain damage, may well process language slowly. So it is important to experiment with such children to identify what their optimum communication speed is, both in terms of the speed at which the words are spoken, but more importantly perhaps, the speed at which the elements of the words are spoken. I will always remember a child with mild cerebral palsy, with visual and language problems. (Tell story)

96 In conclusion, when thinking about how to teach a child with visual impairment, each child needs to be characteried in terms of what their limitations are. And ideally everyone needs to know, in detail, what these limitations are. With respect to the input to the visual system one needs to consider acuity and stay within the limits, Imagery may need to be of high contrast both in terms of colour and in terms of contrast, which is the amount of black or white in the colour. Light blue stands out against navy blue for example. Good diffuse lighting is needed.

If there are visual field limitations one should know and help the child to use the sighted areas.

If there are limitations to perception of movement, these should be recognised.

97 Dorsal stream dysfunction, and of course profound visual impairment, cause visual crowding and disability in using vision to guide movement, both of the upper and lower limbs. But the lower limbs, in our experience are more commonly affected, giving another meaning to the words dyspraxia and developmental coordination disorder, in certain cases of visually impaired children.

98 Ventral stream disorders impairs recogniton both of faces and the language significance of facial expression, along with problems with orientation. And it impairs recognition of shape and form, and of course text. Any of these limitations have also to be catered for.

99 This check list is I think a pre-requisite for working out the individual plan for each child. It should also include the management plan for glasses. (As I've mentioned, a short-sighted child may benefit from taking the glasses off to read because this gives magnification) In addition I have not considered the limitations imposed by eye movement disorders. But that would be the subject of another lecture.

100 Vision affords us access to information, not only books, but the whole panoply of what we are looking at comprises important information. We use vision to guide our movements, of the body and the limbs, and we use vision to interact socially. By knowing the limitations imposed by the type of vision which each child has, we should be modifying the delivery of the curriculum, the environment, and our approaches to communication and social interaction, in such a way that the barriers which would be imposed in each of these areas are minimised, or circumvented.

4 Neurosciences and Furthering and Rehabilitation of Visual Abilities and Visual Behaviour

By: Kern, Hanns
From: Germany
Organisation: Blindeninstitut Würzburg

Abstract

For more information please contact the author: hanns.kern@Blindeninstitut.de

During the last 10 to 15 years neurosciences have made an amazing progress. There is an enormous increase of knowledge about the structure and the processes of the brain and about the functioning of networks of parts of the brain especially on the basis of functional magnetic resonance imaging, computer tomography and other methods. Also various forms of brain damaging and their consequences for perception, feeling and behaviour often can be cleared up much better.

We are very interested in this findings – especially in findings that are describing functions and processes involved with visual perception – because we are convinced that we can improve our diagnosis and furthering and rehabilitation of persons with visual impairments. Especially we try to make useful for our work the various findings of Neuropsychology in rehabilitation of persons with brain damaging. First results of this project shall be presented.

5 Assessment of vision of children with motor problems

By: Hyvärinen, Lea
From: Finland
Organisation: Prof.h.c. Rehabilitationswissenschaften, Universität Dortmund

Children with motor problems have a great variation of the changes in their visual functioning. In the assessment of their vision, oculomotor functions and processing of the visual images are often more important than assessment of the quality of the image, which may have quite normal values in clinical examinations. The assessment is usually performed in the order:

- oculomotor functions
- quality of the image
- processing of the image in the cortical functions
- compensatory strategies.

Oculomotor functions

Depending on the type of the motor problem, different oculomotor functions are involved. They can be noticeable at birth in infants with birth trauma as *ptosis* of the upper lid, which does not move and *large angle strabismus* with loss of motility of the eyes in one or several directions. *Abnormal function of pupils and accommodation* is usually diagnosed first at the age of a few weeks or missed for years.

If an infant has any deviation from norm in the development of oculomotor functions, thorough visual assessment should be performed. The *visual milestones of eye contact and social smile* should be present at the age of 6-8 weeks, at the age of 12 weeks at the latest. If accommodation does not function, the infant seems to look through the parents, which makes the parents to feel that the baby is not interested in them. The delay in development of interaction should be detected and compensatory ways of interaction taught to the parents. Otherwise emotional bonding between the parents and the baby may not become normal.

If accommodation cannot be induced during dynamic retinoscopy, either the fixation target is not interesting enough or the infant/child cannot focus the lens of the eye properly. At 4-5 years of age, visual acuity can be measured with and without near correction. If the correction improves near acuity value, the child should have well fitted correction for distance and near. In infancy, the infant's reaction when near correction is used usually shows clearly enough whether the glasses make a difference or not. In severe multihandicap glasses need to be introduced several times and with only partial correction, so that the change in image quality is not too drastic.

Fixating the gaze on objects is a reflex function in normally sighted. When it is difficult, it becomes *a conscious task* that requires brain capacity during visual tasks. If a child has difficulties in both accommodation and fixation, it may happen that the child loses head control in the middle of a task. The role of conscious effort in functions that in us normally sighted occur automatically is not always understood at schools. The child must use a lot of brain capacity to sit, to control head movements and eye movements and to divide attention between all these tasks at the same time as (s)he should concentrate on listening and watching what happens in the classroom.

Following movements and *saccades* may look fairly normal during a clinical examination when the child is asked to follow a small moving target and to shift gaze from one small target to another. In this kind of test situation the function is again a *conscious function*, whereas when eye movements are used during reading as an *unconscious function*, they may be severely disturbed. If eye movements are irregular during reading, it is important to observe oculomotor functions when the child is looking at small pictures in a row mimicking reading. If the eye movements are normal in this task, then reading requires so much brain capacity that it disturbs the eye movements, not vice versa. Therefore *video recording of eye movements during reading* is an important assessment when a child is starting to read. If eye movements are irregular during reading, there are several strategies to avoid this problem. The text may be easier to read, if only *one word or one line is shown at a time*, other information is covered, or the words are presented one at a time in the middle of a computer screen. *Increasing the size and spacing of the text* may help. Use of *talking books* should be evaluated. Some children with normal or near normal vision may read *Braille* better than print. The choice of learning techniques is of greatest importance.

Visual acuity does not always predict the size of texts that the child will be able to read, even if it is measured with crowded optotypes. This seems to be one of the most difficult problems to understand. Some vision teachers seem to experience it as a failure of their work if a child with normal or near normal visual acuity and normal size of visual field prefers Braille as the learning medium. The reason might be, as one of my young patients explained, "the Braille dots are nicely in rows, they do not jump like the words on paper".

The effect of tonus changes on the oculomotor functions should be well known. When we approach a child for the first time in the morning and greet him, this may cause head thrust backwards if the child is glad to see us. If during the head movement the eyes go up and turn inwards, the child may also have simultaneous spasm in the intraocular muscles and may be10 to 15 dioptres myopic for several seconds. The intraocular spasm may last longer than the spasm in the neck muscles and thus the adult is seen blurred at the time the child gets eye contact with the adult person. These children are accustomed to see the world blurred and do not complain. Therefore the adult persons should know to wait until the child seems to be ready to communicate.

Oculomotor functions may require so much of conscious effort that head control is lost or a generalized spasm spreads in the trunk and arms. If this difficulty is observed we must not ask the child to "look at" because it may effectively prevent the child from looking. The child needs to be gently guided to attend the object, person or picture that we want to discuss with the child. If the eyes glide past the object several times before stopping to look at, we know that ample time must be given the child to also focus and gather the information that we ourselves collect instantly. Some other children may have efficient visual functioning despite poor fixation and seemingly no normal motor functions and may grasp the information in passing even when reading.

Children who do not speak may use gaze pointing to respond in clinical tests. We need to be aware of the speed and exactness of the oculomotor functions and whether the child has central or eccentric fixation. If fixation is eccentric we need to observe whether the child is looking past in the same direction all the time or is there variation in the use of fixation, variation in the PRL (preferred retinal locus).

Quality of visual image

Images of normal daylight vision have three components:

form, colour and movement,

which thus should be assessed. The *size and structure of the visual field* and the *quality of visual adaptation to different luminance levels* should also be investigated. Measurement of visual field is often the most difficult test still during the school age even if Goldmann perimetry is used.

Visual acuity is often measured with single optotypes, because that test situation is easy. We should know that single optotype acuity is not the correct visual acuity value to report. *Visual acuity should be measured with line tests*. The easiest of line tests is the test used in vision screening with wider than standard space between the lines. For schoolwork we need to measure also with tightly spaced optotypes, which mimics reading tasks. As shown in the table below, visual acuity values may vary greatly.

Table 1.

Visual acuity at distance (3m)	with single symbols	1.6; 6/4, 20/12
	with line test 3m/4M=	0.8, 6/9, 20/25
Visual acuity at near (40cm)	with single symbols	0.4, 6/15, 20/50
	with screening line test	0.25, 6/24, 20/80
	with standard test	0.20, 6/30, 20/100
	with 50% spacing	0.16, 6/40, 20/120
	with 25% spacing	0.12, 6/50, 20/160

Table 1. This child's visual acuity was reported as 1.6 when he entered the school. When reading difficulties were encountered, visual functions were assessed at the school. Visual acuity with crowded symbols, 25% spacing between the optotypes, was less than one tenth of the value reported by the ophthalmologist.

The more crowded the details in the visual task are, the more difficult it becomes to many children to keep them a part. A small girl once gave the following description of the crowded side of the near vision test: "I can't look at these pictures. They hug each other." The details partially glide on top of each other, "hug each other" and are seen blurred.

The recommendations written in the WHO document WHO/PBL/03.91 stress the need to use logarithmic visual acuity tests at distance *and* at near, standard luminance level between 80 and 160 candelas per square meter (cd/m^2) and *not* to point at the optotype to be read, because giving a visual reference point may sizeably improve the visual acuity value of an amblyopic eye or an otherwise impaired visual system, even double it.

During this short presentation we do not have time to cover measurement of other visual functions related to the quality of the image but they should be carefully assessed: contrast

sensitivity, colour vision, size and quality of visual field, visual adaptation to lower and higher luminance levels and motion perception.

Processing of the images

Visual information entering the brain is strongly inhibited; only a small part of the incoming information is processed in the cortex. That is the part of information that is useful for the ongoing cortical processes. How this is achieved, is difficult to understand. It is, however, one of the most important features in the functioning of the visual system.

The information enters the primary visual cortex, V_1 and simultaneously also V_5, the area specialized in processing motion related information. In V_1, information from the right and the left eye is fused, if the person uses eyes together. In $V_{1,}$ colour information, form information and motion information are processed in specific groups of cells, after which they are processed further and combined with previous information in the "higher" visual associative cortices and cortical areas fusing information from different modalities.

The two main flows of information are toward the inferotemporal lobe as the *ventral stream* and toward the parietal and frontal lobe as the *dorsal stream*. These main flows of information are normally well connected in their functions but in damaged brains numerous kinds of specific losses of function are possible. Most of them are important in schoolwork and need to be observed and reported to the child's neurologist because these so called "higher" visual functions cannot be assessed in a doctor's office. The important visual functions to be reported are following:

Table 2.

COGNITIVE VISUAL FUNCTIONS:

RECOGNITION and READING

Concrete objects:
Landmarks:
Faces:
Facial expressions, Body language:
Pictures of concrete objects:
Geometric forms:
Letters:
Numbers:
Words:
Crowding effect:
Reading speed:
Scanning lines of text:
Efficiency of reading:

PERCEPTION OF PICTURES

Length of lines:
Orientation of lines
Details of pictures:
Figure-ground:
Visual closure:
Noticing errors:
Noticing missing details:
Comparison with pictures in memory
Reading' series of pictures:
Visual problems in copying pictures:

PERCEPTION OF SPACE

Depth perception:
Perception of near space:
Perception of far space:
Simultanagnosia:
Perception of textures and surface qualities:
Orientation in space:
Memorising routes:
Vision in traffic situations and in playgrounds:

EYE-HAND COORDINATION

Grasping and throwing objects:
Drawing, free hand:
Copying, from near/ from blackboard:
Copying, motor planning and execution:

INTEGRATION PROBLEMS

Vision not used when listening or exploring:
Vision not used when moving:
Balance:

COMPENSATORY STRATEGIES

Auditory functions:
Tactile, kinaesthetic and haptic functions:
Memory functions:

Table 2. List of cognitive visual functions and compensatory strategies assessed in children with motor problems.

Problems in processing of the image at the level of the V_1 are poorly known. The most important for schoolwork are the length and direction of lines. If they are not perceived normally, then forms of all figures based on straight lines are difficult to perceive. These difficulties children can spontaneously describe first in their teens, if even then, so we need to have an open mind and assess carefully, whenever a child has problems in visual perception.

Some children have specific problems with letters based on straight lines and angles. A child who did not see the difference between a V and a U was taught to draw them using motor memory: "V you draw by drawing one line obliquely down, you make a stop and then you draw another line upwards; when drawing a U, you do not make a stop". When reading he recognised poorly visible letter by moving his finger along them, nowadays by using eye movements. Now when he can recognise hundreds of words without spelling, he swiftly recognises also a number of words where one or two of the letters are blurred.

Assessment of the numerous cognitive visual functions takes years. They cannot be assessed in young children by asking questions but we may become aware of the difficulties by observing the child's behaviours. The earliest to be diagnosed are problems in face recognition, which should be noticed in infancy because they affect communication and development of social skills. These children are in danger to be interpreted as having "autistic behaviours" when they do not recognise well-known people. Some of them do not perceive facial expressions and/or body language and not perceiving them, do not develop usual variation in facial expressions and may be interpreted as emotionally cold or angry.

Each of the functions can be observed in play situations. We need to check, whether they appear age appropriately, delayed or not at all. By discussing the functions with parents and having them observe their child, we make the diagnoses years earlier than today. Now it is quite common that children are misinterpreted still at school when they do not have certain perceptual functions. Children with poor spatial orientation may be asked to find their way to school alone without instructions how to develop a strategy to compensate for the problem. Children who do not perceive fast movement are asked to participate ball games although the balls disappear or asked to run although during running they may not see the environment or may become nauseated.

Children who are sensitive to visual and auditory noise are asked to function in classrooms where there are numerous pictures on the walls and a lot of movement in the peripheral visual field and a lot of auditory noise. In more than one case, children have started to ask to be allowed to use toilet during lessons. If a quiet toilet with almost no visual information is a more pleasant place than the classroom, then there is something in the classroom, which needs to be changed.

Lessons in a group of 20 children may be so demanding that a child may not have capacity to function during breaks but needs to rest. A child who needs to use an FM system to hear the teacher's voice and uses a CCTV to see the materials and to blackboard, started to stay in toilet during the breaks. When this was noticed, it was forbidden and he was asked to play outside like other children. He started to climb in the coarse net in a corner of the yard. That was forbidden and he was asked to play with other children. It was not understood that communication was extremely demanding in a noisy group of children and that he did not see the ball other boys were playing with. The teachers were not mean; they just did not understand how the child perceived the world when asking him to develop age appropriate social behaviours.

It helps to understand the structure of visual perception and to remember to check all areas of functioning if we observe the functions of the ventral stream and those of the dorsal stream separately and record our observations for discussions with the parents and the consulting medical and educational specialists.

Compensatory strategies

Development of compensatory strategies is the core area of special education. There are experiences in development of compensatory strategies for all kinds of combinations of problems in visual perception. These experiences should be collected and made a part of teaching in special education. Since more than 70% of visually impaired children are multi-handicapped, this information is especially important in the schools for children with motor problems and/or with intellectual disabilities. We should not confuse visual perceptual difficulties with intellectual disability. A child may have both or only one of them, like the child in my last picture slide. Her extreme motor problems make her to look like a child with serious intellectual difficulties at the time she has learned to read earlier than many of her normally functioning peers.

Since the variation in loss of visual functioning is so great, teachers need to work together with experienced medical, psychological and educational specialists and each child's therapists, use *a transdisciplinary functional assessment* to create a functionally appropriate preschool and school situation for children with motor problems. With the experiences that we have at the special schools for children with motor problems in Finland, I would recommend that all schools for children with motor handicaps carefully evaluate the role of vision in the functioning of their students. It might be advisable to even have one or two vision teachers specialised in brain damage related vision loss in these schools.

For more information visit: www.lea-test.fi

6 Assessment of functional vision in persons who cannot cooperate with the examiner. 2º Revision

By: Ruf Urbea, Albert; Torrents Llistuella, Teresa; Baró, Manel Salamero
From: Spain
Organisation: ONCE

Recent medical advances have allowed the survival of many human beings whose pathologies had been long regarded as mortal or incompatible with life. Yet they have also resulted in the presence of a child population suffering from multiple disabilities with impairing anatomical, motor, sensory, cognitive and psychic effects.

In Spain and particularly in Catalonia, at the turn of this century, special education centres are being attended by a population with high-risk vital characteristics, such as infants and children who survive the most severe injuries and disorders. These children, of school-age, are cared for by qualified professionals, who have not been able to provide for sufficient medical resources to face the challenge of this emergent population.

As attention to persons with disabilities has become widespread, with the implementation of financial, administrative and legal resources it entails, assessing functional vision of multiply impaired persons has also proved a challenge in educational and care intervention.

In many areas, including visual development, an assessment of abilities is obviously a priority for designing psycho-educational care programs based on the real expectations and potential of children and young adults. For most of the multiply-impaired, normative assessment tests would furnish little information that would be of relevance to care planning. In fact many of them could, if used, lead to highly ambiguous results in relation to individual abilities, being standardized for population as a whole and not providing for less conventional expressions. The Functional Vision Assessment Test for persons who are unable to help the examiner (in Spanish, "PVFNC") is intended to be an assessment instrument and has already proved useful for individuals with visual impairment or multiple disabilities. The population suitable to be assessed with this Test should have the two following general characteristics:

1. A decrease in visual functioning that may become blindness, and
2. a difficulty –of varying nature and degree—in helping or being responsive to the examiner.

The "PVFNC" uses simple and available stimuli and systematic observation techniques. Resulting data are developed on the basis of visual stimulation general criteria and adapted to the assessed individual's peculiar disabilities. The various assessed parameters are used to describe the assessed individual's development, learning and interacting. All this material is used to help design a personalized program to be followed by the tutor.

The "PVFNC" test (Torrents and Portolés, 1990), developed for the purpose of assessing residual vision in persons with other disabilities, is a resource for vision teachers, psychologists, and other school specialists who assess these students and as such has been successfully used by them in the Barcelona province, since 1990. The "PVFNC" has been amended following experience; a survey aimed at its statistical validation was financed by the ONCE, with the collaboration of Fundació Vidal i Barraquer, between 2002 and 2004. As such, each of the instruments specified was researched and evaluated, in terms of both its general merits and its utility in assessing students with visual impairment or multiple disabilities. The present work includes the survey's conclusions.

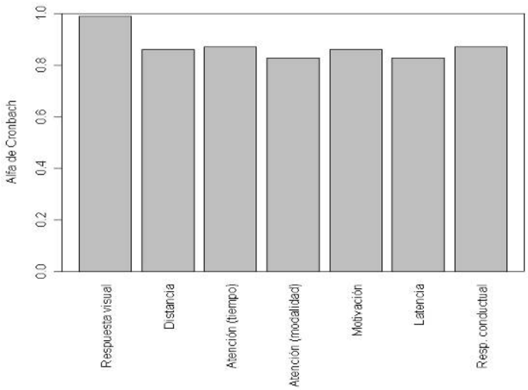
For the "PVFNC" Assessment Test, stimuli pose increasingly difficult visual responses, following the scale distribution obtained.

Table I (Percentage of visual responses and scale distance between stimuli)

	Some Visual Response		> 50% Visual Response	
	Persons	Scale Distance	Persons	Scale Distance
Natural Light	90,6%	-1,7	(--)	(--)
Environmental Light	88,2%	-0,8	(--)	(--)
Pen torch	80,9%	-0,3	60,6%	-1,5
Contrasted Object	73,1%	0,1	53,5%	-0,4
Bright Object	70,6%	0,1	43,7%	0,3
Coloured Object	57,8%	1,0	39,4%	0,8
Face	48,4%	1,6	36,6%	1,4

The "PVFNC" validity results showed that data were reliable for the population concerned and variables used.

Chart I (Crombach Alfa ranged from 0.83 to 0.99).



RESPUESTA VISUAL	Visual Response
DISTANCIA	Distance
ATENCIÓN (tiempo)	Attention (time)
ATENCIÓN (modalidad)	Attention (modality)
MOTIVACIÓN	Motivation
LATENCIA DE RESPUESTA	Response Time
RESPUESTA CONDUCTUAL	Behavioural response

On the test-retest evaluation, the PVFNC proved stable for the set of parameters as a whole.

Table II (Test-retest stability for the set of parameters as a whole)

	r
Visual Responses	0,90
Distance	0,84
Attention (time)	0,71
Attention (modality)	0,61
Motivation	0,80
Response Time	0,76
Behavioural response	0,70

r = Pearson correlation coefficient

Population was distributed as follows:

Blindness	15%	C
Transitional	1%	
Residual Vision	28%	RV
Transitional	4%	
Functional Residual Vision	50%	RVF

The process of validating the PVFNC resulted in a parallel work leading to a revised draft of the PVFNC (Ruf and Torrents, 2004). This draft includes the field-work conclusions reached through exchange and discussion with professionals and through statistical analysis.

FUNCTIONAL VISION ASSESSMENT TEST FOR PERSONS WHO ARE UNABLE TO HELP THE EXAMINER ("PVFNC")

The PVFNC is intended to be an assessment instrument to determine visual response in persons whose communication systems are different from the general population -- mainly due to their psychic, sensory and physical impairments. The test has been validated with individuals in the 2-18 age-group and it may also be successfully administered to persons between 0-21 and to adults.

Administration time is estimated at 45-60 minutes in a single session or during two or more sessions. As for the setting, the room should have the capacity to be darkened as well as to remain well lighted, and should have some minimum levels of privacy and silence. The room must be 3 meters long at least, to allow for stimuli to be administered at the pre-set maximum distance.

The PVFNC consists of 8 stimuli: 7 visual and 1 sound stimulus (Table III). The number of parameters is 7 (Table IV).

Table III

STIMULI	LIGHTING	OBJECTS	SOUND
1	Sunlight (fixed)		
2	Ambient Light (fixed)		
3	Torch (mobile)		
4		Contrast	
5		Bright	
6		Glove Puppet	
7		Face	
8			Bed Bell

Table IV

PARAMETERS	
VISUAL	OVERALL
Visual Response	
	Distance
	Attention (Time) Attention (Modality) Motivation
	Response Time Behavioural response

Each stimulus is introduced by the examiner in a certain position and attitude and is aimed at evoking a visual and overall response from the examined person. Visual responses are compiled through observation of ocular behaviours showing optical functions, i.e. contact, fixation, searching, and tracking. (Barraga, 1986; Cebrián, 2003; Hyvärinen, 1988, 1991). Overall responses are recorded through the following: distance, attention, motivation, response time and behavioural response.

Population

This Test is aimed at persons with low vision who are unable to help their examiner.
Low vision has various causes, not excluding each other. The most frequent are: a visual pathology, a neurological injury or a non developed cortical function.
Similarly, their inability to help the examiner is caused by psychic, sensory or physical conditions or their accumulation.
The PVFNC Test has been designed to assess the functional vision of persons with low vision and other disabilities. Even if the low vision status is a priority --since low vision status is the Test's basic goal--, the person's multiple disabilities frequently have more significant implications on their development, particularly as they influence personal evolution and social relations.
We mean specifically those persons who have been unable to be assessed by means of usual techniques where the person is asked to answer what they see. We also mean those infants and young children who do not show the attitudes of interest, motions, smiles, etc. that might otherwise express a response to certain stimuli. Other sources of information need to be tried with these persons.
The PVFNC Test has been accredited as sufficiently efficient on the 0-20 age-group population, classified as follows (Conill, 2004):

Diagnoses	Prenatal pathologies. Chromosome irregularities. Other genetical conditions.
	Sequels from hypoxic ischemic encephalopathy (HIE), also known as neonatal encephalopathy.
	Sequels of severe diseases during the early stages of development. Traumas. Infections of the central nervous system. Postnatal asphyxia with anoxia.
Syndromes	Motor disorders including language areas.
	Cognitive impairments.
	Social relation disorders, including autism spectrum.
	Sensory impairments.
Visual Diagnosis	Low-vision behaviour. Absence of visual interaction with the environment.
	Microphthalmia, Congenital Cataracts, Optic nerve hypoplasia
	Pale optic disk , Optic Atrophy
	Retinopathy of Prematurity
	Cortical Blindness (Dutton et al, 1996).

Many of these persons are not given an accurate visual diagnosis, since the injury is not explicitly found; also, the visual impairment may be subsequent to sequels from a basic pathology or some cortical neurological dysfunction. However, during their development, their poor visual functioning becomes apparent and is the cause of their consultation.
In understanding better visual functioning in persons with brain injury, the notion of Cortical Visual Impairment needs to be outlined –as studied at present. Cortical Visual Impairment is a disability resulting from either an insult to the brain or how the brain organization became configured during prenatal development. CVI effects how an individual understands the visual information received by the eyes. The location and extent of the brain insult determines which functional behaviours will be affected.
Some persons who were initially assessed with the PVFNC Test have been later assessed with other tests requiring more collaboration. Children who have developed some cognitive and communication skills were able to perform --with adaptations-- more participatory tests, such as the Functional Vision Assessment Test for persons who are able to cooperate with the examiner ("PVFC") (Ruf et al., 1998). To give an example, as

requirements for communication, such as attention, are developed, the visual response becomes more consistent and controlled. Vision stimulation is proven to help most children with vision impairments and improve the way they use their vision. For vision stimulation to be effective it needs to happen in everyday real life situations, not only in therapy sessions. Identifying colours in an activity, visually tracking their classmate as they move across the room, and identifying the shape of every day objects are examples. For those who show some visual responses during infancy, the prognosis for increased functional use of vision is good. Indeed, many may use vision as their primary information gathering sensory modality when they are older. Thus, professionals are challenged to discover by themselves these advances in sensory abilities.

The PVFNC Test has also been used by a population with low vision and other disabilities in the over-20 age group. Despite the fact that a systematic survey of this sample is not yet available, results have been satisfactory. In general, the criteria and results from the Test applied to this age group appear to be correct. Standardization of the Test is pending for the Catalan territory.

Finally, the Test lower and upper limits of use were established in accordance with the individual's age, visual abilities and cognitive and communication skills:

- from birth to adult age;
- from a negligible visual response to the known optic-perceptive visual functions;
- from the severe influence on development to the ability to respond in a logic and oriented form.

The Test may be used beyond these limits; however, persons with low vision show a remarkable decrease in skill discrimination. Persons without other disabilities may be assessed with visual tests more adequate for their overall aptitudes. Thus, any information gathered through the PVFNC test will be particularly relevant for the population with a more normative development.

There are no good questions but rather good questions -it is said. The PVFNC Test aims at filling a gap in the knowledge of the multiply disabled's visual abilities. These are the questions: Can the person see? What does the person see? How does the person see?

Answering in a straight and clear way is very difficult; the Test's screening is aimed at determining whether the person's visual functioning matches blindness, residual vision or functional residual vision. These concepts will be expounded below.

The Test was administered by professionals from the "Joan Amades" Educational Resources Centre for the visually impaired, to more than 500 persons during 14 years. The Test was later validated with a representative sample of 71 persons from the Barcelona province. They were assessed at special education schools, at care centres for persons with psychic disabilities, at "escoles bressol", at the Joan Amades Centre and at the persons' homes.

Characteristics and level of stimuli

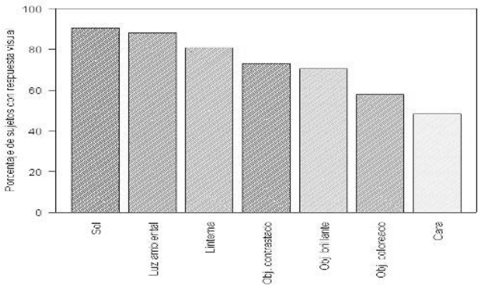
Not always the more intense an stimulus, the more intense the response. Firstly, the notion of a response threshold determines that a person is not sensitive to or aware of a given stimulus if produced over or below a certain measure. Secondly, a human being adaptive abilities allow them to survive even in hostile environments, to avoid harmful stimuli, to become unresponsive to them so as not to reach an over stimulation that could be damaging. Finally, an individual's style of response to their settings --based on heredity and personal development—endows them with a unique way to adapt to their environment.

Yet human beings attempt to endow the physical world with a certain consistency in order to build up stable structures facilitating their interactions with an ever changing environment.

Our assessment and visual development proposal is aimed at calibrating certain stages of visual responses to given stimuli with specific characteristics. Thus, we selected stimuli from daily situations, causing a recordable visual effect on the persons. The range of stimuli has been widely endorsed by specific bibliography on visual assessment of multiply impaired persons (Bayley, 1969; Teller et al., 1986; Karen and Audrey, 1988; Hyvärinen, 1988; Aitken and Buultjens, 1992; Blanksby, 1993; Pelechano et al., 1995; Kern, 1998). Thus, a calibrated set of visual stimuli was created, through our practice, by systematically recording the responses given by low-vision persons with other disabilities. In addition, the intensity of the selected light stimuli was physically measured (with a luxometer).

In validating the Test, it was confirmed that stimuli increase in terms of multiply impaired persons' response. The numeric scale determines a reasonable, balanced period between stimuli. Stimuli are sufficiently apart so as not to repeat the same measure with a different object but sufficiently close not to leave blanks. Thus, the Test is aimed at not being longer than necessary.

Chart II – PERCENTAGE OF PERSONS WITH VISUAL RESPONSE



The first three stimuli were selected among light stimuli available to any professional in our usual educational and developmental environment. Stimuli were divided in: fixed: sunlight (or natural light) and ambient light; and variable: pen torch.

Characteristics

1. Natural Light

The Sun is a source of light and heat, generally abundant in Spanish skies, with negligible variations due to latitude. In a clear day, sunlight is equivalent to 100000 lx= 10^5 lx (lux).

The Sun's enormous heating power will be a variable to be considered in visual responses, able to result in a facial response (response to heat from a light source). In general, sunlight stimulation shall be received outdoors; sometimes also indoors, provided that the sunlight shines through without interference, even through translucent glass.

2. Environmental Light

Environmental light means artificial light inside a room, sufficient to light it in its entirety. In educational centres or venues where the person is assessed, ambient light is usually placed at the ceiling, approximately 3 meters from the floor; it is turn off and on by means of a switch. Lamps, either single or multiple, are usually fluorescent; they can sometimes be halogen lamps. Adjustments can be made to give adequate lighting which will be evenly distributed and free from glare and shadow. Advantage should be taken of natural light using shades, blinds or curtains. Most obviously the person being evaluated should not face the light. If on the light side of the room try to avoid her sitting in her own shadow. A dull surface finish is preferable when choosing a table top or other area to work. Lighting is important not only for near vision tasks, but also is important in mobility activities. Moving around may become less dangerous by paying attention to details of lighting. Optimising lighting does not necessarily mean making the light as bright as possible. For several conditions, bright light can become in many cases a hazard.

Indoors light in a standard room ranges between 400 and 800 lx, clearly less than lighting provided by sunlight.

This stimulus is implemented taking into account its distance from the person being evaluated and intensity of light. However, it is regarded as a fixed stimulus since ambient circumstances are not altered. Ambient light falls between sunlight and torch-pen torch stimulation. It is convenient that ambient light stimulation is provided at the same setting for the same person.

3. Pen torch

Often it is best to begin with a small light source such as a pen torch. Use different coloured filters if you like. If successful try smaller objects. Other objects might include a ping-pong ball stuck on a thin rod, finger puppets or a favourite toy. You may have to suspend the object on invisible thread. Using, for example, a pen torch or larger torch, present the light source while the person is attending. Here you will find that in one or more directions of object movement, the person being evaluated follows the movement quite smoothly. But in the other direction(s), tracking responses are absent. For instance he may track the object's path up from bottom to midline and then his eyes go no further. Or he may track from left to midline and midline to left but not midline on to right. There are of course a host of other possible combinations, too numerous to list individually.

The following set of stimuli (contrasted object, bright object, coloured object and human face) share other characteristics. On the one hand, they are not sources of light; they need to be shown in a well lit room. On the other hand, their visual features (contrast, reflection (brightness), colour, facial features, etc., make them attractive to look at.

Characteristics

4. Contrasted Object

As contrasted object, a 14,5 x 17 cm oval surface was used, with a black and white pattern of 1cm squares. This surface is used by means of a handle or rod. An easily available object for this purpose is a ping-pong racket. As horizontal movements are established earliest it is usually better to concentrate on these first.

5. Bright Object

The kind of surfaces which are highly reflective include a mirror or revolving mirrors, glass, Christmas tree baubles (begin by using large ones and ensure they are unbreakable), empty foil bag from a wine box or tinsel. To make the surface reflect more light a bright torch can be shone from behind the person's head onto the reflecting surface. The examiner could try shining it at different angles.

The essence of providing reflecting surfaces, rather than shining low levels of illumination is to increase the informational content of the events in the person's world. We are thereby facilitating the active stimulation that we are anxious to promote. Directed reaching is encouraged if real objects are present, rather than the purely sensory stimulation offered by levels of light. Long plastic tubes can be purchased. These give the impression of a light moving rapidly along a track. You can then arrange the tube so that the light appears to move in almost any direction. Beware of all disco lights which are based on the use of lasers. These should be avoided.

6. Coloured Object

Often it is best to begin with a small light source such as a pen torch. Use different coloured filters if you like. If successful try smaller objects. Other objects might include a ping-pong ball stuck on a thin rod, finger puppets or a favourite toy. You may have to suspend the object on invisible thread. Glove-puppets can be adapted so that features are highly contrasted. For the person whose language is affected, through hearing impairment or other difficulty, movement of the puppet may be made consequent upon her vocalisation. For some, the action of the puppet may be gross and related to the child producing any utterance. This can later be refined as success is obtained. Speech and language therapists often have superb routines with glove puppets. On the other hand, such a routine may be too intimidating for persons with personality disorders, who may avert looking at the puppets.

7.Human Face

Person being evaluated may appear not to make eye contact but instead direct their gaze to a person's hairline. Because in the process the person being evaluated appears to be avoiding making eye contact this may be interpreted mistakenly as indicating autistic features. An explanation relying on the presence of a visual impairment should not, however, be discounted. Just as different colour combinations or of black and white shading give different effects in contrast, so too do different features of the face give varying levels of contrast. On many occasions, contrast between a person's hairline and background of a wall will offer enhanced contrast - more than that afforded by the same person's eyes. This is by no means true in every instance. Where possible, encourage the person being evaluated to look towards the eyes, making more of a fuss of her if she does so.

8. Sound Object

As a complement to visual stimuli, a small bell producing a sharp sound is shown. Contrary to the previous stimuli, the bell is not introduced to be seen: it is made to ring at one and the other side of the head, near the ears and out of sight. The examiner observes if the person searches for the bell with their eyes, or if the person prepares for hearing its sound or if they show no response at all. This statement is simply to suggest that for the best chances of success you should concentrate on what the person being evaluated is best at. So if hearing shows the highest 'level', use this as a principal route for learning.

Parameters

Selected parameters were chosen among those that could be observed during the person's response to stimulation and could also provide information about visual functioning. In addition, these aspects were categorized in terms of significant responses of the population with other disabilities.

In coining the concepts relative to functional vision, two complementary guidelines were considered: one based on specific bibliography on visual terminology and the other, based on terms and nomenclature commonly used in the field by the Joan Amades Educational Centre's professionals.

VISUAL RESPONSE tick 1 to 10 boxes
Makes visual contact
Fixates
Searches to the right
Searches to the left
Searches above
Searches below
Makes horizontal tracking
Makes vertical tracking
Makes diagonal tracking
Makes circle tracking

Distance was measured in centimetres in order to establish sections for certain behaviours in terms of nearness or distance from the stimulus. Obviously this aspect is measured as excluding units.

DISTANCE tick a single box
0 - 25 cm
26 - 50 cm
51 - 100 cm
101 - 200 cm
201 - 300 cm

Continuous attention time (Blanksby, 1993) to a stimulus was considered to be over 5 seconds, and reduced or momentary attention time, less than 5 seconds. Elements included in this aspect are mutually exclusive. If attention was lost and resumed for the stimulus, this was regarded as uncontinuous attention. Continuous and uncontinuous (as modality) are mutually exclusive elements also.

ATTENTION tick 1 box for time and 1 box for modality
Momentary attention (< 5 seconds)
Brief attention (> 5 seconds)
Uncontinuous attention
Continuous attention

Motivation was measured in terms of the person's difficulty to pay attention to the stimulus and the examiner's effort to attract their interest. This aspect is categorized by means of exclusive elements.

MOTIVATION tick a single box
No additional motivation needed
Additional motivation needed
Much additional motivation needed

As for response times, immediate response times were established as less than 3 seconds following stimulus; delayed response times, more than 3 seconds following stimulation.

RESPONSE TIME tick a single box
Immediate response (< 3 seconds)
Delayed response (> 3 seconds)

Behavioural response was categorized as physical, psychological and perceptive, in an attempt to make a grading for awareness and response to a stimulus from lower to higher levels. Responses for this aspect may be overlapped, i.e. one, two or the three responses may occur. The hierarchy thus established is open to discussion; the purpose is to help determining a visual profile.

BEHAVIOURAL RESPONSE tick 1, 2 or 3 boxes
Physical manifestation is expressed
Psychological manifestation
Perceptive manifestation

If there is "no response", the examiner should try and repeat the procedure, introducing variation when possible and try to adapt it to the person being evaluated. When working with persons who have the most severe multiple learning difficulties, it can be difficult to determine whether any response is being made to an object or event. Sometimes a technique may be needed for refining our observation. One variety of tools does assist in this process.

A tool in itself, the PVFNC makes no claims to be a standardised test of vision, rather we offer it as a procedure or set of guidelines to help others in turn offer the most appropriate learning environments and activities to persons who have visual and multiple disabilities.

Profiles

We aimed at creating a Test which was: not too long (limited to 8 stimuli and 7 parameters to be assessed, with a maximum 28 boxes) and sensitive to the unique visual characteristics of the multiply impaired. This is not an easy task. Examiners, however, should interact carefully with the persons being evaluated (avoiding their becoming too tired, for instance) in order to obtain some valid results that in turn will help to make the adequate psycho-educational decisions.

By completing the PVFNC test, you have an opportunity to summarise all the information you gathered during the assessment. This comes in the form of a chart. This will give you an at-a-glance profile of the person. Use it to decide the areas of intervention on which to concentrate.

Obtaining a Profile

Have a look at the chart on the next page. The category axis includes the stimuli (as sunlight, etc.). The evaluation axis shows the scores obtained by each parameter. By observing the stimuli, you will see that there is a row corresponding to each of the previous sections. By the time you have finished your assessment you will have an at-a-glance profile of the persons visual functioning. The way to use the profile chart is to carry out each of the sections relative to the parameters measuring the person's responses. As you complete each section you are to transfer the scoring obtained. The chart containing the profile can be easily created with Microsoft Excel and this program's tools (Microsoft Office 2000 SR-1 Professional).

TOTAL SCORES	SUN	AMB	---	PEN	CON	BRI	COL	FACE	---	SOUND
VISUAL RESPONSES tick 1 to 10 boxes										
Makes visual contact	100	100		10	10	10	10	12,5		100
Fixates				10	10	10	10	12,5		
Searches to the right				10	10	10	10	12,5		
Searches to the left				10	10	10	10	12,5		
Searches above				10	10	10	10	12,5		
Searches below				10	10	10	10	12,5		
Makes horizontal tracking				10	10	10	10	12,5		
Makes vertical tracking				10	10	10	10	12,5		
Makes diagonal tracking				10	10	10	10			
Makes circular tracking				10	10	10	10			
DISTANCE tick a single box										
0 – 25 cm				8	8	8	8	8		
26 - 50 cm				16	16	16	16	16		
51 - 100 cm				33	33	33	33	33		
101 - 200 cm				66	66	66	66	66		
201 - 300 cm				100	100	100	100	100		
ATTENTION tick 1 box for time and 1 box for modality										
Momentary attention (< 5 seconds)				50	50	50	50	50		
Brief attention (> 5 seconds)				100	100	100	100	100		
Uncontinuous attention				50	50	50	50	50		
Continuous attention				100	100	100	100	100		
MOTIVATION tick a single box										
No additional motivation needed				100	100	100	100	100		
Additional motivation needed				67	67	67	67	67		
Much additional motivation needed				33	33	33	33	33		
RESPONSE TIME tick a single box										
Immediate response (< 3 seconds)	100	100		100	100	100	100	100		100
Delayed response (> 3 seconds)	50	50		50	50	50	50	50		50
BEHAVIOURAL RESPONSE tick 1, 2 or 3 boxes										
Physical manifestation	33	33		33	33	33	33	33		33
Psychological manifestation	33	33		33	33	33	33	33		33
Perceptive manifestation	33	33		33	33	33	33	33		33
NO RESPONSE PRESENT	0	0		0	0	0	0	0		0

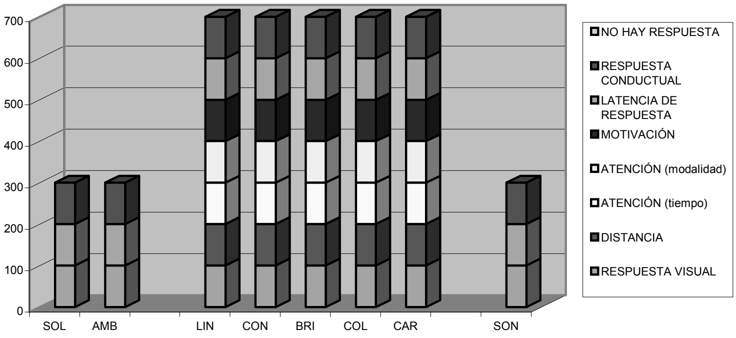
1) Scores for no responses present are erased on the worksheet; scores for responses are saved. A single box needs to be ticked for Distance, Motivation and Response Time: their scores are total, these results are therefore the final scoring for the parameter. Several boxes can be ticked for Visual Response and Behavioural Response: their scores

are parts and can be added up, provided that the maximum score is 100. Attention is divided into time and modality. Each is different from the other and two boxes need to be ticked, one for time and one for modality.

2) Data from the worksheet with the total scoring are transferred to the summary worksheet. Scores for Distance, Motivation and Response Time are added up, as well as Visual Response and Behavioural Response, provided always the maximum score is 100.

SCORING SUMMARY	SUN	AMB	---	PEN	CON	BRI	COL	FACE	---	SOUND
VISUAL RESPONSE										
DISTANCE										
ATTENTION (time)										
ATTENTION (modality)										
MOTIVATION										
RESPONSE TIME										
BEHAVIOURAL RESPONSE										
NO RESPONSE PRESENT										

3) After completing the worksheet containing the scoring summary with Excel, you have to select all the cells located between the names of stimuli and the parameters. The "Graph Assistant" menu will open for you: there are four steps to take:
Step 1 of 4: Graph type:
Choose "Standard", "Columns", " 3D-Column", "Next".
Step 2 of 4: Background Data:
Choose "Next".
Step 3 of 4: Graph Options:
If you want the person's name to be shown on the chart, or some reference, select "Titles", "Graph Title" and then "Next".
Step 4 of 4: Chart Location:
Select "Place chart" and then "New sheet". Choose a name for this sheet (such as the record number and date). Then choose "Finish".
The scoring axis will show the added scores for each stimulus. For sunlight, ambient light and sound stimuli, the best score shall not exceed 300. For the other stimuli, the maximum total shall always be 700 (Figure 1).



Traducción de términos eje horizontal, SOL= Sunlight	AMB= Ambient Light
LIN=Penlight	CON=Contrasted Object
BRI= Bright Object	COL= Coloured Object
CAR=Face	SON= Sound
Traducción de términos de la columna derecha	
RESPUESTA VISUAL	Visual Response
DISTANCIA	Distance
ATENCIÓN (tiempo)	Attention (time)
ATENCIÓN (modalidad)	Attention (modality)
MOTIVACIÓN	Motivation
LATENCIA DE RESPUESTA	Response Time
RESPUESTA CONDUCTUAL	Behavioural response
NO HAY RESPUESTA	No Response

With this chart displayed, you will be able to observe obtained scores for each parameter by placing the cursor on the columns.

Interpreting a Profile:

A profile will show the person's potential for visual response and their style of overall response to the visual stimulation provided by the examiner. The obtained chart shows both responses to stimulation and how the parameters' contribution.

A glance at your completed Summary Chart will show you the limit of the learner's visual abilities, including no response present (=0) and no stimulation provided (blank space). An analysis of stimulation may provide information about the objects (persons included), the objects (either source of light or reflecting light), and the qualities of the objects (contrast, brightness, colour, facial features) that the person could see.

Not surprisingly you may find some rows of the Summary Chart to be blank (tick not recorded). This tells you that at this point you have reached the limit for that learner's visual abilities.

As we have previously mentioned, we have to come to grips with an assessment schedule that is manageable, while at the same time being comprehensive enough for the purposes for which it is de signed - assessing functional vision. It is more important to carry out this procedure over a time determined individually for each learner. What will be right for one learner in one situation, will be inappropriate for the same learner at a different time or place; and would be different for two or more different learners. We would, however, argue that our approach is entirely appropriate to the particular population to which these guidelines are directed. We do not see the multiply disabled as conforming to some normative process which is commonly applied in other spheres.

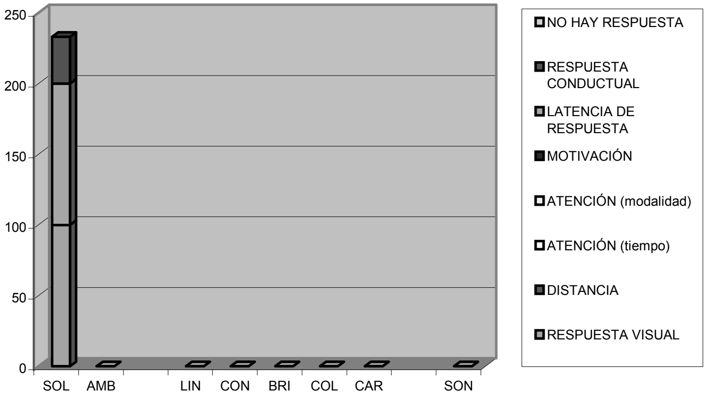
Defining the level of vision

The efficiency of the PVFNC Test should be measured by its being able to determine a visual functioning profile. This profile will be used to design a specific program for each individual, in accordance with the general characteristics of the group where that individual has been included based on their results.

From reading and interpreting the data obtained with the PVFNC Test, one of the three following profiles will be drawn: blindness, residual vision and functional residual vision.

In brief, blindness may be defined as no useful vision; clinically measured light perception or less, i.e. a situation where there is no response to any stimuli or where there is only response to natural or ambient light as light perception or light projection. There are no responses to other stimuli. However, for the purpose of multisensory stimulation, working with powerful lighting stimuli could be considered, as well as with the other senses.

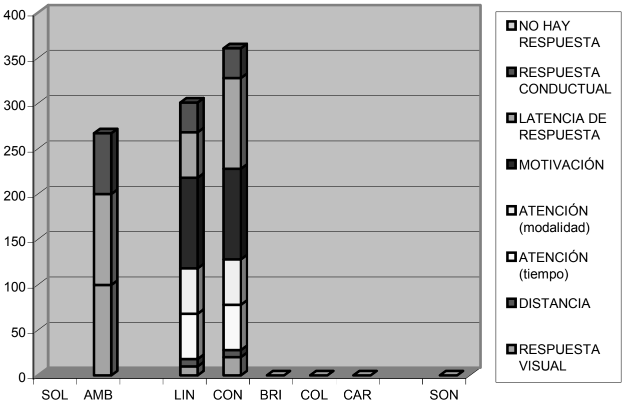
Sample of a Blindness Profile



Traducción de términos eje horizontal, SOL= Sunlight	AMB= Ambient Light
LIN=Penlight	CON=Contrasted Object
BRI= Bright Object	COL= Coloured Object
CAR=Face	SON= Sound
Traducción de términos de la columna derecha	
RESPUESTA VISUAL	Visual Response
DISTANCIA	Distance
ATENCIÓN (tiempo)	Attention (time)
ATENCIÓN (modalidad)	Attention (modality)
MOTIVACIÓN	Motivation
LATENCIA DE RESPUESTA	Response Time
RESPUESTA CONDUCTUAL	Behavioural response
NO HAY RESPUESTA	No Response

In brief, residual vision may be defined as a person's vision when there is response to certain stimuli but always an evoked response, i.e. there is no spontaneous response unless the stimulus approaches the person in an explicit way. The visual response is very precarious; the overall parameters are often very low. Occasionally, some stimuli may cause a behaviour-psychological response, but a perception response is rare. To encourage multisensory stimulation, a specific proposal to improve the person's remaining sight can be drawn to include visual stimulation.

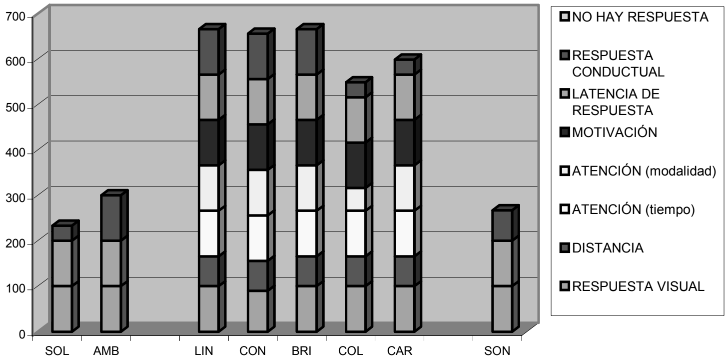
Sample of a Residual Vision Profile



Traducción de términos eje horizontal SOL= Sunlight	AMB= Ambient Light
LIN=Penlight	CON=Contrasted Object
BRI= Bright Object	COL= Coloured Object
CAR=Face	SON= Sound
Traducción de términos de la columna derecha	
RESPUESTA VISUAL	Visual Response
DISTANCIA	Distance
ATENCIÓN (tiempo)	Attention (time)
ATENCIÓN (modalidad)	Attention (modality)
MOTIVACIÓN	Motivation
LATENCIA DE RESPUESTA	Response Time
RESPUESTA CONDUCTUAL	Behavioural response
NO HAY RESPUESTA	No Response

In brief, functional residual vision can be described as a person's vision when there is an explicit response to certain stimuli --which have nevertheless to be facilitated in terms of distance to the learner or motivation. Behavioural responses are a key element. There is also a visual response to the sound of the bell, even though efforts are made by the learner. Low vision specialists can provide advice on the best lighting and contrast to maximize remaining vision. Sensory stimulation activities can help children use their remaining vision more effectively. The theory is that by performing these activities, the visual areas of the brain are stimulated to maximize the development of vision. Other times, the intensity of stimuli being introduced should be reduced in order to get a response.

Sample of a Functional Residual Vision Profile



Traducción de términos eje horizontal SOL= Sunlight	AMB= Ambient Light
LIN=Penlight	CON=Contrasted Object
BRI= Bright Object	COL= Coloured Object
CAR=Face	SON= Sound
Traducción de términos de la columna derecha	
RESPUESTA VISUAL	Visual Response
DISTANCIA	Distance
ATENCIÓN (tiempo)	Attention (time)
ATENCIÓN (modalidad)	Attention (modality)
MOTIVACIÓN	Motivation
LATENCIA DE RESPUESTA	Response Time
RESPUESTA CONDUCTUAL	Behavioural response
NO HAY RESPUESTA	No Response

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7 Developmental assessment of blind children

By: Delaet, Leo
From: Belgium
Organisation: Centrum Ganspoel

Assessment of development in young blind children is a challenge for all of us, who are involved in early intervention.
In our work with these children and their families we developed a procedure for assessment.

In my presentation at the Cracow conference I focused on the idea of ***assessment*** *as an opportunity to discover ways for development for a particular child and his family.*
As learning and development are social processes – involving other persons and relations – we must try to establish in our assessment activities some kind of relationship. Assessment can be seen then as a clinical interview (Greenspan) – a sequence of meaningful interactions between the child and the visiting person (as assessment takes place at home) and not just an objective evaluation. The main question is : how can we (including parents and teachers) reach and teach this blind child in the best possible way?
We see ***development*** *as an interactive process : an individual child and his environment are equally involved.*
Blindness is considered as a factor of vulnerability (Revuelta), threatening this interaction. Early intervention is set up as compensation.
But developmental psychology inspires us these days to look for protective factors as well : in the environment and in the child herself. Sensitive and responsive parents provide good conditions for development. Blind children themselves often show a remarkable strength to cope with developmental problems, imposed by blindness. In early intervention we make use of these protective factors and try to make them stronger.

Today I would like to focus on one more aspect of **assessment in early intervention with young blind children:** the **materials** we use in the sessions: which materials do we use, why and how do we use them?
We don't have enough time to say much about the analysis and interpretation of the results that we get from assessment and that we combine with observations in daily family situations.
Of course there is a lot to be said about separate areas of development, developmental lines – some of them specific for blind children – and the more general personal development.
Observing blind children is always a fascinating experience. Using video we can watch the observation again and again and make new discoveries every time. During this presentation I will use some recordings in order to make myself clearer – I hope. While we look at these recorded observations, I will mention some behaviour that we consider to be signs of good development in blind children. We would like to make a list of these signs and I am going to ask your help to do so.
Materials used in the assessment of young blind children
Out of a range of materials I have chosen four items to present to you, because we use them regularly in our assessment sessions.

My questions to you will be then: do you agree with this choice? Do you use similar or totally different materials? What suggestions do you have to improve our set of materials?

(video)

1.1 **bell tree**: a large wooden 'tree' with different bells, hung up in holes, all within reach when the child is standing in front of it. This is often the first object I introduce to the child. You could say: it's my way to introduce myself. The purpose is to initiate an interaction and gently lead the child in the exploration of this new object. Doing this we have a lot of questions in our mind :

(video)

- how does the child react to our (verbal or nonverbal) invitation for exploring this toy
- in what way do we get the child's attention and how can we direct it at the object
- how can we make her feel safe and comfortable enough to join us in exploring or just go on by herself; do we feel left out then or can we join her?
- Does exploration just mean being active (being caught in direct action) or do we notice signs of reflection and intentional activity, meaning: I know what I'm doing. Speaking of signs of good development: this seems to be an important sign to us.
- How does she handle this object? With one or both hands?
  Does she explore the whole object or just a part of it?
- Is the child building up a mental representation that she can use later, when we offer the object a second time? Does she recognizes it and knows what to do with it?
- Can we share some experiences and feelings about this strange object? Do we feel anxiety, excitation, inhibition, interest? How does she cope with these feelings? And do we have some fun together?
- How do we estimate the quality of contact at the start of the session and during this interaction (it takes from two to twenty minutes)
  What happens when we end this situation and say: now we're going to do something else?

(video)

1.2 **treasure box**: a round IKEA box with several lids, containing different sorts of small objects.

We use the treasure box in a similar way as the bell tree.
Blind children are often attracted by the possibility of moving the lids (opening and closing them) and by making sounds that way.
We like to join them for a while. Do they accept that? Is there any turn taking in making sounds? Any imitation?
We wonder if they start exploring the inside of the box – with or without our suggestion.
Do they recognize and identify the objects inside? Do they have preferences?
Do they dislike some of them?
And what can they do with them? Explore their qualities for sound making? Taste them? Throw them away? Put them back in the box, closing it and go searching again? What kind of manipulations and combinations can we observe?
Do they allow us to join them? Can we make them imitate our actions with blocks or tubes or anything else? Can we teach them a new skill?
Later in this session I will show some of these object manipulations with materials from the treasure box

(video)
1.3 a medium sized **metal bucket containing some plastic bottles** with different substances in it, like water, sand, pebbles, a marble, etc. The child cannot open these bottles without help.
We observe how the child uses his hands when he explores the content of the bucket. The 'comprehending hand' is again a sign of good development.
Furthermore we are interested in ways of working and exploring together.
We wonder if the child will ask for help or accept our help when needed.
How does he react when the bottle is opened and we discover the cold water inside?
How do we communicate with one another wishes and ideas about what happens?
Does the child accept limits we set (like not throwing the water on the floor or drinking it)?

(video)
1.4 the real experience: a box or **basket with real objects** from everyday life like cups and spoons, a coomb, a towel, a real apple and orange, an onion and a carrot, an empty bottle, a stone from a river, …
We use the objects for the assessment of the child's abilities to recognize and name objects, for functional play and use of objects (as a necessary step towards fantasy play).
Can we have a conversation about some of these objects?
Do we know the child's interests? Does he/she share them with us?

Analysis and interpretation

In order to analyse our observations from daily situations and integrate them with the results of the assessment sessions we take a look at different **developmental areas**.
It seems a good idea to make use of so called **developmental lines** and to try to point out the position of an individual child on each line.
Some of these developmental lines are specific for blind children, like the transition from mouth to hand in the use of objects and the development of functional play to fantasy play and constructive play.
Developmental lines consist of integrated categories of behaviour that we consider significant for the development of an individual person in relation with his environment. The developmental line from complete dependency towards self-reliance is a classical example of such a developmental line.
Most developmental lines are linked to the educational goals we set in all areas.
For an individual person or child it is important to have a good balance between different lines that are also connected to each other.
Children should have reached a certain stage on several lines (like language, self care, play behaviour) before they can successfully enter a new situation like nursery school.
We believe that some developmental lines have a specific course for blind children.
Important steps on these lines might represent our **'signs of good development'**. We mentioned some of these signs before.
Developmental lines represent a more analytic approach. Signs of good development are quite isolated observations.
Moreover we try to get a **general image** of the **personal and social development**: an image of the **child as a person and his relations with others.**
And finally we are interested in the important **conditions for further development,** including the support and structure that the environment is providing and that can help the child in achieving new skills and in growing as a person. Remember that the

main question of our interview with the child was: how can we reach and teach this child?

(to be left out until: conclusion)
We don't have time to explore more than one developmental area.
Right now I want to focus on one of them: **the area of 'development of togetherness'** *because we believe this area contains the underlying process of development in most area's and of course of the personal and social development of blind children.*
This line goes back to birth and the first 'dancing cheek by cheek' experiences (Meyers and Lansky). If we see a child enjoying these interactions and being excited about them we believe this is one of the first signs that development has started well.
We know that basic elements of dialogue are present in these interactions. During the first years of life, many different forms of togetherness are evolving. Cf Anette Ingsholt.
We just give a few illustrations to show how sensitive and responsive **parents and other adults** *engage in interactions and take an important role in the development of play, language, mobility, daily living skills and so on. These moments of togetherness should always be an important focus of assessment.*
Looking at some video materials I was surprised by the influence of a young girl – a sister of one of our blind children on her brother's development. Crossing several developmental area's (role play, mobility, cooperation, companionship) she shows us how important these interactions between children can be for overall development. No assessment could make that more clear.

It's time to come to a conclusion

The results of assessment (using specific materials in specific situations) and many observations in everyday life help us to understand the position of blind children on different developmental lines. And they help us to understand what kind of approach they need to make new steps on separate lines and as a whole person – on becoming a 'self' in close relation with the people around them.
At the end of this presentation I'd also like to invite you to give your own ideas about three topics I mentioned before:

- what about materials used for assessment ?
- what about specific developmental lines for blind children?
- What about signs of good development for young blind children?

8 Functional Vision Assessment for children with complex needs

By: Henriksen, Anne
From: Germany
Organisation: Staatliche Schule für Sehgeschädigte, Schleswig

A high percentage of children with multiple disabilities have a visual impairment, which often remains unrecognized. Many of these children do not visit schools for blind or visually impaired, but schools for children with learning disabilities, mental disabilities or physical disabilities.

A vision screening in a clinical setting has often proved to be unsuccessful for this group of children for various reasons. Therefore it is difficult or even impossible for parents and teachers to get useful information about the visual skills of a child.

The State School for Visually Impaired in Schleswig, Germany is offering consultancy and support to parents, teachers, therapists and caregivers of multiple disabled visually impaired (MDVI) children.

The Functional Vision Assessment is an important part in the whole process and gives information about the way children use their vision in different situations and what factors affect what they can see.

It is the aim of this lecture to define briefly the term "Functional Vision" and to describe visual functions that should be assessed in children with low vision and multiple disabilities. Afterwards four areas to improve use of vision will be presented and some examples of ideas for measures and interventions will be given. These examples should help educators to design an appropriate environment and to select suitable materials in order to enhance the child´ s development in as many areas as possible.

Visual Functions / Functional Vision

The term "Visual Functions" describes how the eye and the visual system functions. Visual functions (e.g. visual acuity, visual field) are usually measured for each eye separately, they test threshold performance, they evaluate a single variable at a time and they are performed in a static environment.

By contrast the term "Functional Vision" describes the person's visual skills. Functional vision is often measured binocularly, it examines suprathreshold (above threshold) performance. Some categories are less precise (e.g. lighting situations may differ). Functional Vision is affected by multiple variables and is usually performed in dynamic environments (Colenbrander 2002). It is the aim of the Functional Vision Evaluation to assess the children's ability to use their vision in everyday tasks of real life and to design appropriate educational measures.

A Functional Vision Assessment includes the use of formal tests, as used in clinical settings as well as observations in typical surroundings (e.g. home, school) to determine visual demands and requirements of the child.

Assessment of functional vision is a continuing process, since visual functions and functional tasks can change over time (e.g. in transition from school to work, transition from living with parents to living in sheltered homes, etc.)

Functional Vision Evaluation

A basic eye examination by an ophthalmologist should always take place before a Functional Vision Evaluation starts. This is necessary to make sure that refractive errors (Myopia or Hyperopia) are corrected through conventional optical devices and also in order to know as much as possible about the cause of a visual impairment. Knowing the cause of a person's visual impairment helps to identify which of his or her visual functions are probably affected. But only knowing about the cause is usually insufficient to predict an individual's visual functioning.

Visual Functions tested or observed in a Functional Vision Assessment

This is a collection of functions that should be tested within a Vision Assessment for children with complex needs. It is not always necessary to test every item in every child and very often it is not possible to do all these items in only one meeting.

- Visual Awareness
- Reflexes (pupil-, blink reflex)
- Oculomotor Functions
- Visual Acuity
- Visual Fields
- Contrast Sensitivity
- Light Sensitivity
- Colour Vision
- Form Perception
- Motion Perception
- Depth Perception
- Recognition of Faces
- Visually directed movements (eye-hand coordination)
- Need of Magnification
- Need of light

The testing is usually done by specialists in this area. In our institution it is the task of either the orthoptist or the low-vision-trainer, after an ophthalmologist has seen the child.

More information about the functional vision assessment can be found in the documentation of the Comenius 1 project “Expertise for teachers who do itinerary work for MDVI children”. The outcome of this Comenius project will be published in summer 2006.

After doing all those tests and collecting this tremendous amount of information it is necessary to explain it to parents and teachers or caregivers. This includes a written report in an understandable language including ideas for educational interventions. In the pedagogical context there are usually four important aspects:

1. **Magnification:** How large must a symbol or material be, that the child can discriminate it easily from others?
2. **Contrast:** How high must the contrast be to see learning materials or expressions of faces easily?
3. **Complexity:** What possibilities do we have to create learning environments with fewer distractions?
4. **Illumination:** Does lighting need to be modified?

1. Magnification

Magnification through proximity

Many children do not pay attention to material of greater distances if it is too small. Recognition of faces and facial expressions is also difficult for children with impaired clarity of visual input. One possibility to compensate is getting closer to objects. In communication situations we can let the child look and reach for faces in a close distance, or use a mirror to show the child it’s own face. We can use photos or slides of parents and siblings in a slide projector and let the child sit very close in front of it.

Magnification through Plus Lenses
Difficulties due to impaired clarity of vision can also be compensated by using optical devices. Additional plus lenses make near objects clearer, without the need of accommodation. The plus lens should be inversely related to the distance at which the child is holding near material.

2. Enhancing Contrast

Recognition of faces and facial expressions is also difficult for children with impaired contrast sensitivity. It can be compensated by enhancing the contrast of faces. The use of make-up gives more contrast to faces, taking slides of these faces, or using additional light to lighten the face of the care person are other possibilities to help children with Low Contrast Sensitivity. It is also possible to enhance contrast through change of background.

3. Reduction of Complexity

Brain damage related vision loss (Cerebral Visual Impairment or CVI) is today the leading cause of visual impairment in children (Zihl, Priglinger 2002).
A high percentage of children who visit schools for children with mental disabilities have cerebral palsy, hydrocephalus, were born prematurely or have other disorders of the brain and are at risk of having brain damage related vision loss. Some children with CVI have difficulties separating figures from the background and difficulties in differentiating crowded images. Many see better in environments with fewer distractions (Dutton 2001).

This means, that
- Visual information needs to be clear.
- Only essential visual information should be provided.
- Work surfaces and background surfaces with visual patterns make it difficult for children with CVI to select the visual target.
- Decorative items hanging from the ceiling, carpets with visual patterns, crowded walls and spaces filled with objects also make it difficult to get a good orientation in classrooms.

4. Illumination

Many children with severe multiple disabilities lie on mattresses, resonance boards or beds in their classroom. It is important to avoid light shining directly into children's eyes when lying on their back looking at overhead lights or windows.
- Use indirect light sources whenever possible.
- Avoid extreme luminance differences within rooms and between rooms.
- Dim the light, if a child is sensitive to light.
- Give special filters (blue blocker), or sunglasses and a cap, when the child has photophobia.
- Give the child time to adapt from light to dark and from dark to light.
- Eliminate as much glare as possible on all surfaces.
- Increase lighting by moving the light source closer to the child, if the child needs more light in order to see well.

Summary

A good functional vision assessment for children with Low Vision and multiple disabilities should always start with a basic eye examination by an ophthalmologist.

This eye examination should be followed by a functional vision assessment done by a low vision specialist.

It is the aim of the functional vision assessment to get more information about the way children use their vision in everyday tasks, to describe children's visual skills, but also to design appropriate educational interventions and to select suitable materials. It includes tests that are used in clinical settings as well as observations of parents, classroom-teachers and special teachers in typical surroundings.

All the information that has been collected during the assessment has to be summarized in a report that is written in an understandable language, so that parents, therapists, teachers and caregivers know what how to design appropriate educational measures and to enhance the child´ s development in as many areas as possible.

Functional Vision is not a set of skills that operate in isolation. It is closely related to other sensory, motor and cognitive systems and should always have something to do with pleasure and joy. Create visually interesting situations and environments for every child in everyday tasks and encourage children to use their vision in as many areas as possible.

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9 Assessment protocol for children with multiple visual impairments

By: Lijnders, Henriette
From: The Netherlands
Organisation: Sensis

Reason and purpose

More and more children are referred to our centre who have problems in visual functioning, but who are mostly not visually impaired according to the WHO criteria of visual acuity and visual field. They experience visual limitations in daily life at home or at school which are difficult to explain.

Parents, teachers, and care givers already went to other centres for assessment but still they have questions how to handle these problems. For these children our regular assessment procedure was not adequate.

So there was

- a need to survey the nature of the problems of these children with an effective instrument and
- a need of solid advice for guidance.

From 2002 till 2004 we did a project at Sensis. The purpose of this project was to develop an appropriate protocol for multi-disciplinary assessment (in order to objectify and specify the visual impairments and disabilities) in children with (suspected) multiple visual impairments (MVI) in order to improve guidance and support.

Target group, materials and methods

Target group

Who are these children with multiple visual impairments? Often they come from Rehabilitation centres or special schools, but also from schools for the visually impaired children or regular schools. There is a suspicion that besides the reduced visual acuity they also have impairments in oculomotor-, visual perceptual- or visuomotor functioning. Problems in visual information processing are common in these children. They often have neurological pathology.

Children with CVI belong to this group. Their visual impairments may be the effect of ocular and/ or cerebral pathology. Their problems occur in evident visual limitations (disabilities) while playing, in school skills, in communication, social contacts, orientation and mobility and activities of daily life.

The visual acuity often (e.g. 0.5 or 0.6) is not that low that the limitations in visual functioning can be explained from the visual sensory impairment.

The ICF offers us a good model for the visual functioning of these children.

It is hard to classify this mixed group of children. To prevent the target group from becoming too large on the one hand or that we miss children on the other hand in- and exclusion criteria are formulated.

We choose for the school age 4 to 12 because up to 4 there are many instruments available to get a clear picture of visual functioning. The developmental age should be at least 3 ½. Visual acuity was an important criterion. Acuity below O.1 influences the functioning to such a degree that it is difficult to differentiate between the kind of the visual impairments. The upper limit was placed at 0.6 (WHO is 0.3). But during the pilot study we decided to see 4 children with a visual acuity above 0.6 because they had so many problems and a risky anamnesis. (e.g. prematurity).

To do the examinations it is important that the children are cooperative and task oriented.

The visual sensory impairment is combined with other suspected visual impairments. (Oc, Vm. Vp)

We already told, and this is a very important criterion, that they should have obvious visual limitations in daily life that cannot be fully explained by their visual acuity or visual field. They have additional neurological or developmental disorders. In these children it is important to get a clear picture of their anamnesis.

Exclusion criteria we made are, severe mental retardation, autism and dyslexia.

We can distinguish a few groups of children who are at risk for developing multiple visual impairments. At first there are the premature children. Its known that prematurity is associated with poor visual and cognitive outcome. Then there is a group of children with brain damage. The damage can be brain malformation, congenital or acquired. Well known are the children with Periventricular Leucomalacia, Intraventricular Haemorrhage, infantile encephalopathy or contusio cerebri. Finally there is a group of children with uncomprehended developmental delay.

Problems in visual information processing are common in children with MVI. So we make a little excursion to the visual system.

All conscious cortical visual processes start in the primary visual cortex V-1. For further visual information processing there are two important streams: the dorsal stream and the ventral stream. The dorsal stream is known as WHERE and HOW, the ventral stream as WHAT and WHO. (Further information on the slides).

Procedure

When we developed the assessment protocol we had the following basic principles:

- The protocol should have an additional value of regular assessment.
- Because of the complexity of the impairments and disabilities the assessment should be carried out by a multidisciplinary team.
- To get an insight in the problems of the child an extensive hetero-anamnesis is important: medical, neurological, ophthalmologic, developmental and the visual functioning.
- In the composition of the assessment battery (series) we loked for instruments that could give us a clear picture of the four areas of visual function: visual sensory, oculomotor, visual perceptual, visuomotor and also of the visual behaviour.
- On the basis of the new protocol we must be able to improve guidance and support in daily life.

In the pilot period all children were assessed with an experimental, fixed protocol by each examiner. The assessment took 2 days, 7 hours. We used video-registration and the results were processed in a database. On the basis of this pilot study with 10 children a phased protocol is developed which is effective and efficient for clinical practice. This phased protocol is partly standardised and partly adapted to the problems and questions of the individual child.

All the children are assessed multi-disciplinairy: anamnestic, ophthalmologic, orthoptic, psychologic, physiotherapeutic.

In our assessment protocol we pay attention to the 4 visual functions (ICF).

- visual sensory functions : quality of the picture
- oculomotor functions: eye movements
- visual perceptual cognitive functions: reception, processing and comprehension
- visuo-motor functions: integration of seeing and acting

The anamnestic assessment is done by the social worker. For this we made a special questionnaire.

Ophthalmologic assessment was regular

Orthoptic assessment was partly regular. Special attention was given to crowding, accommodation, quality of eye movements, vestibular ocular reflex, and optokinetic nystagmus.

The psychological assessment had the nature of a neuropsychological assessment. First of all we should have a picture of the non-verbal intelligence (Kaufman) for the sake of interpretation. We looked for new valid instruments: the Nepsy, L-94, and the DTVP-2.These instruments examine visual perception and the visuomotor function. Also some instruments of L. Hyvarinen, Postbox, Rectangels, Heidi expressions, were used. These instruments are not validated, but are suitable for especially the youngest children and the children with a mild mental retardation. Much attention was given to observation of general and visual behaviour.

Items in the paediatric physiotherapeutic assessment are: Motometry (motor skills): static and dynamic coordination/balance, manual skills, ball skills etc.

Motoscopy: (quality of posture and movement): relation between motor skills and visual functioning, oculomotor function, visual scanning in space (both in children with and without neurological motor disorders).

Sensorymotor integration: e.g. tactile gnosis, imitation of posture, spatial orientation, vestibular gnosis).

Al examiners observed general and visual behaviours on a 3-issue list.

Results and conclusions

The results can be divided on the level of the target group, the model of assessment and the organisation and execution of the multidisciplinary protocol. We only give the most important ones.

- The assessment protocol is effective: 8 out of 10 children had multiple visual impairments.
- The inclusion and exclusion criteria are suitable for selection. But: the upper limit visual acuity criterion should be changed, because 4 out of 10 children who had a higher acuity as 0.6, seemed to be diagnosed as children with multiple visual impairments.
- The medical-neurological impairments in combination with visual limitations are better predictors of MVI than the ocular diagnosis.
- With the more specific and integrated information we are able to give better advice regarding to guidance. Even though it still is not optimal.
- The physiotherapist is essential as regular assessor for MVI, especially for the children who also have motor impairments.
- It is useful to consult a neurologist or neuro-psychologist.
- Because the group was small (10) and heterogeneous is not possible to establish statistically significant relations between the disorders, impairments and disabilities.

See for further results the slides

Recommendations

- WHO criteria or ICF: the indication criteria for assessment and guidance should not be restricted to visual acuity and visual field (visual sensory impairment). The diagnosis, suspicion of impairments in the other visual functions and especially the limitations children expire are also important for indication. So indication criteria should be extended. The ICF offers us a good framework
- Advices for guidance are more specific. Further study however is needed.
- Analogue to this project it is recommended to develop a protocol for children aged 2 to 4 with the suspicion of multiple visual problems.

10 The value of Assessment in the Evaluation of Capabilities and Aptitudes for Profession Finding Decisions

By: Gerstenberger, Sabine
From: Germany
Organisation: SFZ BBW für Blinde und Sehbehinderte Chemnitz gGmbH

Assessment means, amongst other things, assessing; determining; evaluating; measuring; examining; ascertaining; judging; estimating; identifying

In other words, it is about ascertaining/assessing/and judging capabilities, aptitudes/talents, skills and also inclinations – competences – and about determining potential – resources that can be tapped into and the conditions necessary to do so. In short, it is about a possible guarantee of success. In times of increasingly scant resources and tight budgets, using resources effectively is a "must"! This means that poor investments need to be reduced and eliminated as far as possible. Of course, you cannot always plan everything with absolute certainty, but we should be working with the least possible amount of risk. For this reason, more and more small and medium-sized enterprises are interested in selecting the right trainees and they are then prepared to invest in their choice. The instrument they use for making this assessment (in other words for determining the competences) is an assessment centre. Assessment centres (known as AC's) are increasingly being held by vocational educational establishments e.g. by vocational training centres but also by special institutes (e.g. IMBSE- Institute for Measures to Promote Professional and Social Integration; INBAS North-Rhine Westphalia) and in large companies under the instruction of experts.

I think a few explanations are necessary before I continue. Although the term assessment centre is an English term, the roots of the procedure can be traced back to Germany. In the First World War this method was used to select pilots, radio operators and drivers. The use of this tool to select officers in the Weimar Republic introduced it to Great Britain – where it was also used to select officers – and to the USA, which initially used this method for selecting secret agents. Later management staffs were also chosen this way and this led the procedure back to Germany in 1970. It is also used by the Netherlands and other European countries. Just to give you some background information.

The aim of the assessment centre is to determine **competences**. Competences are the abilities of individuals to organise themselves and include wanting, being able and being allowed. Want: an individual's willingness to carry out an action in a certain way with a clearly defined goal (motivation)

Being able to: refers to the knowledge relevant for a particular action, skills and experience (qualification)

Being allowed to: giving the person taking action a legitimate, desired scope for action (in a field of responsibility with clear boundaries)

Someone is competent when they can carry out a desired action in the best possible way.

We can distinguish between and assess different forms of competence:

<u>Professional competences:</u> Having a disposition / the facility to organise and use one's intellect independently, i.e., to solve problems creatively with professional competence and specialist skills, to classify knowledge purposefully and evaluate it.

<u>Methodological competences:</u> Having a disposition / the facility to organise the use of instruments independently, i.e., using methods creatively to shape activities, tasks and solutions and in so doing structuring the cognitive approach as well.

Social competences: Having a disposition / the facility to organise communicative and cooperative actions independently, i.e., to discuss critically with others and find common ground with others, to conduct group relations and relations with others in such a way as to develop new plans and goals.

Personal competences: Having a disposition / the facility to reflect independently (looking back), i.e., being able to appraise oneself, productive attitudes, preserving values, developing motives and self-image, developing one's own talents, motivation, and ways of achieving goals; developing oneself creatively at work / outside work and learning.

Competence to act: Having a disposition / the facility to act independently overall, i.e., of integrating many or all of the above-mentioned competences.

The selection of exercises determines which competences shall be observed and assessed. The construction of an assessment centre, the selection of exercises to be deployed and the general conditions are critical for the success of the process.

Firstly, there has to be a need, which has to be precisely defined (which competences should the successful trainee have?). Secondly, a critical situation (critical incident technique) must be found in which these competences can be observed. This situation must be so acute that one can tease out the absolute best - maximum – most competent reaction and the most unsustainable – most negative – most incompetent reaction. But the reaction is not the aim of the task; it should become visible naturally. So, the framework conditions must be clearly defined to ensure comparability.

We will now take a closer look at the assessment centre as a tool.

At an assessment centre (AC) several participants conduct a series of exercises and tasks at the same time. Their behaviour and performance are observed by several trained observers for a fixed period of time according to categories laid down in advance. The observations are then evaluated.

To ensure the quality of the process the following quality standards must be met:

1.Requirements-oriented

Determining the needs is the basis of a purposeful and effective AC

2.Actions-oriented

Create the requirements based on the profession in order to be able to assess professional performance

3.Principle of controlled subjectivity

Use several trained observers to balance out subjectivity

4.Simulation of real requirements

Reflect the range of tasks in the AC and reproduce future career development

5.Principle of transparency

Inform all participants of the procedure and make it understandable / transparent for the participants (goal; risks)

6.Individual feedback

Provide valuable, individual feedback – relevant to the present and critical but with a positive basic attitude towards participant, provide recommendations

7.System principle

The AC must be integrated into the overall system i.e., consider links to follow-up training measures etc and the participants selected for the AC

8.Quality checks and control

Constant, continuous improvement of AC; adapt to new needs or participants; iron out problems; improve implementation on an ongoing basis

9.Organised process management

Complex, dynamic process – for that an organised system is necessary – the use of a presenter

These quality criteria have to be observed; otherwise the term AC is not justified.
In the assessment, in other words when appraising the observations, one must pay attention to several 'side-effects' that can arise, and which the observer has to be aware of so that their influence on the observations can be minimised.

Side-effects of observations
- Sympathy / antipathy
- Simultaneous tasks (overload error)
- Halo (one personality trait outshines overall conduct)
- Tendency to the middle (distribution error – impulse to form average values from extremes)
- Pygmalion (a person behaves according to the assessment they've been given – e.g. caused by clothes or something similar)
- The observed person tries extremely hard
- Contrast and adaptation level (distortion of assessment due to other participants of varying competence being assessed at the same time or after each other)

We have to be aware of these possible effects in order to try and level out their influence so that we can claim objective subjectivity.
I will now say something about the presentation and carrying out of an AC.

Example

We have been holding assessment centres at the SFZ vocational training centre since spring 2003 for trying out work options and determining aptitude.
Participants (about 4) arrive, are welcomed by the deputy training manager and they are then shown round the centre and the places they need to know. The participants are also asked about their career ambitions and expectations. Some of our requirements for clarifying suitability for an occupation are laid down by the Federal Labour Agency and the State Social Insurance Office – depending on who is carrying the costs – and these are what we base our selection of AC tasks on.
After eating breakfast together, paid for by the hosts, the assessment centre begins. The participants are informed about the AC, the goals, the contents and the conditions.
The introduction is done somewhat differently in other centres – mostly with a market of opportunities and targeted discussions with interested candidates and relatives in order to clarify whether the interested candidate would like to take part, if so under which conditions, and what benefits are guaranteed.
Since the participants are enrolled by whichever body is bearing the costs, the question of whether they will participate is not relevant. Having said that, since the beginning of

our AC introduction only 2 of about 60 participants said in the initial discussions that they were not there voluntarily. Yet by the final discussion both these participants were convinced of the usefulness of the measure and said that they were convinced by all they could learn.

Following an explanation by and introduction to the AC presenter, the first exercise is explained.

Everyone introduces themselves using questionnaires – Arrived be present – time for questionnaires about 7-10 minutes

The participants ask each other questions, noting down key words and then briefly introducing the person they've asked. (This reveals the participant's ability to communicate and their command of literacy and numeric skills – reading, writing and their ability to express themselves orally.)

The second exercise follows immediately after that. The participants have to write down the things in life that are very important to them on 6 cards – as key words or phrases – and then make a pyramid out of these – the pyramid of life. Next each participant is asked to present his/her pyramid. 10 minutes are allocated for this. Once everyone has said something about their pyramid, the participants are given the task of building one common pyramid from the existing ones – with the cards they already have. But the pyramid is only supposed to contain 6 cards. So they have to decide which cards to use and which to leave aside. One participant has the task of presenting the overall pyramid. Again they have 10 minutes. This is a good exercise for observing personal competences (values in life), professional competences (system of working) and social competences (team skills; ability to assert themselves).

The third and last AC task is carried out the next day. This last task is a construction task – at the moment we are using the tower building exercise. The participants have to build a tower using exactly the materials stated, a tower that stands alone without leaning against anything, which is certainly higher than it is wide and which can support a ruler. The paper provided has to be cut into strips which should not be wider than 3 cm. The participants can stick it together any way they see fit. They have 45 minutes for the task. This exercise can reveal professional, personal, social and methodological competences. We pay particular attention to their system of working, their handiwork; time management and team skills.

The observers (minimum of 2, maximum of 4) observe the participants while they are completing the tasks and take notes (micro-observation). These notes are then sorted out, categorised and evaluated in the observers/ assessors conference which is held after the third task. A report is drawn up based on these notes and makes a recommendation at the end. A feedback session is then held with the participant based on this report, the participant is told the conclusions of the observations personally in a one-to-one meeting and a recommendation is given. The participant can then give his response. If necessary the participant's response can be attached to the report as an appendix.

A particular process (BAKQQER) is used for this process.

Beobachten (observe) concrete, targeted awareness
Aufschreiben (write down) what actually happened – no interpretation
Klassifizieren (classification) categorising the observations into observation dimensions
Qualifizieren (qualify) qualifying each observation dimension in terms of intensity and specificity
Quantifizieren (quantify)
Evaluieren (evaluate) work out individual aspects (assess.-conference)
Report specific feedback as basis for consultation

In addition to this report about the assessment centre we also compose other written work on the psychodiagnostics, the medical history, orthoptic findings (determining functional vision), medical suitability statements, social education statements (from the boarding school), an ophthalmologist's analysis if required, the results from the different occupations that were tried out and the minutes of the closing discussion. During this discussion all the results are evaluated with the participant, the next steps are discussed and an overall recommendation for the funding body is drawn up. The funding body's inquiries are also answered in the final report and the overall recommendation is formulated precisely and in detail.

At the moment we are drawing up a profile sheet for recording the observation dimensions and their specific nature. This will give both the funding body and the participant an overview.

I would just like to say something briefly about the terms assessment centre, analysis of potential and profiling. Assessment centres are primarily used to select applicants for certain positions and training courses. Analyses of potential are mostly used to determine what specific support is needed. Profiling is used for specific rehabilitation e. g. on the employment market. The pool of instruments is the same for all three processes. For each measure certain instruments are selected in order to reach the set goal. All three processes are similar.

I hope that in my presentation I have illustrated that an AC is a very effective method of determining competences. However, it is also a costly method so it should only be used after careful consideration and analysis of the situation. On the other hand with this method you can virtually eliminate poor investments in vocational training. At the same time it highlights the potential and resources of the participant which in turn makes is possible to support this participant in a targeted and efficient way and with a very good chance of success. Therefore, investing before the training means being able to provide solid and cost-effective training, to judge and plan the financial situation accurately and save costs arising from poor investments.

11 Imitation – a powerful mediator for the development of congenitally deaf blind children

By: Pittroff, Hanne
From: Germany
Organisation: Blindeninstitutsstiftung Würzburg

Introduction

Children are born with many competencies, which go far beyond their cognitive, motoric, perceptional and emotional abilities (which Piaget could not explain by the way – so he did not take some of them into account, even he noticed them: crossmodal abilities f.e.): let me call them instinctive or intuitive or natural predispositions for social learning.

One of these natural predispositions is the ability to be sensitive for being imitated and to imitate actively. This topic I have chosen for today.

OH 1: sensivity for being imitated - to imitate actively (immidiate imitation)

It is a mutual, a reciprocal phenomenon.

Already newborn children react to crying of other babies by crying themselves or "by repetition of imitated head movements, gestures and face expressions…" (vgl. Trevarthen 1999, S.150), and I remember from my experiences especially that they respond with tongue movements when watching tongue movements shown by their parents or caretakers.

This indicates that the sensivity of being imitated and active imitation are important aspects in child development not only for human individuals, but as well for higher developed mammals – the higher the more, and human individuals might be the highest developed mammal so to say.

In my presentation I want to demonstrate in what respect imitation in child development is not only important but can be crucial. If there is enough time we will have a short look at 5 different aspects of imitation

And of course I want to share with you the experiences of my collegues and me how imitation can take place when children are born blind, additional mentally retarded, multiply handicapped or even more congenitally deafblind.

When we normally think of imitation it is connected with visual and auditory aspects, and it seems rather difficult to us when we try to imagine how mutual imitation can take place with individuals without vision and hearing.

I will illustrate by some videos, how this may look like in case of congenital deafblind children at early developmental levels – that does not mean in early age, as many congenital deafblind children have a strong developmental delay.

1 The contribution of imitation to the emerge of togetherness and primary intersubjectivity

Having left their mothers body and being outside in a different and maybe painful and cold world, in a world with different tactile, visual, auditory impressions, with different smells and tastes, realising gravitation and more newborn children might have a big need to gain back a piece of that **natural togetherness** they experienced in mothers body during several month before they were born.

Togetherness – that is the feeling of belonging to each other, the feeling being a part of another person, lateron of the familiy, the community or even to mankind.

Togetherness is the feeling of being more similar than different to each other.

Togetherness makes bonding and attachment possible and we all know about the relation of attachment and explorativity.
Togetherness is the precondition for a basic self confidence to emerge ... and so on.
How do child and parents or caretakers contribute to re- establish this togetherness, which is the precondition for survival, wellbeing, sensomotoric, cognitive, emotional and social-communicative development and learning throughout our life?

It is an intuitive parental behaviour, by which almost automatically parents react this need for togetherness. They try to attune to babies behaviours and – that is very essential - to babys' feelings. They do it by imitating aspects of babys behaviours and especially by grasping the dynamics of its behaviours, and by then their emotional content. Babys' contribution is to react in an intuitive and specific way to "fitting" parental behaviour, by this stimulating parents to go on with their efforts.
When parents imitate especially dynamic aspects of babies behaviour the baby can find its own behaviours and feelings expressed and represented by its parents or caretakers – they are identical in a way, but executed by another person - out side in a way, the space around babies' body enlarging.
But as important at this moment is the synchrony of emotions, which is the result of this transfer of feelings from child to parents and from parents to the child.
This kind of imitation is called **attunement.**
By attunement we learn to share and to read emotions of a partner.
By attunement we succeed hopefully succeed again and again to re-establish togetherness and synchrony between a partner and us, a need which we want to be satisfied throughout our life.
Papousek & Papousek have shown in their publications that parents which have a handicapped child do have problems to transfer these intuitive parental behaviours to the new situation: Parents and caretakers might not feel invited by child's behaviours to respond to, or more to imitate them or to tune in childs feelings expressed. Instead of they try to cope with the situation by stronger shaping the situation and becoming more active, what often leads to more passivity of the child – and of course togetherness is in danger not to emerge as a stabile basis for bonding and exploration. There is little synchrony to emerge, and children might not learn to share and read emotions of a partner. Or we may say it in other terms:
There is a risk for **primary intersubjectivity** to arise. (what is not an english expression I have learned in Presov).
So an important lesson at school may be to attune into childs behaviour and feelings.

2. The contribution of imitation to the development of secundary intersubjectivity

To read and to share emotions is important as well at a higher developmental level: When children start to be interested in manipulating objects and playtools.
At this level parents and caretaker show also a intuitive kind of tuning in childs' activities. Again parents grasp the dynamic aspects of childs' play by supporting childs' activity by hands clapping or shouting or something else (Dornes 1993, S. 152 ff)). Children may by that learn that their play is noticed by parents and more it is appreciated. As not all kinds of behaviors and play activities are noticed and appreciated – parents show their child what they take for important or not.
But as well parents or caretaker show that they want to be with the child, that they want to share childs' emotions in respect of a third element – childs' engagement with its surroundings, with an object.
And this behaviour contributes to communication development at a higher level: to share not only an activity but also the emotions in respect to an activity. This we want

to happen when we have a communication exchange with a good friend: to share emotions, that are joy, fear, hope et. in respect to a specific topic.

In other terms: by that kind of attunement **secundary intersubjectivity** emerges and it contributes of course to a feeling of togetherness with a partner, but on a higher level.

To illustrate this aspect I do not have a good video. But maybe you may see the beginning of this level: a deafblind and her caretaker to start with both of them relating to a third element.

3. The contribution of imitation to develop autonomy and control

There is a basic need for every individual to develop autonomy, and to be able to control the environment.

A feeling of autonomy may emerge, when a child is able to take the initiative; and at the same time this is a good method to control the environment.

Without being able to initiate communication is just a one way road. Communication needs a speaker and a listener – and changing roles by turn taking.

All these aspects may arise by imitation games.

When the child experiences, that its behaviours are imitated in a consequent way there may expectations arise how an answer has to look like. When the child is sure about the basic game, she or he might vary the game by changing their behaviour in different respect:

They become slower or quicker, they wait a bit to increase tension and so on. Within such a situation many congenital deafblind children start to overtake initiative. They vary their offers and wait for an identical response. Sometimes I had to realize, that a child was able to count or to vary very sensitive its dynamics. Let us look to this video:

As I mentioned above: To have an effect on other people is a basic precondition for communication as well. We want our partners not only to listen to us, we want them to do this or that. We have intentions in respect to our partners, f.e. that I respond with as many beats on the drum as my deafblind partner offered to me..

Within these imitation games children may not only experience being initiative, being imitated, being seen, being felt, but also start to expect a specific answer, to imagine a specific answer.

This gives an opportunity to the child to develop together with his or her partner the basics of communication: to communicate intentionally:

When I do this I expect you to do the same, and if you did not manage you will see it in my face, and if you do right you will see it in my face as well (Nadel 1996, S.137).

4. The contribution of imitation to the development of tactile communication (signing)

In a far more specific way imitation is important for the development of tactile communication by movements, by signs.

Let me at first show very shortly how tactile signing looks like:

When you cannot see the signing movements of your partner you must feel them – by laying your hands on the hands of your signing partner. Then you can follow his movements and by that grasp meaning of these movements – if you know already what these movements may represent, what meaning they have.

Most individuals using the tactile sign language have already known signs before becoming blind.

This is very different with children born deafblind, and we all can imagine how many difficulties they must overcome before they becomes able to communicate by tactile signs.

Of course they must have learned how communication works – and know, that they can address to a partner with a specific intention.

The imitation games are one way to get an idea how communication may arise, another way is to confirm childs' utterances and to share them with a partner.

4.1 By imitation utterances of deafblind children can be confirmed and transferred to partners body.

There are many reasons how utterances of a deafblind child are motivated and what they aim to.

One important reason may be a meaningful event, which was very impressive for the child. Meaningful events leave traces in childs' body and mind. Every child has its own criterias what is a meaningful trace for him or her – it is his or her own construction of the world. Every human individual tries to keep such an experience in mind – and also do deafblind children. We as partners can watch this process taking place in deafblind children: the child processes this event by using those "traces", movements what the event did on and with his or her body, movements which were elicited by the emotional aspects of the event.

When we as partners have access to the context, to the event, then we can understand what the child expressed for itsself and if the child allows us we can try to share event and representing movements. And we can make a meaning of a movement sure by negotiating it with the child again and again.

This is a very short description for a very complex process, and it is worth to study the scientific work of the EWGoC with Anne Nafstad, I would like to recommend.

But how does this look like? How do we do when we try to share an event, a movement, a meaning with our deafblind partner?

We have already seen how to share a feeling – by imitating especially dynamic aspects in a way the child can perceive them.

We do the same when we watch a deafblind child making movements: we imitate childs behavior or relate to the place on body where the event left a "trace": We confirm childs activity, we show that we have perceived what it has done: `

And the child knows that I know.

There are several ways to do this confirmation

- By going under childrens' hands and repeating or imitating childs' movements on childs body
- by taking childs hands and imitating, repeating or imitating childs' movements coactively on his body
- by going under childs` hands, leading them to our body and imitating, confirming it on our body.

By doing the last kind of confirmation – going with childs' movements to partners body there comes in a new quality:

The child finds its own behaviour – activity – utterance – expression on the body of his partner – as we have seen on our first video. Bur parents do something more: theh take childs utterance as kind of request: "Oh oh my baby is so hungry" they say grasping childs emotion as well and then they give an answer to it: "Oh yes, mamy will give you a milk". This kind of dialogues start very early and the child may learn to recognize his own utterances and feelings coming out of his or her mother body or voice – and experience the answers.

The famous netherlandic professor Van Uden observed and described this process. He called it "the playing of a double role of the mother". What did he mean by that?

Also deafblind children need that kind of interactions as a perment model for dialogical communication.

So it may be necessary only to confirm childs utterances by imitating on childs body, but it may be also important to execute them on partners body as well, as a somewhat elaborated confirmation and at the same time as a request: Is it that what you want? Of course our deafblind child will have an answer, but it might quite difficult to figure it out – but this is another topic.

By doing so we can avoid, what parents caretakes and professionals very often do:

They feel that this is maybe to difficult for cdb children and consequently they take childs hand or go under childs hand but do the gestural movements on childs body.

By this way often the left hand is taken as the leading hand even the child is righthanded; communication is in danger not to become really dialogical.

Doing it the other way round the deafblind child has a chance to learn, that he or she may share a common topic, and later on this topic may be related to the child but as well to the partner – this depends on the relational gesture you or me.

Let us have short look on a Norwegian boy communicating with his parents, in which you can find details mentioned above.

4.2 Imitation is a means to transfer a natural gesture

Children who know already how communication works might be able to learn the meaning of natural signs by watching their origin and just imitating them. But for this reason it is absolutely necessary, that the deafblind child can watch very often where the sign comes from. We should not support verbalism with the hands!

Watching partners activities and imitating partners as-if-movements

In case we want a child discover the meaning of gestural represention we must of course give him or her access to context. It is the real activity what the child has to experience a hundred times or more. If the child can feel what a person is doing when he/she is drinking from a cup again and again – as children with vision may watch - it may grasp the meaning of this movement done without a cup – as if drinking.

There are many other reasons to give blind or deafblind children as many possibilities to watch their partners what they are doing: they may get the routine events of daily life, they may decide themselves to explore objects, to try to overtake partners activity by imitation. Instead of we very quickly take childs' hands and lead them to the object directly or manipulate their hands in order to teach them how to to do. I think with childs' hands on partners hand we do better.

But let us go back to tactile signing. By watching their partners many deafblind children can experience the meaning of many natural signs – and they can learn not only to watch but also to listen and to imitate such a movement as if drinking or eating or sleeping or handwashing.

5. Closing comments

I hope that the role of imitation in respect to blind or deafblind children became a bit more more obvious.

Again I want you to invite to go more into detail of tactile communication development for example.

Maybe there is a possibility to introduce and to discuss tactile signing as well – this method can be useful for all children which have a multisensory impairment, which have no access to speech or visually transferred signs.

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12 Parents / Epidemiology: The Profile of Scottish Children

By: Ravenscroft, John
From: Great Britain
Organisation: Visual Impairment Scotland

Slide l-2: Hello, and good morning, my name is John Ravenscroft and I am that manager of visual impairment Scotland. I am also the manager of the Scottish Century centre, all based at the University of Edinburgh and I would just like to say thank you very much for allowing me to present the recent Update of the profile of Scottish children with visual impairment.
But before I Start I would like to say a special thanks to Dr Andrew Blaikie, Professor Gordon Dutton, Marianna Buultjens, and to the visual impairment Scotland research group, which is made up of Community paediatricians, social workers, ophthalmologists, parents, and health visitors.

Slide 3: We know that childhood visual impairment has far reaching effects throughout life. This ranges from when the child is born up to when the person dies. And as a result we like to talk in terms of VI years. The concept of V. I. years can be explained like this. If a person loses their site, say around when they are 60 years old, and that person dies when they are 90 years old, then they would have been visually impaired for around 30 years. However, if a child is born, visually impaired, and that child lives to 90 years old, then that child will have had 90 VI years. Thus, if you are delivering a Service, like social work, or even education, then it is important to understand how many V. I. years, that person will have within your Service.

Slide 4: Visual impairment can have a significant impact upon child's development, education, employment and social prospects. It can also lead to a wide raging effect upon the immediate family. And this goes beyond the affected child and family, for we know that
visual impairment creates financial implicalions for society, the provision of education, social and health Services.

Slide 5: Children with visual impairment, require an integrated and tailored Service provision that involves health, education, social work, and voluntary organisations. In order to plan an integrated Service it is important that we have current and accurate data of the numbers and causes and level of visual impairment. Without this, I believe that a fully integrated service provision cannot meet the unmet needs of visually impaired children.

Slide 6: However, in order to do this, in order to profile children with visual impairment. We need to know, the following.

- **Number:** we need to know just how rnany children are our with a visual impairment
- **Location:** we need to know where these children live
- Age: we need to know how old they are
- **Level of visual function:** we need to know their level of visual function
- **Level of visual** field: we need to know the level of visual field
- **Additional disabilities:** and we need to know, what additional disabilities. These children have?
- **Current service provision.:** and finally, we need to know, what is the currentStatus of service provision

Slide 7: In Scotland, there it is already an existing blind and partial sight register, which is held by the social Services. However, there have been several adult studies which have highlighted the incompleteness of the official blind and partial sight register. Notice that in Scotland, that there is no separate register of children with visual impairment. Adults and children are all put together. And often Service for the children come out of the adult budget

Slide 8: If we contrast this with Scandinavia where there has been considerable, collaborative effort over the past several decades on the epidemiology of childhood visual impairment. We find that there is excellent data that not only supports the health service, but also to education departments as well as social service planners. Basically, Scotland is nowhere as good as Scandinavia.

Slide 9: Of course his Information can first of all be used to research into the prevention, the diagnosis and treatnient of conditions causing the impairment.

Slide 10: Aims of visual impairment Scotland
When visual impairment Scotland first started in 1999, and we actually launched in June 2001, the primary purpose of the project was to develop a new method of notification. Notice here the change of terminology - notification and not registration. We knew that the current blind and partial sight registration System was failing children with visual impairment, and therefore in order to meet the unmet needs of children with visual impairment. It was important that a parent led voluntary System of notification to a central body was developed. This was our primary aim, and as you'll see later. It is quite clear that this type of approach could be applied across the range of low incidence childhood disabilities.
Slide 11: Not another database.
It must be stressed that Visual Impairment Scotland is not just another database of childhood visual impairment. It is much more than that, Visual Impairment Scotland is a unique model of notification, it empowers parents and children directly through their own parents and children specific website and by children having their own virtual children's club to the parent network support Community and through the medical information documents which are all available on our website.

Slide 12: On this slide we can see an example of all the medical information sheets that are available on the website. These can range from Aicard's syndrome to West syndrome. All these sheets are freely available and have been written by ophthalmologist checked by parents and lay people. Just out of curiosity, how many people here have actually downloaded some of our medical information sheets?

Slide 13: The eye and normal development
Before I go on to talk about the profile of Scottish children with visual impairment. I think it is important to detail just a little bit about the eye and normal development of the visual processes. I think take is important to have a good understanding of what we would expect to see in the normal development of the child before we go on to discuss the fmdings of our notification System.

Slide 14: logmar equivalent. This slide shows the logmar äquivalent of the Snellen Acuity Scores. Logmar 0 is equal to the Snellen score of 6/6 and so on.

Slide 15: Normal visual development.
As you can see in this slide that a newborn child will have a visual acuity of around 6/240. During the second and third ninth of life is this develops to 6/180 to 6/90. Around six months of age, the child visual acuity will develop from 6/60 to 6/124. At the end of the first year of life, you expect to see the child's visual acuity, developing to 6/18 to 6/12. Around the 18 months of age, the child's visual acuity was developed to around 6/9 and at 24 months of age. The child can be tested on individual letters within acuity of around 6/6. And when the child reaches four new expect to see the child performing well on Standard 6/6 lest type materials.

Slide 16: This can be seeing here in this slide of a typical Snellen chart. Where at the first six months of age, the child can read the very top letter A in his case and as the child grows older, their visual acuity school gets better.

Slide 17: In this slide, I have divided up the visual System into three very broad categories. The eye, the optic nerve, and the brain. Damage to any one of these parts, can induce significant visual impairment.

Slide 18: What is significant visual impairment. I think before we can proflle any children with visual impairment is important that we get our terminology clear. Therefore, I would just like to explain what exactly I think significant visual impairment is. Although it has to be said, this is not my defmition but a Standard medical one. Significant visual impairment, can be seen as best corrected binocular visual acuity equal to or worse than 6/18 (or equivalent) or any form of visual field loss or an eye movement disorder which affects visual function or any form of cognitive visual impairment do to damage of the brain sub serving the visual System.

Slide 19: Professionals and notification. As mentioned above, Visual Impairment Scotland is a parent led notification System that parents infonn us about their children with visual impairment through completing a small form. This form is completed within the eye clinic itself, after consultation with the ophthalmologist/orthoptist. And on average, we have noticed that the parents can complete the form in the clinic in roughly around three minutes. As you can see from the slide that the parents can complete the form in various health professional clinics, such as the ophthalmologist clinic, the orthoptic's clinic and the Community paediatricians clinic

Slide 20: Visual Impairment in Scotland. So currently, the total number of children notified to VIS Stands at 700. There are about another hundred children on our database, but we have not yet fmished completing their entry. So for this talk I will present data on around 700 children. We found that the total number of children with significant visual impairment was 370 and the total number of none significant visually impaired children was 330 and this can be seen in the following pie chart.

Slide 21: (Pie Chart). It is interesting to note that of all the total number of notifications only 53% had what was classed as significant visual impairment and 47% had visual impairment less than 6/18.

Slide 22: Gender. Out after 700 children. We had more males notified (56%) than females (44%).

Slide 23: Notifications by Additional Disability. Again, out of the 700 notifications, we found that an amazing 71% had an additional disability over and above their visual impairment. I shall repeat that, 71% of all children notified to visual impairment Scotland had an additional disability, 29% didn't. This is an incredibly high figure. Two years ago, I presented data that suggested the figure should be around 60% of children had an additional disability, but if we include all children, (those with and without significant visual impairment) we find that nearly three quarters of all children with visual impairment have an additional disability. This has an enormous impact on provision of these children, not only within the education sector but also within health and social Services.

Slide 24: Type of Additional Disability. These slide shows the kind of additional disabilities children have. This graph is broken into two are in represents all children and those children with significant visual impairment. As you can see there are a considerable amount of children, who have learning difficulties.

Slide 25: (Check with Sweden). It is important to us to see if our database was coming up any stränge anomalies. So in order to check this need wanted to compare our data with data from Sweden, and this is what you can see in this slide. This slide is a couple of years old now and I've not got round updating it but you can see that two graphs look identical. Please note that Sweden has 2373 children on their records at the time VI Scotland at the time only had 333. It appears from the graph that our database does in fact, seem reliable.

Slide 26: Ethnic Group. Again, out of 574 notiflcations, we can see the ethnic group division As you can see from the graph most of the notiflcations come from the white ethnic group. Clearly, this impairment Scotland is not reaching those members from different ethnic groups, äs it should. I can talk more about this later, if you wish.

Slide 27: Age. This graph shows the age of the children notified to visual impairment Scotland. It is a typical graph, with most notiflcations coming to Visual Impairment Scotland around the ages of around **five to 13.**

Slide 28: Location of Notiflcations. For those people that know Scotland. It is important that all notiflcations when not, based around the Edinburgh or Central Belt area. We are pleased to see that, in fact, notiflcations come from all 32 local council areas. And I am particularly pleased to see that most of our notiflcations come from, the greater Glasgow health board area, which is our main funder.
As you can see most children are in the A/B calegory. This is true for those children who we have data on for best binocular vision and for those that has any eye in this category. You can also see that the numbers of children decreases in the worst acuity group.

Slide 34: This graph shows, the same data, except for raw numbers, and the Snellen acuity scale.

Slide 35-36: Primary diagnosis. We had over 66 different conditions, named by the health Professionals. As you will see CVI and Albinism were the most common primary diagnosis. Over 32% of all the children for whom we had a diagnosis for that is 679, CVI accounted for nearly two thirds of all notifications. In the "other" category there are over 40 conditions, which is why it accounts for 17% of the total notifications. We should not therefore, under estimate the numbers of children with cerebral visual impairment There are many more children out there with cerebral visual impairment than we think.

Slide 37: Aetiology. This study categorised the time of acquiring the cause of childhood visual impairment into three major periods. The first of these is prenatal, that is before birth, including both genetic and intrauterine (in the womb) causes. Perinatal and neonatal at the time of birth and within the first 28 days of life. Postnatal during childhood, and after the first 28 days of life

Slide 38: Aetiology graph. As we can clearly see in this slide most children acquire their visual impairment, before they are born.

Slide 39: Again, a comparison with Sweden shows how robust our data are.

Slide 40: Disorders acquired in the prenatal period with the most common. The second most common is at and around the time of birth. Prematurity and hypoxic ischaemic damage are the two main causes of acquired visual impairment at this time. It is uncommon to acquire a visually impairing condition during childhood.

Slide 41-42: Visual field loss. As you can see, we have divided visual field last into five categories, with an unspecified category. Peripheral, lower, haminaopia, bitemporal and central. We see that there are a
large number of children that have a lower visual fleld loss. We see that those children with a significant visual impairment have a high degree of peripheral field loss.

Slide43: Our data shows that practically all the lower visual field loss and the hemianopia comprises of cases of CVI. With the lower field loss being PVL, or presumed PVL or hydrocephalus.

Slide 44: Discussion. It is quite clear that this study has identified that using Information as a mechanism of attracting notification of disability works well for children, families, and the Service providers. The Information and support Service has been well used, which has raised awareness amongst parents and Professionals, which in turn generate notifications. And in fact, in total, they have been over 2 million hits to the website since 2001, and these continue to increase every month.

Slide 46-47: To summarise. Policymakers and planners of integrated medical, educational and social Services, aiming to meet the needs of children with special needs face the difficult task of delivering Services. Based on Information that may not describe the full-scale whole spectrum of children to be served. This study by linking relevant user driven Information and support service to a broad base of notifying Professionals, ophthalmologists, optometrists, orthoptists, Community paediatricians, teachers and social workers has developed an inclusive System of notification of a low incidence of childhood disability.
It is quite clear that this approach should and is not confmed to visual impairment and could further be applied across the range of all low incidence that the disabilities.

13 Multi handicapped visually impaired children with severe psychiatric problems in daily school life

By: Drave, Doris
From: Germany
Organisation: Graf-zu-Bentheim-School in Würzburg

Abstract

For more information please contact the author: wolfgang.drave@web.de

Bases, experiences and assessments after 4 years of work

In 2001/2002 at the Graf-zu-Bentheim-School of the Blindeninstitutsstiftung (foundation for the blind) in Würzburg a pilot project started to support multi handicapped visually impaired students with severe psychical disturbances. These are students, whose psychical illnesses, autism, schizophrenia, perception disturbances combined with blindness or low vision and intensive mental handicap etc. is expressed in intensive aggressive behaviour (f.e. auto-aggression and external aggression). Therefore life and learning in the existing classes and family-similar group-structures was no longer possible. From this fact we created a „new group" with at that time four of these problematic students. This pedagogic challenge was assumed with additional teachers and remedial teachers, additional home-personnel, spatially and timewise changed structures, detailed diagnosis, particular pedagogic concepts, extensive documentation, more intensive team-discussions and specialised advanced training for the co-workers.

The lecture describes the experiences of four years, the change of the students, the adaptation and transaction of the TEACCH-concept (Treatment and Education of Autistic and related Communication of handicapped Children), and the cooperation of school, home, therapy-department and psychiatry.

14 Open School - an alternative program for education visually impaired students in general education setting

By: Eick, Marianne
From: Germany

Abstract

For more information please contact the author: marianne@eick-vhh.de

The open school concept allowed for students without special needs to be included in small group instruction. The focus being individualized education while still maintaining the expertise needed to educate visually impaired students. This is offered to general education students in the Würzburg area.

15 Towards Inclusive Education in Kosovo

By: Sjöstedt, Solveig
From: Finland
Organisation: FSDEK II/ Ministry of Education / Kosovo

Dear Colleagues,

It is a pleasure for me to present this paper on the steps taken towards inclusive education in Kosovo. It is a real challenge to take part in creating a totally new system for approximately 40.000 children and young people in a region where everything is different from what I am used to. In Finland I was the director of a small school for the visually impaired. Luckily I have always had a chance to be as creative as I have wished, to make decisions on my own and I have gone through all the stages of making a special school into a resource centre and planning for the new activities within it. Networking within the field of special education in Finland has been an important part of my job. And I have had the possibility to travel around the world to see how the schools have tackled the problems of inclusion elsewhere. I have, of course, been active within the ICEVI as well.

Finland has supported inclusive education in Kosovo since the year 2000. Before my team consisting of three persons came to Kosovo in the beginning of 2003, the main focus had been on policy making and assisting the Ministry of Education drawing up the curriculum framework. Furthermore the focus had been on professional development for teacher, the so called PD program and in-service training or TESFA training. TESFA standing for "Towards an Effective School for All".

To change a school system is easier than to change the general opinion and the prejudice of the people. I very often hear about the "Balkan mentality". In this connection it means that parents feel ashamed of a child with impairment and prefer to hide them at home. But this is not always the case. We once had a parents' seminar for 90 parents and 140 parents turned up. It seems to be more a question of money and willingness from the part of the administration.

But in the Ministry of Education the people in charge of special needs education are really dedicated to their work. Since the year 2000 they have established over 60 special classes for children and young people with special needs. International institutions have provided the special schools with new equipment; they have trained the teachers and restored the houses. Much has happened in only 5 years.

As part of the TESFA program also includes school directors and municipality special education needs officers, I have been asked to be in charge of their training even though my main responsibility is the professional development module. When I started the planning, my first though was of course: "What kind of school system am I supposed to plan for? Are we talking about special schools? Can we make them consider inclusive education? That is, should I talk about resource centres?"

As we all know, we have three trends in Europe. The double track system with special schools for children with special needs, we have the mixed system, which is the most common in Europe, with special schools working as resource centres as well - and we have some countries with a one-track system where all children with special needs are included in the regular schools.

Due to several reasons we have chosen the mixed model in Kosovo for the time being. Our main aim now is getting the children into school. Today 1078 children out of 400.000 school children are receiving special education. The attached classes are supposed to function as a gateway, giving the children and young people a chance to get acquainted with the school system and receive basic teaching before they are moving into the regular classes. As for the special schools, we hope to make them into resource centres as well and we know that the easiest pupils to integrate are the pupils with a visual impairment.

A working group was appointed by the Ministry of Education in Kosovo to work out a plan on how to make this come true. I represented the FSDEK II during the preparation phase. We have now gone through the legislation to see if it has to be changed in order to make the special schools into resource centres. That was not a problem.

We have provided the Ministry with ideas on how the changes could take place. These include an instruction model for the transition phase such as tasks for the resource centre, resource centre models, existing human resources and current training. Important issues are of course the new role of the teachers as well as the focus inclusive education puts on the Individual Education Plan. The reform was accepted in May 2005. The school for the visually impaired in Peja was chosen as the pilot school for the project starting this autumn.

The system of teacher training and the role of the teacher are crucial when we want to include our children into the general school system. In order to facilitate the procedure, we drew up a Core Curriculum Analyse regarding the skills and knowledge the teachers in the different settings need. For the part of the visually impaired (we also have analysed the needs regarding deaf, hard of hearing and intellectually impaired) we have concentrated on inclusion, general core curriculum on blindness, low vision, braille, mathematics, independence skills / orientation and mobility and self-help skills.

Work done at the ICEVI teacher training workshop in Budapest in the autumn 2004 was also based on the idea of this analyse. You can find the outcome on the ICEVI Europe homepage. The idea was given by my "boss", Dr Markku Leskinen and I was very happy to have had Dr Emmy Csocsán from Universität Dortmund helping me with the structure of the analyse.

So, what is the general idea? We know that we today have our children in many different settings. We have them in mainstream schools, in special schools and classes, in resource centres. We know that the persons involved in their education are ordinary teachers, specialist teachers of various kinds, specialist teachers for the visually impaired in special classes or in special schools. We know that there are itinerant teachers helping the teachers and the children.

The children, the parents and their teachers are being assisted and taught by a wide range of persons. There are classroom assistants and therapists there are doctors and other experts involved in the total rehabilitation of the children. The children might have a variety of visual impairments and other problems as well. And we want to include them in the general school system. So, who should know what?

What we have wanted to do is to clarify this dilemma. There is a general need for quality improvement and developmental continuity as well. The matrix also gives a possibility of self evaluation for the teachers. We are concentrating on the teachers and researchers in different settings, with different tasks and have tried to analyse their need of knowledge and skills.

The curriculum matrix is based on 4 aspects and along these aspects it is structured in 4 levels.

The aspects are:
I Background context / prerequisites
II Content
III Methods
IV Teacher profile

As to the levels, *Basic knowledge* is a program offered to the regular teacher, *advanced knowledge* is to be offered to teachers in special schools - or knowledge we expect the teacher to have, *in-depth knowledge* is needed for the itinerant teachers and finally *specialisation* for experts or/and persons involved in training programs and university researchers.
I cannot, of course, go through the whole analyse during the time given, but I will give you one example.

Core Curriculum Analyse / Braille

Transparency

The Professional Development program offered by the Finnish Support to the Development of Education Sector in Kosovo (FSDEK II) is a program which aims at enhancing the knowledge and skills of teachers already working in the field of special education. One course was carried out by the first Finnish team. Of these students today18 work as TESFA in-service trainers, supervised by our team. For them it is crucial to have a structured plan on what the teachers they are training should learn. Today they are called TESFA trainers, but tomorrow they will be itinerant teachers. One new PD group will finish their studies this year and a new group starts their training in September. These will later become the new itinerant teachers.
The resource centre reform also makes the existence of this analyse important. Decision-makers in the Ministry the regional education offices and the special schools that have not yet had to make decisions on internal school organisation, individual education plans, curriculum adaptation, in-service training, teacher training, teacher licensing and other aspects on special education can benefit from it.
Furthermore it gives a structure to the work of the itinerant teachers on what the teacher having a visually impaired student in the classroom should know, it gives a kick forward to teacher co-operation, it gives teachers knowledge on what they still need to know. It is also a good instrument for school directors. They have to know the needs of the teachers and the SEN students in their school. As part of the education for the student and the teacher will be given by itinerant teachers, it is of vital importance that the head of the school and the regional SEN officers are aware of the in-service training the teachers need when he or she receives a visually impaired child into their class.
I belong to the Swedish speaking minority in Finland. Because of this I am well aware of the difficulties you meet when there are few experts around. I have learned that concentrating the expertise in order to achieve optimal outcome is extremely important. And if you cannot have all the experts you need inside your centre, networking is the best solution. You try to find the best experts, you try to persuade them that co-operation benefits all parties and you share the pleasures of the good outcome. Co-operation and networking is still a problem in Kosovo. Too many want to hold on to their power position without sharing the credit of the end result.
The most positive thing in Kosovo is the enthusiasm the teachers show regarding in-service and other forms of training. Without any formal invitation sent out (the mail delivery system in Kosovo is not working very well), 150 persons interested in inclusive education turned up on a sunny June Saturday to participate in a seminar arranged by FSDEK. They did not even receive a certificate for their participation. The TESFA training too often has more participants than we are allowed. A lot of good work is going on.
As I told you, the school for the visually impaired in Peja is the pilot resource centre / school. They have the facilities for book production, both braille books and a studio for producing talking books. Two of their teachers are TESFA trainers and several of them have participated in the PD programs. The head of the school Mr Ahmet Mahmutaj

has new ideas and is a very creative person. The school has close co-operation with the organisation of the visually impaired in Peja. Several of the students already attend classes in regular schools in Peja, mostly in music and art classes. The school has taken in some sighted students in their physiotherapy class. We have already met the families of children that can be included into mainstream classes this autumn. Many initiatives are going on at the same time. We sincerely hope that this pilot project will give a good basis for future inclusion of children and young people with special needs in Kosovo.

16 Workshop on: Technique of eccentric viewing training to improve reading performance

Workshop
By: Verweyen, Petra
From: Germany
Organisation: SFZ-BBW für Blinde und Sehbehinderte Chemnitz gGmbH

The workshop will introduce participants to an adapted version based on the training method of eccentric viewing developed by Ulla Nilsson, Sweden. The technique is used to identify a retinal locus suitable for reading and to train a patient on the efficient use of this identified area of the retina. It is conducted most commonly in patients with age related macula degeneration but can be useful in case of other eye diseases affecting the macula. The workshop will be based on case studies and is practically oriented. This is why the number of participants has to be restricted to a maximum of 20.

Introduction

First of all I would like to thank the Congress Managers for accepting my paper in this important international conference. In addition I thank you as my audience for your interest in the subject of **eccentric viewing**. As an orthoptist I know that there are different opinions about the relevance of this method of vision therapy for patients with central scotoma. Some people feel, that it is not necessary, as the patient will be able to establish his own **preferred retinal locus (PRL).** For others it is important as soon as a central scotoma is present. I like to agree and disagree with both opinions.

I decided to present about the subject at this international conference because I think that there is more discussion needed to find an adequate answer. Having learned from my working experience in **vision therapy**, 8 years in Kenya and 6 years in Germany I gained the following basic principle:

Most methods of vision training have their relevance if considered for specific and well-chosen cases. The specific method used needs to be based on good knowledge of the visual system, the **vision therapist's** experience and effective strategies of training. During the years of practice I developed a method of eccentric viewing training, which is an adapted version of the technique of Ulla Nilsson, Sweden, who was my mentor in techniques of vision therapy as well as Dr. Lea Hyvarinen, Finland. They are both very important persons for the development of my strategies of vision therapy.

Material and Methods

The method I used in Kenya at the Low Vision Project at Kikuyu Hospital Eye Unit is the same as the one I use in Germany at the vocational training center for the visual impaired in Chemnitz. In Kenya 80 % of my entire patients were children; in Germany I mainly deal with young adults. I trained clients at ages of 18 to 84 years in both countries. I never found a client younger than 18 years where I considered training of eccentric viewing as the right training approach. The reason could be that the visual system of children is still very flexible. They are able to establish various preferred retinal loci depending on the required visual task which makes training unnecessary. Most of the patients trained suffered from juvenile or age related macula degeneration, some had optic atrophy or other retinal diseases affecting the **macula.** The progression of the disease has to be considered to decide for or against training. A prior comprehensive assessment of visual functions is very important. The following assessment results are according to my experience signs of consideration for the conduction of training:

1. **Fixation**: searching or unsteady central fixation, no steady eccentric fixation without change of localization (pointing test)
2. **Visual Acuity**: between 0,15 up to 0,03, (the closer the chart the better visual acuity values, searching lines and optotyps)
3. Near distance: good reading ability for larger texts, poor acceptance of optical magnification
4. **Visual field:** absolute or relative **central scotoma**, visibility of at least light marker I_4 in an area preferably below the macula, which has an extension of at least 5° or more. (I prefer the Goldmann perimeter for patients with low vision as communication with the patient is easier and I can adapt my speed and sequence for the patient.)

Other prerequisites are the identification of need. Training can be offered if the person wants to gain or regain reading ability of regular print without being dependent on a CCTV or computer technology. The vision therapist has to explain that reading will be possible with the aid of magnifying glasses but at a very short distance. In addition a lot of time, patience, motivation and determination is needed. If the patient still agrees the training can be started.

The materials used are easy to get and not very expensive. The main items needed are pen (red and black in colour), paper, text and letters of different sizes printed on paper, newspapers and magazines, a pointer, a clip board, plano- glass-spectacles or a comfortable trial frame, stick-on rings, convex lenses (powers of +4 upto +20 dpts.), hyperoculars and if possible peak lupes 10X and 20X.

First step

The best suitable retinal area to use is identified by the therapist together with the client himself. This is done monocular while the patient is requested to look as central as possible to a big red dot. If both eyes have similar levels of visual function the eye with the larger area where suitable sizes of letters (not bigger than 5X magnified) are visible, is the one to be trained.

Second step

(Poor mans SLO by Lea Hyarinen)

The patient is requested to look at a letter of a size he can see with the eye to be trained. The other eye is occluded. With pen and paper the location of the blind spot is found. Then a word of about five letters is presented at the same point and the location of the blind spot is identified again. If the location of the blind spot changes, we know that the patient is already using different **preferred retinal *loci*** one for small details and the other for looking at a group of details, which has a larger extension. The location of the area used for looking at the group of letters is compared with the identified area at the First step. When they agree training will be easier and faster.

Third step

Groups of letters and text in a size visible for the patient at a suitable distance is moved into the area identified. (Near distance addition for the distance used can be utilized) The patient gets a feeling of how to use the identified area.

Forth step

The patient learns how to move the text to view letters of interest exactly in the area to be trained. Higher powers of near distance addition can be used. For this task guiding lines of fixation are drawn above or below the text (depending on the retinal locus used for reading). The more near distance addition is accepted the smaller the size of letters and the less space in between the lines of a text. Homework needs to be assigned and the patient is advised on the lighting conditions to use for the homework.

Fifth step

Between 5 and 15 training sessions of about 30 minutes each are needed, depending on the individual situation whereby the size of letters get smaller and smaller and the near distance addition gets more and more. Homework is always assigned in between the training sessions. Magnifying glasses are provided as a loan. In the beginning training sessions should be conducted every day or at least every second day. Later sessions ones a week are enough. At a certain stage the guiding line can be missed. At the end the person is able to read newspaper print with a high reading addition or with a peak lupe (max magnification 20X). Reading speed is measured.

Sixt step

Fitting of optical low vision devices for reading or any other task. The patient should continue the training every day with reading materials of the persons own interest. This is why it is important to provide the needed low vision device for reading as a loan as long as the patient gets his own device.

Seventh step

Follow up with the new device, to see if there is any problem.

Eights step

Measuring of reading speed after 3 month or 6 month.

The patient should be welcomed to contact the vision therapist again as soon as he feels changes or deterioration of the situation.

Results

The aim of the training is to enable persons with central scotoma to become readers of regular print (newspaper print). The goal is always to achieve or regain **reading ability** for sizes of letters the individual is confronted with in daily life. In some cases we achieve very good **reading speed** in others the speed remains slow, but mobile reading ability is reached in all cases. In addition the use of telescopes for far distances (e.g. reading sign boards) can be improved and a higher reading ease and speed at the **CCTV** can be gained. I also found improvements of visual acuity (increments of 0.01 or 0.03), which could be explained that patients are also able to orientate better on visual acuity test charts (line tests) while using their eccentric viewing technique.

Comparing the training and its results in Kenya und Germany the following differences are found:

In Kenya patients life far away from the clinic. During the training they need to be accommodated, which makes the training very expensive for them. Most of the time I organized the training as workshop sequences whereby 3-5 clients stayed together and I conducted the training sessions with them each twice a day for a week. Most of the time we had an international group as some patients came from Tanzania and Uganda and there was a great personal exchange, which motivated all members of the group. Because of the distance they hardly managed to come for follow-ups after training.

In Germany patients come separate for each and every visit. This is why the training takes longer as it is less intensive. Transport is one of the main problems. Some elderly patients need to be supported by a member of the family who comes with them. As the training is not covered by the health insurances patients have to pay by themselves about 350,- Euro (depending on the numbers of sessions), except the ones enrolled as trainees in the vocational training center. Follow up after training is much easier than in Kenya.

The value of result can be described as follows:

1. As optical devices are more sophisticated in Europe compared to Kenya, the reading of newspaper print is possible with lower visual acuities. Also the reading becomes

less *strainious* because a clearer picture can be provided. This is why in Germany a higher reading speed can be achieved.

2. In Kenya the eccentric viewing training provides the complete reading ability as large print and CCTVs are not available. In Germany it is easier to learn reading with the CCTV compared to the eccentric viewing technique. The training and the mobile reading device enables persons to be more independent, which also counts a lot. This is why the training provides a higher quality of life for patients in Kenya but also for patients in Germany. The benefit depends on the occupation and interest of the individual.
3. In general in Kenya there are fewer patients in need of independent reading ability than in Germany where self-reliance plays a great role also in elderly persons. Old people in Kenya are cared for by younger family members. We wanted to train ones a Kenya priest who said after the first session: "This is too much work; my daughter better continues reading the bible for me".
   Other aspects are relevant for both countries:
4. The eccentric viewing training is necessary before prescription of an optical low vision device as magnification can be easier accepted and utilized after training, it might even be possible that the need of magnification reduces after training.
5. Instead of using a small island with the best vision a larger more eccentric area with poorer vision can be used, more magnification is needed in this case but the reading speed becomes more fluent.
6. The cause of the central scotoma is less important. If the guiding prerequisites are present, the progression of the disease has to be considered to decide for or against training.
7. The achievements of training do not depend on the age, they rather depend on the patience of both the client and the vision therapist and also their motivation. The result of newspaper reading should always be understood as an achievement of both *respective* persons.

Conclusion

Eccentric viewing training is a method of vision therapy, which can be used in different countries. It can become more and more important as the number of old people with age related macula-degeneration increases especially in European countries.

To make the training itself easier and more attractive we would like to develop a computer program supporting the training. For this we are still looking for an appropriate partner.

But even with the handmade procedure I always made the experience that clients were very thankful for the times we spent together. They were happy about their achievements. This keeps me up conducting eccentric viewing training wherever I will be with or without computer program.

17 Regional East European support systems for employment of visually impaired

Workshop
By: de Jong, Henk
From: The Netherlands
Organisation: Sonneheerdt

Introduction

From 1991 dramatic changes took place in Eastern Europe. The central planned economy under the communistic system changed overnight. A confused and des-oriented economy was inherited by the new governments. Central production and planned consumption were no longer the alma mater of all industrial activity. Most countries sought alliances with the free market economy in Western Europe. Market demands directed industry in the post communistic era. Now, some 14 years later a number of the East European countries affiliated with EC. Others are applying for EC membership or seek shelter in the Russian federation. A few countries are still considering their future identity. Despite huge difficulties and misery among vulnerable sections of the population, most of the countries in Eastern Europe now experience economic growth. Economic activities are evident in construction, trade, and increased consumption. On top of domestic economic development, money from EC and migrant workers are flushing into the former communistic societies. The system changes in Eastern Europe did not work well for all sectors in society. Before the change of regime unemployment did virtually not exist in Eastern Europe. Almost every person able to work contributed to production in the former USSR. Disabled persons played a productive role in society. At that time the blind unions were powerful institutions that possessed extensive premises and enterprises. Production of electric devices, matches, carton boxes, twist-off caps, suitcases etc. were produced in such massive numbers that the enterprises made an enormous turn-over and profit. Profits were invested in housing, healthcare, sports and cultural facilities and other services that made the life of the blind comfortable. The negative side of this practice was that blind people hardly had any choice. The jobs for the blind under the communistic regime entailed in general unskilled and routine production work that did not require training or education and was done in premises segregated from the rest of the society. The blind unions and local governments rarely invested in education, professional training or integration of the visually impaired. Only very few talented people who had a change and enough family support continued studying after primary school. Some figures: in 1991 the Bulgarian Blind Union employed 12.000 blind persons in 9 enterprises. Today only 900 persons find a job in one of the 7 remaining production centres in Bulgaria. The enterprise in Plovdiv has been closed down. Parts of the premises are sold or rented out to foreign enterprises. The former 2.000 employees in Plovdiv now survive on a pension. Out of the 4.000 blind persons employed by the Moldavian Blind Union in 1991, today only 300 are employed on a part-time stand-by base. Enterprises in Romania are ‘dying’, while employment opportunities for the blind in Kosovo are non-existent. After primary education in special schools 90% of the young blind children disappear somewhere in society. No statistics are available on their abilities, activities or potentials.

Today most of the East European blind unions in countries in which Sonneheerdt implements programs (Moldova, Albania, Kosovo, Romania, Bulgaria), struggle with their profitability and try to survive or at least seek means to postpone an imminent bankruptcy. Presidents of the blind unions seek a way out in source out their empty

factory halls and in production of mass goods in areas in which they are specialised (electric devices, carton, matches, twist-off caps). Investments in labour saving technologies are being considered to reduce the cost of production. Experiments with new technologies or disciplines are rarely found: Romania started training for medical massage, Bulgaria invested in technologies for air filters.
What can be done to increase jobs for the blind in Eastern Europe?

1. Blind and professional.

Since 1999 Sonneheerdt has developed a range of activities in the field of professional training and job creation in a number of East European countries. Upholstery training and production centres have been equipped in Lithuania, Bulgaria and Moldova. Braille production centres are operational in Moldova, Albania, Kosovo and Bulgaria. Training on job mediation was conducted in Romania and South Africa. EC partnership programs are being implemented with Bulgaria, Latvia, and other European countries. Disabled persons, especially blind people, are on average less productive and thus more costly than non-disabled. I use these words with some reluctance since they reflect the dimension of our society which says that '*money is all there is*', but possibly we have to acknowledge that economy has become the main societal mantra in our era. Disabled are also limited in the areas they can work in. Jobs in which a good sight is a requisite are not accessible for visually impaired. Instrumental is to find work places in which blind can take advantage of their disability or in which they can compensate their handicap. Sonneheerdt believes that visually impaired people are part of society in all its aspects. Every creature has his/her own talents and potentials. Making use of it for the benefit of society is what life is worth living for. It is crucial for a person to sustain him-/herself and his/her family. Earning an income gives comfort to a persons' life and a job places a person in social circles from which he/she can learn and develop him/herself. We believe that national governments are to play a role in designing policies, legislation and benefits to facilitate integration of disabled in jobs and education. Sonneheerdt however concentrates its work at the level of blind institutions and business to business networks. Durability of jobs is to be realised at the work place itself.

2. Research

As yet no research on job opportunities has been done in Eastern Europe. Jobs were created in the period of central planning and production and job creation has never been made dependant on open market mechanisms of demand and supply. Specific research describing disabled as economic valuable entities is not available. Such surveys are helpful though. These could include areas in which blind people can get at work, possibly in combination with people with other handicaps and/or with non-handicapped.
A survey should entail elements of national strategies for employment for the disabled, including education and employers/employees benefits. Crucial is the basic understanding that people are to work in an environment that can sustain itself. It means that work should lead to the appreciation of customers willing to pay for the goods or the services rendered by the disabled. Sonneheerdt will entertain national employment surveys for the blind in Albania and Kosovo, starting in 2005. With the blind unions in Romania and Bulgaria the establishment of a regional knowledge and expertise centre for employment for the blind is under discussion. This centre is to gather information on employment opportunities and professional training needs for the blind. It will also serve as a regional training centre and acknowledge/ business network.

3.The Blind Unions.

The blind unions are in most East European countries the sole representative of visually impaired in their country. As part of their package they register blind people, take care of pensions and other indemnities, offer health, sports and cultural facilities and they manage their production centres. Blind unions in general do not receive structural subsidies from their government for the organisational and running costs. Instead, the blind unions possess land, premises, apartment buildings and sport fields. Today some of these assets are rented out or sold in order to compensate the loss of income from the production centres. The organisational structures of the blind unions are based on regional representation of their members. The president and staff are trained to manage production units and to provide social services to their members. In general the management is not trained to cope with the challenges of the open market economy, nor does it has the means in invest in new technologies. Here the vicious circle is complete: no production, no income, no investments, and more space for competitors. The outcomes of a national survey on employment opportunities for the blind should be used by the national government and the blind unions to develop an employment strategy for the blind including education, investment and marketing plans. Operating in an open market economy requires entrepreneurship from the management of the blind unions. Staffs are to be trained in issues like marketing and entrepreneurial skills. The blind organisations may require restructuring in order to increase flexibility and efficiency to be able to respond to the challenges of an open market economy.

Sonneheerdt started a joint operation with the Moldovan Blind Union to reconstruct its set-up. It entails reorganisation of the unions' enterprises in order to secure future profitability. Investments in new technologies are part of the program. Recommendations for the organisational structure of the blind union and the management of the enterprises are being drafted. In Moldova a research will be conducted to identify most successful areas for blind people to work in. Strategies for implementation of the reconstruction will be submitted to the Unions' decision making mechanisms. Sonneheerdt will continue to invest in combined learning/production centres at the MBU in areas in which visually impaired can be successful. Experiences with the present wood workshop are promising. Most probably Moldova will be able in the near future to provide its young members a combination of non-skilled production work, professional learning and fabrication of craft products and management support in starting small/medium enterprises.

4.The individuals

Handicapped people in the Netherlands have been nurtured by the respective governments in the last 40 years or so. Education, vocational training, services and all kind of benefits for the handicapped, the education system, public spaces and employers have been provided. A network of social care institutions and professionals encircles the handicapped client in an attempt to empower, skill and lift the person to a higher social, economic and intellectual level. Now, in a period of economic stagnation and a newly adopted paradigm of the 'distant government' the dramatic consequence of nurturing the vulnerable becomes clear. Service levels for handicapped decrease in an environment that is highly commercialised making it difficult for enterprises to find niches or to compete sufficiently to survive. In such a situation an approach of social care fails: blind people appear not to be prepared and skilled to survive in a 'distant government' situation. In that sense Eastern Europe and the Netherlands share the same issue. Other than in the Netherlands, visually impaired in Eastern Europe had no access to proper education. Braille schoolbooks are only printed in Moldova, Kosovo and Albania since Sonneheerdt recently equipped braille printing units at the blind schools. Vocational training centres in these countries and in many other East European countries are non existent. Nevertheless it has been pointed out that whatever education people receive it will make them stronger and increases opportunities for a meaningful life.

5. Epilogue

Creating jobs for visually impaired is difficult. The unemployment rate in Eastern Europe varies from 20 – 40%. Competition among jobseekers has become very tough. Visually impaired are less productive compared to their sighted compatriots. On top: Most visually impaired in East European countries in which Sonneheerdt is operating have received hardly any professional education. Visually disabled are designed for unskilled work that can be done by anyone. In the current open market economy all kind of producers can manufacture goods and compete with other suppliers. Blind Unions are too weak to invest in new technologies, new machineries and in professional training of their staff and employees. Generating income has become very difficult for these institutions. Combined efforts with governments, national and international business communities are required to reverse this situation. Collaboration of the Blind Unions at trans national level on employment strategies and, possibly, on regional labour division and production can be taken into consideration. Making use of some regional planning could be part of an answer to the current situation.

Sonneheerdt is an international centre for the blind and partly sighted, specialised in employment, vocational training and housing. The centre employs over 200 specialists and service providers. The department for international affairs is currently supporting programs in Eastern Europe, Africa and the Antilles.

18 Cortical visual impairment

By: Gardo, Marta
From: Hungary
Organisation: Barczi Gusztav College of Special Education

Cortical (central or cerebral) visual impairment is a rather new phenomenon in the education of visually impaired children. By now we know the symptoms quite well and recognize the problem, we can quite easily differentiate whether the child has CVI or ocular blindness.

Specialists working in the field of vision therapy discovered that it is a really complex problem with a wide range of symptoms, visual efficiency and performance, heterogineous subfubctions, etc.

My interest was drawn to those questions and problems that has come up when assessing and trying to find solutions to serve these children in Hungary, where the diagnosis of CVI is not yet well-known among medical specialists. In most cases no clear diagnosis is given to the family for a long time. At the same time teachers and the early intervention team of visually impaired chilren know the problem but try to defend their services and institutions from the large number of children with CVI. Because of this they exclude these chidren and even declaire that "they are not visually impaired".

My experiences come from an early intervention centre for children with perinatal brain damages where I assess and provide therapy for children with different neurological or developmental problems caused by some kind of complication in their medical history. These are both minor problems and also severe, usually multiple impairements.

The first problem for me is around those phenomenons where the symptoms are the same to cortical visual impairement but the course of development, the prognosis is different:

(PPT 1.) Similar symptoms to CVI
- Delayed visual maturation (Fielder)
- Deprivation CVI (Groenveld, Jan & Leader)
- Low level of reaction to any kind of stimuli

Among the children I've met I've found these three types of vision problems where the symptoms are the same - at least at the beginning - but these are „treatable", if they are detected in good time and – in cooperation with the family – intensive therapy is provided.

I'd like to show you now three cases on a short video recording: the first is an example of „classical" CVI, a two and a half year old girl, born prematurely with not extremly low birth-weightr but soon after birth she got into a very severe status, she was in coma for days, she survived but her brain was severely damaged. Her parents were told honestly that their child can not be expected to develop and will be a severely multiply impaired girl. Typical in their story that they were sent to ophtalmological examination many times and her retina was checked over and over again – due to the anamnestic data about ROP stage II. in her eyes. Even after a number of these examinations their is no written statement about CVI in her medical papers. By now I've been working half a year with her together with her parents and she shows clear signs of vision development, although the typical characteristic features haven't changed much: very short fixation attempts, alternating attention and rest phases, fluctuation in her performance, etc. She is a low functioning child but she is alert to all kinds of auditive stimuli, she is intensively listening for sounds with a long attention span. The difference between the perception of vision and hearing is evident, therefore her vision problems can not be explained by her low general status, it's clearly impairment in the proceeding of visual stimuli.

The second child is a 20 months old boy; he has a healthy twin brother. They both had ROP but it stopped with almost no damage to the retina. This little boy did not start looking, did not develop eye-contact or reach for things as his brother did. He was brought to the ophtalmologist several times but they reinforced that his eyes were fine and the lack of visual behaviour must be the result of the brain lesion he went through after birth.

I saw him first when he was 16 months old and there was a total lack of interest and visual behaviours except for looking into the light-source (torch). After that he was assessed by an ophtalmologist specialized in vision impairments and she discovered the little boy had high myopia. When his thick minus glasses were put on his nose he immediately smiled, lifted up his head and started looking around, already in the ophtalmologist's office. In this recording he has been wearing the glasses for four month, received vision training twice a week and her mother was councelled how to help him to use vision. Here he is already interested in shining and glittering objects and high contrast patterns, develops eye-contact with wee-known persons (e.g. his mother and his therapist) but here we can see how he looks at the face of a teddy-bear, he's interested but his facial expression does not show the signs of understanding the image. His performance is so similar to a child with very low vision, although his acuity is not that bad, but his vision developmental age is probably around two months, when the visual efficiency of even a fully sighted child is at about this level. For me he is the example for deprivation CVI, where his other brain porblems did not allow him to overcome the depriving effect of a high refractive error.

The recording of the third child – delayíed visual maturation - shows unfortunately only the result of my work with a boy born from a normal pregnancy due time, good birth-weight, but suffered from hypoxia after birth. His general devlopment, especially his motor development was delayed but the major problem was his vision. I started working with him at the age of six months when he was not looking at all, had no eye-contact, no fixation. This recording shows show perfectly he uses his eyes in terms of manuipulating with object after six months of therapy, which development is not comparable to real cases of CVI, although the symptoms at the beginning were the same as in CVI..

Therefore my questions are

(PPT 2.) Questions and problems1.

- Are children with CVI visually impaired?
- Whose competency is to diagnose?
- What method is accepted to assess vision?
- Are the educational services prepaired to provide proper care for these children?

What I'd like to raise with these questions is not the problem for me to recognise CVI. Most of the special educators, who see children with vision problems regularly, recognise the problem. Buti f it is against their interest to include these children into the group of their clients, they may not diagnose them with CVI. Then who has the final word in it: ophtalmologists, neurologists or what kind of test, examination, result or finding?

A big problem in Hungary that in some places these children are tested with Teller cards and since their acuity in preferential looking is better than the equivalent of 0,3, they are excluded from services for the visually impaired.

(PPT 3.) Questions and problems 2.

- Whose responsibility id to provide therapy for children with a „temporary" vision problem?
- If low vision specialists don't help, a number of them will be visually impaired and then eligible for services

Finally concerning my job as a teacher at a college of special education, department of the education of the visually impaired:

(PPT 4.) Consequences for teacher training

- What changes in the content of training should be done in order to prepaire teachers of the visually impaired to deal with people with CVI?
- Are our students trained to train other professionals working with the child with multiple disabilities and CVI?
- Is the recognition of cortical vision problems and basic knowledge about treatment and therapy included into the training of other professionals?

19 Vision Therapy - multidisciplinary and integrated approach

By: Verweyen, Petra; Uhlig, Marion; Kaubisch, Andreas
From: Germany
Organisation: SFZ-Berufsbildungswerk für Blinde und Sehbehinderte Chemnitz gGmbH

Introduction

My name is Petra Verweyen and I am working as an Orthoptist / Vision Therapist at the Saxony Resource Centre for special needs. First of all I would like to thank the Congress Managers for accepting my paper in this important European Conference. In addition I thank you as my audience for your interest in impact and nature of offering vision therapy in a vocational training centre. In the first part of my presentation I would like to define vision therapy as an multidisciplinary and integrated aproach, second I would like to introduce you to a system on how to assess and categorise low vision services, which includes aspects on the evaluation of servicedelivery on the example of our vision centre. I would like to show you numbers on how the service developed in our centre from March 2003 until Decembre 2004 (which includes 19 month of service delivery counting from June 2003) in comparison with numbers achieved in the Low Vision Project in Kenya from 1994 to 1999.

Definition of Vision Therapy

Vision therapy is the art and practice of enabling a person with visual impairment to utilise his/her sight effectively for the execution of tasks. This service has to be offered according to the individual needs and wishes meaning it is oriented towards the daily life and occupation of a person. To achieve a comprehensive service provision special areas of expertise have to be involved. In particular the clinical, optical and functional area need to be covered. An other important aspect is the follow up.

The clinical area ensures that all medical treatment possible e.g. medication, surgery is managed to achieve the best **visual function**. Then the level of function is assessed to evaluate the visual abilities of an individual and estimate his/her performance in reference to specific tasks. Through the clinical assessment individual needs are identified, these include for example optical devices, non optical low vision devices, electronic devices, training in the use of vision or other specific services. The comprehensive clinical low vision assessment includes assessment of all 10 visual functions and takes about 1 to 2 hours all inclusive. To monitor changes elements of this assessment have to be repeated regularly depending on the medical diagnosis.

The optical area covers the need of **optical correction and optical magnification**. For this a specific adapted way of refraction needs to be conducted which is based on the distance where best possible visual function is achieved and the respective working distance of specific tasks the individual is required or wishes to perform . In some cases for each task a different optical device is needed. Depending on changing requirements in life this assessment needs to be offered continuously.

The functional area is important to evaluate the use of vision for specific tasks with or without optimal devices, to assess the best **functional vision**. In this respect also the need of special lighting conditions (direction, intensity and type of light) is considered. The body position and placement while executing activities is observed and improved to ensure a comfortable working situation. In addition the need of further training in the use of vision is assessed according to speed, fluency and mistakes. The functional area needs continuous attention to notice a change which has to be attended to.

All areas need follow up and re-evaluation especially as soon as a change is noticed. Only if this follow up is ensured low vision therapy will be effective to achieve the aim of reducing the handicap and increase the independency of a person.

Working in a team

The low vision team consists of many team members of different professional background. This is important as the individual requires services in many different areas. A comprehensive service provision is complete if all relevant people are involved. A **multidisciplinary** team is the first prerequisite for the quality of service.

The basic team consists of personnel providing the clinical, optical and functional services (e.g. ophthalmologist, orthoptist, optometrist, special educator). Other professionals are needed to deliver specific low vision services (e.g. special educators, rehabilitation trainers specialised in visual impairments (O&M; ADL), social workers and psychologists). And last but not least all persons in private or professional contact with the individual, these include teachers, special therapists like speech or occupational therapists and also classmates, colleagues and in children and youth most important the parents. To coordinate all these services a professional is needed who has an understanding of all areas, this could be a person from the educational, medical or optical background with special training in Vision Therapy. Such a training needs to be offered and recognized. There are training programmes on trial and we can offer such courses in Chemnitz.

Effective service delivery depends on an efficient collaboration of these people. To reinforce an effective networking system among them different prerequisites are necessary:

1. Design of communication-methods: this depends on the techniques available. According to the situation of place, time and connections an appropriate system has to be designed. At the SFZ we use the intranet and a database programme to make information available to everybody evolved. We write reports in specific designs and make them available for other team members. Also meetings or discussions on phone make cooperation easy and prevent misunderstandings. Breakdowns of communication have to be detected to improve and change the system.
2. Use of a common language: definitions have to be clear and easy understanding of professional codes have to be reinforced. This is why it is important to discuss or to offer courses or lectures to inform about certain topics relevant for vision therapy. These courses can be offered to professionals involved in the field, to parents and also for example to teachers of a regular school integrating children with visual impairments or old people’s nurses in a home for the aged.
3. Good working correlation: communication can be very fast in case of a good working atmosphere. This makes it easy to contact each other and to talk without problems.

Depending on the institution where the service is offered it has to be **integrated** into daily activities meaning the service has to be oriented towards these activities. This includes the availability of devices, specialized working materials and the adaptation of the environment towards the special needs of people with visual impairments. As soon as an individual executes a visual task the vision needs to be used under optimal circumstances. This is why people involved and especially the individual him/herself need to be aware about special adaptations, requirements and techniques.

Strategies for effective low vision service delivery

During my working experience in Kenya from 1994 to 2002 and in Germany from 2003 unto today, I developed strategies to establish low vision services. These strategies mainly promote the communication network and the recording system to improve work efficiency. They are based on the use of specific categories, which I would like to introduce to you.

Category I

Persons with no perception of light, who need to be trained to use techniques for the blind. Their reading and writing medium is Braille.

Category II

Persons with low vision, which is not enough to conduct certain visual task e.g. reading of regular print. They require to be trained in techniques for the blind, but also would benefit from some vision therapy like visual stimulation, functional vision training, training in eccentric viewing and/or training in visual orientation. The suitable reading/writing medium would be Braille and if possible some large print. (Print as a secondary learning medium=functional print)

Category III

Persons with low vision, who can be trained to use their sight for a specific visual task e.g. reading and writing print with the aid of optical low vision devices as they require magnification to cope with regular materials. They require services of vision therapy.

Category IV

Persons with low vision, who can perform visually without using optical or electronic low vision devices, e.g. they can read regular print using geometric magnification (reducing the working distance by taking things closer). They also require some low vision services and might benefit from non-optical low vision devices.

Category V

Persons, who are not considered to be visually impaired. They can function like normally sighted persons and they do not need special services if their disorder is not progressive.

These categories were recommended to the WHO for recognition in 1999.

After using them in Kenya successfully we also introduced them in Chemnitz Vocational Training Center.

Through the use of these categories the following can be seen:

1. they identify individuals in need of services and individuals who do not need special low vision services
2. they define the need of a person to get access to low vision services
3. they make communication easy as all people involved know what to expect about the visual function of a person
4. they help to establish the necessity of service provision to a certain population as they show the general need
5. the outcome of service is efficient if individuals in need have access to services and when there is no over supply
6. they describe the workload of a low vision service

SFZ- Vision Centre

The Vocational Training Centre for the Visually impaired in Chemnitz (BBW- Berufsbildungswerk für Blinde und Sehbehinderte Chemnitz)under the umbrella of the SFZ-Sächsiches Förderzentrum gGmbH (Resource Centre for special needs of Saxony) offers training in different professions. It has a yearly enrolment about 260 students. The low vision service started in 1997. It was established under the director of the vocational training centre by a visiting orthoptist from Marburg and pioneer of vision therapy in Germany, Mrs. Heide Keil, who conducted low vision assessments and gave recommendations for newly admitted students, but unfortunately because of the distance there was almost no follow up possible. Later an other orthoptist working at the school for the visually impaired, Mrs. Margit Fügmann did these assessments on consultancy. Both of them did a wonderful job and a great step was made towards effective service delivery. Through Mrs. Fügmann the service improved because she built up connections to optical services. In June 2003 the Vision Centre was initiated through Mr. Hohler, director of the SFZ, under the leadership of Mrs. Catrin Hastreiter, who is the head of department. This was done in order to offer a comprehensive and constant low vision service, which was not possible through consultancy alone. I was imployed to coordinate the service delivery. We work together as a team with 3 professionals: Dr. Marion Uhlig, Opthalmologist, Andreas Kaubisch, Optometrist (who are my co-authors) and myself as an orthoptist and vision therapist. The low vision service was established as an integrative service. Students are assessed clinically, functionally, optically and medically and we are working in close collaboration with other supportive services e.g. Training in O&M and ADL, Psychological Support. In addition we have close contact with the professional trainers and the teachers of the Institute. We conduct assessments at the respective workingplace of a person to evaluate and detect special needs and we offer training sequences for the efficient use of vision for specific tasks with and without low vision devices.

A great advantage is the close collaboration with other ophthalmologists, whom we can contact in case of any specific questions concerning the diagnosis and medical care of an idividual. They know their patients best and through this professional exchange the best possible assistance can be chosen.

Evaluation of service-delivery

The impact and quality of service can be assessed using patients data before and after its inception and analysis the specific numbers. These numbers can be categorized according to the individual needs. In addition specific aspects which mark an efficient service are relevant. This will be described in the following evaluation.

Subject

As the service was started in 2003 we wanted to detect differences in the quality of low vision care and the efficiency of use of vision in students enrolled in the vocational training centre. We collected data in March 2003 and compared the outcome with a data collection done in Decembre 2004, 21 month afer the inception of the service. Hereby we concentrated on the supply and use of optical low vision devices in correlation with the diagnosis, visual acuity and visual field. In comparison we wanted to utilize experiences made during the establishement of low vision services in Kenya and transfer concepts.

Cause of Visual Impairment

In total 458 students are enrolled in the study. They trained at the vocational training center from 2003 to 2004.

The main cause of visual impairment is congenital followed very closely by eye problems presenting in early childhood. This might be because most of our students are aged between 16 and 25.

The main diagnosis was a retinal problem, three times more than the second most which is cortical.

Distribution of Categories

In 2003 a population of 239 students were interviewed and in 2004 they were 343 assessed, 252 of them received low vision services through the vision centre in between the 21 month of operation and 38 were Category 1 and 2, 60 were not assessed. 73 students came 3 times or more often for follow up, 61 students came once or twice again, 118 students were only seen once.

In 2003 out of 239 students we found:

22 students (9,2 %)	Category 1	
21 students (8,7 %)	Category 2	VA range from PL onto 0,03 (meanVA PL)
146 students (61,1 %)	Category 3	VA range from 0,025 onto 0,8(meanVA 0,34)
37 students (15,5%)	Category 4	VA range from 0,2 onto 0,9 (mean VA 0,42)
13 students (5,5 %)	Category 5.	VA range from 0,3 onto 1,25 (mean VA 1,0).

In 2004 out of 343 students we found:

21 students (6,2%)	Category 1	
39 students (11,5%)	Category 2	VA range from PL to 0,16 (meanVA 0,025)
114students (33,3%)	Category 3	VA range from 0,02 to 0,5 (meanVA 0,13)
64 students (18,8%)	Category 4	VA range from 0,09 to 0,8 (meanVA 0,35)
45 students (13,2%)	Category 5.	VA range from 0,25 to 1,5 (mean VA 0,7)
60 students (17%)	not categorised	

In comparison to this we had in 1999 in Kenya out of a total of 855 supported children:

179 students (21 %)	Category 1
120 students (14%)	Category 2
117 students (13,5%)	Category 3
302 students (35%)	Category 4
31 students (4%)	Category 5
106 students (12 %)	not categorised

This means compared to Kenya where most of the students with low vision could read print without optical magnification, in Germany most of the students were reading print using magnification. The reason of this difference could be that in Germany students with such a poor VA that students in Kenya were already using Braille, they were still using print as they were utilizing electronic magnification which enabled them to still use print even when the need of magnification is very high.

New Prescriptions

Here we look at the prescriptions according to the categories. Most of the prescriptions were made for Category III cases but also in other categories prescriptions were made.

Compared to 2003 the use of optical low vision devices was much more effectively.

60 of all students in Category 3 use a CCTV these are 41 % (52 in combination with optical low vision devices), 65 use optical low vision devices only (44,5%) and 21 do not accept any devices (14,3 %). In 2004 53 students use a CCTV (49 in combination with optical low vision devices), 55 use optical low vision devices only and only 5 do not accept any devices.

Conclusions

These are only the main conclusions, as time does not allow to discuss the whole extent of the study.

1. Through comprehensive vision therapy delivered by multidisciplinary team, services can be offered fast and they are effective.

2. Further recognized training for professionals is important involve suitable cadres to coordinate the service delivery e.g. Vision Therapists
3. The effect of training can be seen as students use appropriate devices, there is no oversupply and devices provided are used effectively. The acceptance of devices rises.
4. The visual impairment can not be classified through medical assessment of visual function only. The functional vision is an important element which determines the nature of services a person requires to perform specific tasks.

In Future the effect of the low vision service at our institute will be evaluated further and I will report more about the acceptance of specific devices in a later study.

20 Training for the Visually Impaired on how to use a telescope

By: Zeun, Ulrich
From: Germany
Organisation: Martin-Bartels-Schule, Westf. Schule f. Blinde u. Sehbehidnerte Dortmund

Monoculars, especially those with close focus, no doubt are very useful for many low vision people for orientation and information access in distant and close-up situations
In this paper you will learn

- for what visual tasks monoculars can be used and which fields of use there are;
- what skills the low visioner must adopt and how to train these skills;
- about some basic training principles.

1 Visual Tasks

There are three main tasks monoculars can be used for:

a) orientation and mobility
b) free time
c) school and vocational training

Here are some examples when you make use of your monocular:

- reading street names
- reading time tables behind windows
- reading numbers of busses and trains
- reading menus behind counters
- watching shows, events (theatre, sports, concerts, zoo)
- reading and copying texts and drawings from the board etc.)
- everyday situation in a super market, meeting friends, landscape viewing, animal watching etc.

There are, of course, many more situations you can use your monocular for.

2 Skills

To manage all these situations the low visioner should use his or her monocular most effectively. Some, but not everybody is able to learn the skills by him- or herself. Therefore, he or she must train several basic and advanced skills.

First of all he or she must get acquainted

1. to the parts of a monocular (terms etc.) which is essential to communicate during a training programme.
2. to how to hold the monocular, in order to have a stable and comfortable viewing position
3. to carrying the device with you all the time, and to caring for the monocular.

Further skills are

4. Focussing
5. Spotting
6. Scanning
7. Viewing things in different distance from the same position
8. Tracing
9. Tracking

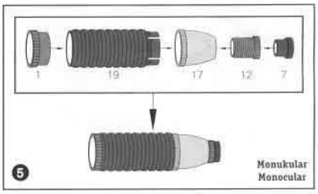
10. Copying texts and drawings
11. Combined Skills for Everyday use

Every skill will be described with am exercise as a example- Again, there are many more exercises to practice the skills.

2.1 Getting Acquainted

The student must get to know the monocular and the terms for is parts in order not only to know their functions within the system, but also to understand the trainer's instructions. Moreover, knowing your monocular means a better appreciation of this aid.

Having an old, broken or a toy monocular lets you show and dismantle parts in a playful way.



2.2. Holding

Holding the monocular right is important to achieve a stable and non shaky view. Explain

- through which end to look,
- to hold the monocular in one's fist, and to steady it at one's eye socket,
- to put one's holding arm at the side of the body (probably also supporting the elbow with the other hand),
- that the rubber eye-cup can be folded for spectacle wearers

Outdoors you can steady the arm on a wall etc.

People having problems holding the monocular in their fist may use a finger ring that fits to some models.

2.3 Carrying and Caring

It is important that the user always has his/her monocular at hand or safe around his neck. So he or she should use belt cases (cases intended for mobile phones etc. are also useful), straps or lanyards (very useful are clip-on rings of lanyards).

Additionally "roll-busters" – a triangular or octagonal ring slipped over the tube –can prevent monoculars from rolling down sloping table tops etc.

2.4 Focussing

Focussing is not a skill which every low visioner can handle sufficiently from the beginning. The trainer should be sure his or her student knows what is meant by "being in focus". So practice this by

- using and OHP and a transparency that must be brought into focus (the sharpness of the image on the wall is your control),
- put, hold or project objects and either student adjusts focus and names object or teacher pre-focuses, then student looks for best viewing position.

2.5 Spotting

A basic skill is finding things you want to see at all.

For a pre-exercise you can use cardboard tubes. The student must look through it and find an object, turning his or her body in this direction and pointing at the object.

Some exercises are:

- hang up a dart-board, let throw darts and let count the score by looking with the monocular.
- spot stickers in a picture or an album, or spot things in a real doll's house.

2.6 Scanning

It is not easy to spot a thing when you only know that it is 'somewhere over there'. The scanning technique can help. Scanning means systematically searching a range by meandering downwards. Thus one can be sure not to miss seeing the desired object.

Some exercise are:

- using animated pictures on a computer screen (following a ball on a zigzag line, finding an object on the line),
- using a grid system with or without coordinates to structure the meandering range (student can look for an object in a certain square name it and its coordinates).

2.7 Viewing Things in Different Distances

This skill combines focussing and spotting. It is needed when looking for departments and items in a supermarket, or any place where you stand at the same position and look at different distances.

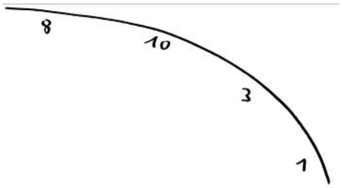
You can train this by

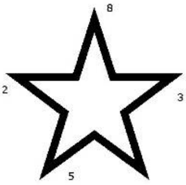
- putting toy blocks (lego), or jig-saw puzzle parts at different spots in a room, and they can be put together when found;
- putting slips with parts of a text (riddles, jokes) at different spots in a room.

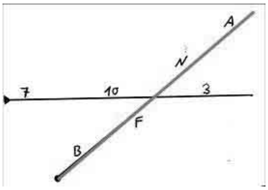
2.8 Tracing

Following a line to a wanted object is called tracing. This is a pre-exercise to finding street signs, traffic lights etc.

Draw lines on a board, poster or project them with an OHP. Mark the line with characters to be named as a checkpoint.







Use drawings like the ones above for it

2.9 Tracking

Tracking of moving objects like persons, busses etc. is quite difficult as you not only have to keep the object in your field of view, but also have to re-focus continuously.

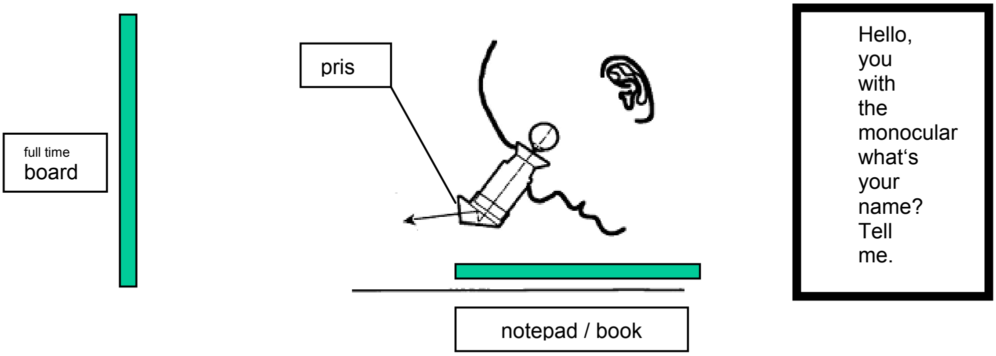
Indoor exercises are tracking and seeing

- things at remote controlled toy cars or toy trains,
- linear computer animations (moving ball, moving number)
- films of arriving busses and trains.
- You can also hold up texts and pass by the monocular user in some distance.
- Outdoor exercises are tracking and seeing
- colour, clothes and walking direction of a person,
- colour of a car, its type / model,
- flying kites.

2.10 Copying Texts and Drawings

Another advanced skill low visioners need during school and vocational training or their jobs is copying texts or drawings from a board, poster etc. You can do that by just looking up at the board with your monocular and then down at your note-pad again.

There is one aid that is supposed to avoid pain in your back and neck, because of less up and down movements. This is a combination of a Buser-Bauernfeind prism slipped onto the objective lens of the monocular, and a clamp mounted on a tripod to hold the monocular in a diagonal position (s. pics.)



Use these exercises:

- start with copying symbols
- then use letters and numbers
- words (one column → more columns)
- phrases (with messages), riddles or jokes,
- copying drawings.
- It is the goal to
- copy words „at one glance“
- reduce time needed, and
- avoid copying mistakes

Use a data sheet to fix the student's progress.

Name:			
date	number of words	time needed to copy	mistakes

2.11 Everyday use

Reading texts behind window panes (such as bus time tables, shop windows etc.) is one of the everyday tasks which combine two or more of the skills. This particular task is difficult, because the close focussing range is hard to keep

Exercises

- close-up work with a flip-chart folder
- reading behind an acrylic pane
- time-table on a wall

3. Basic Training Principles

Every user needs his or her individual training programme, of course, depending on age, his or her pre-experience, concentration or willingness to use the aid.
Yet, some basic training principles are
1) Use user orientated exercises
2) Create optimal conditions to learn (free of blinding, good lighting, high contrast)
3) Let the objects and their place be named
4) Start at an individual learning pace, then practice being quick
5) Motivate by using playful and competitive exercises
When the student has managed all this he can get a "Mono-Fox Diploma" ("Fernrohr-Fuchs-Diplom", plus a self-training manual as developed by the author). To announce this award can increase motivation among younger students as well. You also can invent stories of the "Mono-Fox" using a hand puppet for that.

Some sources and further lecture

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SZB-Kurs für Low Vision Trainerinnen und Trainer; Hrsg.: SZB, St. Gallen; o.O., o.J.

Ulrich Zeun: Monokular-Schulung – eine Handreichung zum Einsatz von Monokularen als Hilfsmittel für sehbehinderte Menschen; Münster, 2003 (Book + CD-ROM with many exercises and copy sheets, -animations, films and other materials)

Author's website: www.monokulare.0catch.com (0 = zero); here: further material, tips and tricks, today's models, distributors.

21 DAISY - A smart access to information

By: Dr. Kahlisch, Thomas
From: Germany
Organisation: Deutsche Zentralbücherei für Blinde zu Leipzig (DZB)

Abstract

For more information please contact the author: Thomas.Kahlisch@dzb.de

Like blind children in regular schools need good Braille skills, blind people generally need more than a laptop computer with a screen reader to get equal access to the information society.
The presentation describes DAISY (Digital Accessible Information System) as a technology mainly used in public library services for blind and visually impaired persons around the world.
It will be demonstrated as follows:
1. What is DAISY?
2. How to play and read a DAISY book?
3. How many DAISY books and journals are available?
4. What are the present developments?
During the presentation it will be demonstrated how a DAISY book works and how to use a player.
It will be explained how the unique DAISY technology can be used to improve the production of text and audio books as well as Braille documents.

22 Internet Multimedia Library Accessible to Impaired Readers

By: Brzoza, Piotr
From: Poland
Organisation: Institute of Informatics, Silesian University of Technology

Abstract

For more information please contact the author: piotrbr@polsl.pl

Paper presents management system for internet library accessible to visually impaired people developed at Computer Science Department of Silesian University of Technology. Library system allows to collect, store, catalogue and lend multimedia publications such as: etext books, DAISY DTB, and movies adapted to visually impaired people needs etc.

In our system user can search and borrow publications in few ways: browse publications on-line, download publications locally or they can order them on CDROM or DVD discs.

The system is continuously developed. We would like to improve its level of security by introducing DRM subsystem.

23 Ocular movements Study in Youngsters with Low and Normal Vision

By: Marques-Neves, Graça; Moniz-Pereira Ph D, Leonor
From: Portugal
Organisation: Faculty Human Kinetics studies-Departement of Special Education and Rehabilitation

Introduction

Reading constitutes one of the most highly valued human activities, from a cultural standpoint. Even today, it constitutes schools' privileged way of acquiring information.
For this reason students with low vision are considered at educational risk if their reading speed is not competitive with the one of their peers without low vision (Corn & al., 2002).
According to Kalloniatis & Johnston, 1994 reading is considered by low vision students as the biggest obstacles in their daily activities.
Today, we know that reading occurs by carrying out fast, effective eye movements "saccades", intercalated with movements when the eyes fix themselves on given points with the aim of focusing the image on the fovea "fixations" and sometimes, at given times, it makes eye movements of regression.
In the next figure it is possible to observe an example of eye movements when reading.

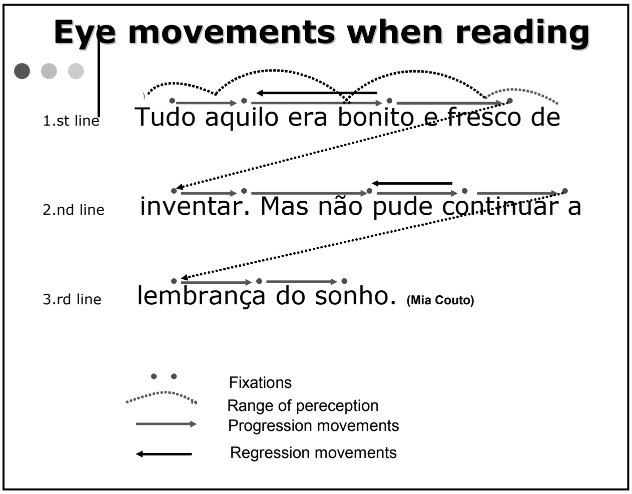

Fig. 1: Eye movements during reading.

In this figure it is possible to observe:
- A depiction of the fixations points (the place where information is processed),
- The saccadic movement, represented by the arrow occurring in the direction of the text.
- The regression movements represented by the arrow going to the left side of the text. Those movements serve to re-check text elements or to reassess a word that has already been perceived.
- The perceptive range, representing the number of characters that are recognized in each saccadic movement.

As we may observe in reading, the perceptive range does not correspond to a saccadic movement, since the letters are sequential and is more difficult to distinguish with peripheral vision.

According to Legge 1997 the differences observed in reading speed concerning normal and low vision people are related to different patterns of their eye movements. This study aimed at determining causes in order to establish intervention, preventive or remedial principles.

Objectives

To check how the length of words influences eye movements for reading in pupils with low and normal vision.

To check how the predictability of words influences eye movements for reading in students with low and normal vision.

Sample

The sample was composed by 24 students, 12 with low vision and 12 with normal vision.

The criteria used in the selection of low vision students were based on the International Society for Low Vision Research and Rehabilitation classification principles. Students with low vision had:

- To be able to read large print letters (at least font size 30);
- To have a visual acuity lower than 5/10;
- To have difficulties in using vision effectively.

Peers with normal vision were selected according to the following criteria:

- They were of the same sex;
- They belonging to an identical age group;
- They had a similar social and economic class;
- Belonging to the same school class with a compatible reading level.

Procedures:

The student was asked to read:

Words composed of 5 letters (common and uncommon).

Words composed of 9 letters (common and uncommon).

Words composed of 12 letters (common and uncommon).

	5 letters	9 letters	12 letters
Common	vento (wind)	catavento (vane)	maravilhosos (wonderful)
Uncommon	amura (bow)	alcatrate (gunwale)	balaustradas (railings)

To eliminate head movements it was used a slit lamp head fixation. The students were placed at 40cms from the equipment. The calibration was obtained by asking the students to look at 9 points presented in different places of the screen (four points in the corners, one at the center, and 4 points between them).

Eye Tracking ASL 504

In order to measure eye movements in reading, a device to track the eye, usually known as *Eye Tracker* model ASL 504*,* was used.

To monitor eye movements, this device uses a technique involving the eye's orientation in space; that is, the point of fixation (POF- *Point of fixation),* based on the combination of measures at the center of the pupillary diameter with diameter with the corneal reflex. The EYEPOS program controls the eye register of the eye position (the individual's line of sight) in a system of Cartesian coordinates (x , y).

With this equipment it is possible to measure:

The number of fixations;
The number of regression movements;
The length of saccades;
The duration of saccades;
The duration of fixations.

The EYENAL program analyzes and presents the gathered data in tables and histograms. A statistical analysis is performed with the program GraphPab Prism 4.03. In the figure 2 and 3 it is possible to observe on the left the register obtained by the student with low vision, and on the right the one obtained by the student with normal vision. The outline represents eye movements, with their points of fixation and progression or regression movements.

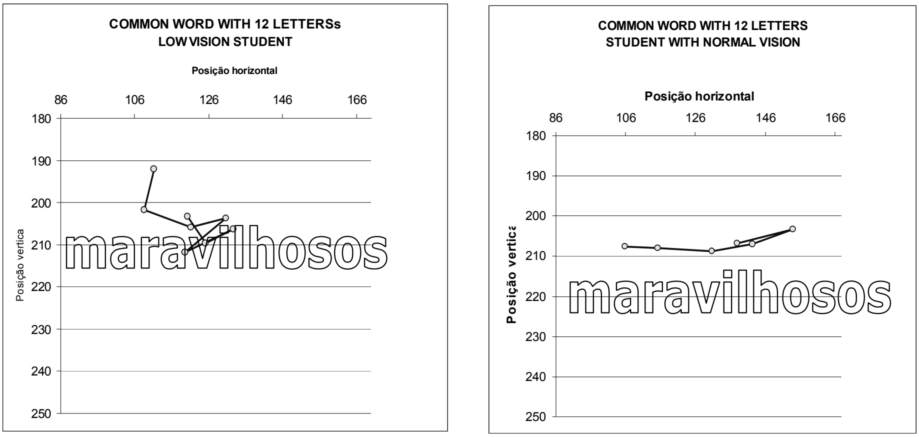

Figure 2 a reading record for a common word with 12 letters

Table 1 shows the quantitative data obtained by the student with low vision, and on the right the one obtained by the student with normal vision reading the common word with 12 letters

Reg. no.	Register no.	Dur. Reg.	Dur. Interr.	Comp.
8	4	0.181	0.047	1.77

Reg. no.	Register no.	Dur. Reg.	Dur. Interr.	Comp.
6	1	0.205	0.020	2.07

Table 1 quantitative data of the common word with 12 letters

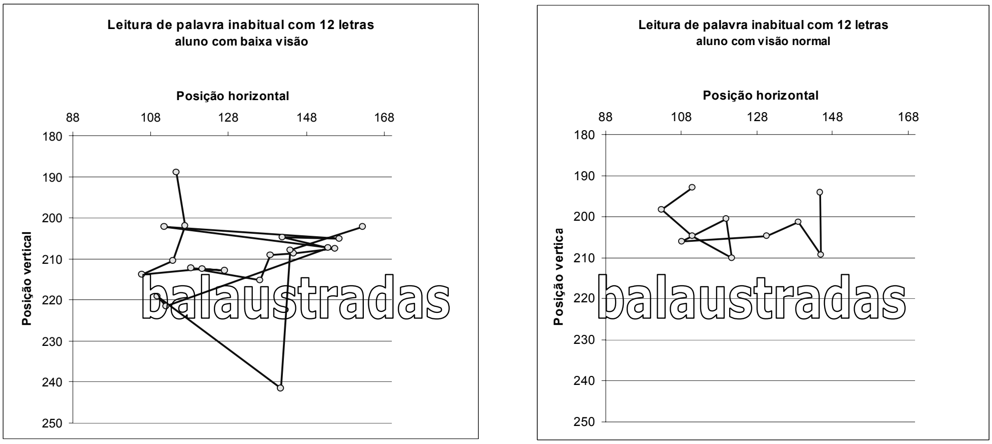

Figure 3 reading record for an uncommon word with 12 letters.

Reg. no.	Register no.	Dur. Reg.	Dur. Interr.	Comp.
8	4	0.181	0.047	1.77

Reg. no.	Register no.	Dur. Reg.	Dur. Interr.	Comp.
6	1	0.205	0.020	2.07

Table 2 quantitative data of the uncommon word with 12 letters

Since the sample is small and does not correspond to a normal distribution, a non-parametric statistical test was used. As can be seen by the numbers in bold, the statistical differences (*p value* 0.05) found between the 2 groups of pupils are:
5 letters common – length of saccades.
5 letters uncommon – length and duration of saccades.
9 letters – number of fixations and regressions.
12 letters common – number of fixations and regressions, duration of fixations and inter-fixations.
12 letters uncommon – number of fixations and regressions.

	Fixations No.	Regression No.	Duration of Fixations	Duration of saccades	Length saccades
5 common	*P*= 0.117	*P*= 0.514	*P*= 0.554	*P*= 0.468	*P*= **0.035**
5 uncommon	*P*= 0.354	*P*= 0.203	*P*= 0.839	*P*= **0.0003**	*P*= **0.0002**
9 common	*P*= **0.042**	*P*= **0.014**	*P*= 0.052	*P*= 0.805	*P*= 0.309
9 uncommon	*P*= **0.046**	*P*= **0.0127**	*P*= 0.194	*P*= 0.224	*P=0.340*
12 common	*P*= **0.008**	*P*= **0.010**	*P*= **0.024**	*P*= **0.026**	*P*= 0.0941
12 uncommon	*P*=**0.0001**	*P*= **0.033**	*P*= 0.103	*P*= 0.131	*P*= 0.185

Table 3 Mann-Whitney U non-parametric statistical test

Given the fact that the Mann-Whitney statistical test evaluates only the existence or absence of differences between the groups, a descriptive analysis was carried out, by turning to main tendency values, in order to determine which group showed a higher value (Table 4).

		Fixations No.	Regression No.	Duration of Fixations	Duration of Saccades	Length of Saccades
5 letters common	Low vision	4.833	2.200	0.2872	0.0634	2.658
	Normal vision	3.583	1.500	0.3463	0.0601	1.463
5 letters uncommon	Low vision	6.833	3.700	0.2457	0.1344	2.786
	Normal vision	5.250	2.182	0.3074	0.0225	1.470
9 letters common	Low vision	10.08	4.417	0.1984	0.1527	2.577
	Normal vision	5.455	1.636	0.2568	0.0523	2.177
9 letters uncommon	Low vision	9.583	3.750	0.2226	0.0922	2.452
	Normal vision	6.333	1.667	0.2688	0.0458	2.186
12 letters common	Low vision	8.750	3.00	0.1858	0.07094	2.912
	Normal vision	5.750	1.167	0.2371	0.0291	2.432
12 letters uncommon	Low vision	15.45	6.000	0.2653	0.2972	3.610
	Normal vision	7.833	2.750	0.2523	0.0717	3.068

Table 4 Main tendency values - Average

As we can see in Table 4 the group of pupils with low vision shows:
Greater number of fixations;
Greater number of regressions;
Greater average length of saccadic movements;
Duration of fixations is smaller.

Conclusions

The length and predictability of words influence the eye movements of pupils with normal and low vision. We may say that our investigation converge with the model developed by Morrison (1984). It seems, as Morrison pointed out, that saccades are determined not just by visual tracks but also by frequency and predictability of words.

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24 The Road to Vision – A Case Study

By: Gschaider-Kraner, Marija
From: Austria

Early intervention, and integration of a girl with severe visual impairment

I got to know Sarah while working as an early intervenor, and taught her for 5 years while working as a mobile teacher for blind and visually impaired children. This case study is a look back at some of the stages of Sarah's early intervention period and her integration into school life.

Early intervention

Sarah was born in September 1992. Some weeks later, her parents and grandparents noticed that there was something wrong with her eyes, so they brought her to the University Eye Clinic, where they were informed that Sarah "appeared to be blind". Luckily they were also informed about early intervention services for blind or visually impaired children, and Sarah was seen by an early intervenor for the first time when she was three-and-a-half months. Things went very quickly from there on. During the early intervenor's first visit, Sarah did not respond to any visual stimuli whatsoever. Fortunately the authorities were quite familiar with early intervention and were able to facilitate an immediate start of weekly training sessions.

Cooperation with the University Eye Clinic

At that time, my colleagues and I had a very good relationship with the Graz University Eye Clinic and especially with the head of the Low Vision Clinic. In urgent cases we were able to consult the ophthalmologist while she was on call to discuss cases. I made a point of taking advantage of this opportunity to the full, and in this way was able to learn a lot about Sarah's diagnosis.

A summary of Sarah's condition is that she was diagnosed as having optic hypoplasia in both eyes, had nystagmus and strabismus, and showed no reaction to preferential looking techniques, no reaction to light and no reaction of the pupil. However, the eye specialist was convinced that intensive training using very powerful stimuli might succeed in triggering a reaction of the eye, and that Sarah might possibly gain some vision.

Training with a firework of visual inputs

We started with a "firework of visual inputs" in a darkened environment. At the beginning, it was not possible to clearly identify Sarah's reactions as seeing. Daylight tests produced no reaction whatsoever, despite the huge range of stimuli used. I then brought a UV box, and Sarah reacted to it. She seemed to notice the fluorescent objects and soon started to look for them consciously. So it was obvious that Sarah did react after all, if the stimulus was challenging enough and if the conditions were suitable (darkened environment, high contrast). Sarah had to be placed on her stomach in front of the box to avoid direct eye exposure to the UV light bulb. Normally the child showed a clear dislike of lying on her stomach, but in front of this amazing "magic box" she relented! She would just raise her head and watch all the stimulating visual impulses. The box was such a clear success, that her father and grand father built her her own UV box, so that she could practice "seeing" as often as possible. After some time, we noticed that we didn't need such a high contrast, and that Sarah was starting to react in daylight as well. Sarah was given coloured scarfs, images of high-contrast faces - and anything that would stimulate vision in any way. As many contrasts as possible were provided.

In March – a few weeks after starting early intervention – Sarah had a check-up at the eye clinic where the first signs of success were noted – even if it was only a slow reaction of the pupil.

Picture books – a particular challenge

We tried the edutainment multimedia pack “Lilly and Gogo”, and Sarah showed an interest in looking at it, but she clearly preferred playing with the dolls. At first, Sarah didn’t know what to do with the picture book that came with the multimedia pack. Pictures didn’t mean anything to her. As motivation plays a huge role in seeing, I asked Sarah's parents to take high-quality high contrast photos and make slides of all the important people in Sarah's life. In the early intervention lessons, we then looked at the slides and a photo album containing the same photos as in the slides. The person in the photo was also present. We were able to make Sarah understand that it was possible that Grandma and Mum, who were present at the slide show, could also at the same time be seen on the wall and in the photo album. Her parents and grand parents looked at the photo album with Sarah over and over. After some time, the child was clearly able to recognize people she knew, the family’s car and other photos of her surroundings. We gradually moved on to images, and before long Sarah's favourite activity was looking at picture books.

The importance of colours

As colours are known to play an important role in stimulating vision, Sarah’s very dedicated parents and grand parents devoted a lot of time to looking at things with her in great detail to train her colour recognition. I remember once when Sarah was about two-and-a-half years old, I brought coloured bowls to the early intervention lesson and Sarah spent hours playing with them. She really enjoyed playing the colours game, and was able to name all of the primary colours.

Prerequisites for seeing

Sarah was definitely able to see, but her level of vision always depended on various factors such as her level of motivation, the size and contrast of objects, and distance. In many situations, Sarah was still not able to see, e.g. when something was too far away. It was obvious that Sarah was aware of this and she would constantly try to improve her blurred vision by moving her face closer to the object of interest. This was often just a matter of a few centimetres. With another check-up at the eye clinic coming up, I started using visual acuity test cards developed by the Finnish ophthalmologist Lea Hyvärinen. In a relaxed atmosphere, Sarah was able to become familiar with the four symbols and learnt to name them, drawing the cards up to her eyes. There was a great sense of achievement as she was able to recognize quite a lot of signs, because the distance was short enough.

Lines, curves, drawings

In early intervention, we take any opportunity we can to draw, and Sarah really enjoyed drawing lines and curves. She took up a special position to draw, crouching on the floor to get as close to the paper as possible. She used her nose to “keep her distance”. Sarah’s drawings were beautiful and she proudly hung them in the living room for everyone to admire.

Distance vision

As Sarah could only see up to a few metres, training her distance vision involved special measures and required extra motivation on her part. In order to train her distance vision, we started by playing with kaleidoscopes. We called them “magic tubes”. Slowly we started introducing monoculars. Sarah tried different kinds of monoculars and suddenly was able to see things around her that she hadn't been able to see before, such as pictures and a clock. She was even able to make out where the hands of the clock were pointing. Fascinated by a new dimension of seeing, she would go around the house looking for new things to discover.

Kindergarten

Sarah started kindergarten when she was five, after a long and intensive preparatory phase. The preparatory phase involved many meetings with the kindergarten teacher to discuss the many aspects of integrating a visually impaired child into a group of sighted children. Such issues were discussed as choosing suitable games and toys, preparing the other children, and especially preparing Sarah herself for her first days at kindergarten. I also brought Sarah to the kindergarten several times "outside of hours", so that she could get familiar with the new environment. The kindergarten teacher was also present on those occasions, so that Sarah could get to know her before her first day. Gradually we started going to the kindergarten towards noon, when only few children remained, allowing Sarah to get used to some of the other children as well.

By the time kindergarten began for Sarah she knew several children and it wasn't long until she started liking it. The girls and boys were very open and she soon made friends. The other children didn't have a problem with the fact that she almost touched their faces when she wanted to see them properly. They quickly distinguished between the situations where Sarah was able to play by herself, and where she needed their help. Sarah was well integrated and participated in all activities.

Primary school

Just as we had prepared Sarah for kindergarten, we gradually eased her into the new environment and experience of primary school. We brought her to the school quite a few times so that she could take her time finding her way around, and we spent lots of time with her in her soon-to-be classroom. We especially wanted to find a way for her to be able to read the blackboard. As she was well used to using her monocular by that stage, we brought a pair of magnifying glasses to see if she would adapt to them, and within a short time she did. We then got Sarah her own monocular telescope magnifying glass eyeglasses and she practised on long and short distances. We arranged for her to have the desk at the middle of the first row, so that she could read from the blackboard.

“Different Views”

Acquisition of a CCTV with integrated blackboard reading camera

Although Sarah had monocular telescope magnifying glass eyeglasses of her own, she wasn't able to use them very well, and it soon became clear that it was too difficult for her to use them to read the blackboard. Her posture was suffering too, despite having a tilted desk, because of having to hold her face so close to the paper. Because of this she would come home every day with her nose the colour of whatever felt-tip pen she happened to be using that day. It was time to consider buying a CCTV with a blackboard reading camera. Sarah's parents brought her to a trade fair for assisted technology so that they could try out and compare the equipment that was on the market at the time. They found something to suit Sarah's needs and were even able to test it out for two weeks, to make sure Sarah would be able to work with it over extended periods. Sarah took to the equipment very quickly and was able to use all of its features before the test period was over and didn't want to give it back! Our decision was made – we needed a blackboard reading camera with computer and peripheral equipment for school, and the CCTV and a PC for the home. Everything together would cost us about € 15,000, but without any significant grants or government funding, it was necessary to take the initiative. With the consent of Sarah's parents and the help of the other teachers in the school, we started a project called "Different Views". For a whole week, students and staff worked on different projects involving different ways of "seeing" things, culminating in a day of action with a wide range of activities for parents, children and the public. About 500 people came to the day of action and everyone was fascinated by the CCTV. Never before had so many parents taken part in a project at the school. We subsequently started a fundraising campaign and were very fortunate to raise enough money to buy the equipment.

Typing

By the time Sarah started second form, she had a CCTV, and a computer both at home and at school, and she also had a blackboard reading camera. It only took her two-and-a-half months to learn to type, thanks to "open learning", where students can learn things at their own pace and according to their own needs. During these open learning periods, I worked with Sarah on new keyboard characters every week, which her mother then practiced with her at home. We arranged that Sarah would get less homework in maths and German and would hand up her typing exercises instead. It was proving difficult to work without screen magnification software, so we decided to get her a programme called "ZoomText". This software enlarges text and enables you to choose from different magnification. Sarah is now able to touch-type so well that she is quicker at taking notes than the rest of the class.

Working with computers

In the beginning, Sarah would only work at the PC when I was there for my sessions with her. I encouraged her to work with the computer on her own, but it took quite a while before she would do so of her own accord. She has since started to use the computer in all her classes, and all the workbooks she needs are now available in digital format.

Assistive technology for mobile use – monocular telescope magnifying glass eyeglasses

Before discussing assistive technology for mobile use, let me briefly tell you a little story. Sarah is a friend and fan of my husband Gerhard, who is also visually impaired. She knows that as a programmer he works with computers all the time. One day, she asked me whether Gerhard also has CCTV and screen magnification software for the computer. When I explained to her that he does everything with his monocular telescope magnifying glass eyeglasses – from computer work to reading books – she suddenly remembered her own monocular telescope magnifying glass eyeglasses and asked if she could bring them with her the next day to try them out in class. The next day she tried the monocular telescope magnifying glass eyeglasses and noticed that she could read from a book using them. She was so motivated by the thought of being able to read like Gerhard that she kept practising. Now Sarah is able to read from all types of books with her monocular telescope magnifying glass eyeglasses and therefore has become much more mobile.

Adapting class materials to everyone's benefit

Sarah has always done well at school and there have been no problem areas. However, her teacher was a little worried about working with maps, because she wasn't sure whether Sarah was able to get an overview, because she only had a narrow view. We overcame this problem by adapting existing maps, and Sarah was able to read most sketches provided they were adapted to her needs. I was very fortunate that Sarah's teacher was so positive and open to my ideas. I usually only had to make a few suggestions for adaptations and give her some examples and she would take it from there. She always worked in a practically-oriented way and all of her pupils really benefited from this. Working together with this teacher was really great.

Preparing for secondary school

As Sarah was doing well at school, we considered sending her to grammar school, but as the school was more than two hours away by public transport, we decided to weigh up the pros and cons of the various types and locations of schools. We chose a good "Landhauptschule" for the first four years, where Sarah would study general subjects. In this case she wouldn't have to choose a field of specialisation until she was 15. This turned out to be a good choice. We looked at two possible schools and finally chose one which had had a blind student a few years previously, and seemed to be very positive in respect to the teachers' commitment.

Preparing Sarah’s future teachers

The school was well prepared for Sarah’s needs. We ordered some of the textbooks in digital format so that she was able to use the workbooks more efficiently. We also chose the classroom that best suited Sarah’s needs and thought about how to arrange her desk. During orientation and mobility training sessions she got familiar with the new school building, so that finding her way around the school would not present an additional challenge when school started.

We talked to Sarah’s future form teacher, and at a meeting with all the teachers we were able to emphasise that Sarah was not blind, but could see a little, and we had a chance to discuss her special needs so as to be able to use her limited vision to the maximum. Although Sarah's vision is only 0.04 to 0.05 according to the medical diagnosis and to my functional descriptions, it is simply amazing what she can do with it.

A new school with special challenges

Sarah’s desk was ready for her when school began, equipped with CCTV with a blackboard reading camera, and a computer with peripheral equipment. During the first week of term we held a self-awareness class with the pupils of the first form, to raise awareness about impaired vision. All of Sarah’s classmates were able to try Sarah's equipment for them, to see how it worked. In the video “Between Vision and Blindness” they found out about the effects of visual impairment. Sarah had the chance to raise important issues with her classmates herself. Her greatest wish was to be treated normally by them. “I’m not blind, I just see poorly,” she said emphatically.

During the first parent-teacher meeting in the new school, all the parents of Sarah’s classmates had the opportunity to see for themselves what it was like to have impaired vision. They were asked to perform a variety of tasks while wearing glasses that simulate visual impairment. On this occasion, we were also able to explain to the parents why Sarah needed extra time for written tests and that sometimes exceptions would be made for her, but that for the most part, she would be taught according to the normal curriculum.

In her normal classroom, Sarah works with CCTV and the blackboard reading camera, and when working with the computer she uses screen magnification software. If the lessons are held in another room, e.g. music or physics, she uses the monocular telescope magnifying glass eyeglasses and a monocular. Sarah is taught according to the normal curriculum of secondary schools, except in some subjects, where the curriculum had to be slightly adapted. For example she can gather some important facts from a map or an atlas, but unless it has been especially adapted for her level of vision, she obviously cannot go into the same level of detail as her fellow students. In mathematics, particularly in geometry, a higher level of inaccuracy is tolerated in Sarah's case and some of the tasks are simplified. Sarah isn't expected to do all arts and crafts activities and instead special emphasis is placed on practical skills like needlework, sewing on buttons and the like.

The multiple-teacher school has been, and remains, a particular challenge for Sarah. During her early schooling where she only had one teacher, it was always obvious to whom she should turn if she had any special problems. Now, there is a form teacher who is responsible for certain things relating to the class, while there is a separate teacher for each subject. If the computer breaks down, the headmaster, who also teaches computing, has to be contacted, as he is the one who has the most experience with the assistive technology for the blind and visually impaired. It hasn't always been easy for Sarah to pluck up the courage to ask for help if, for example, the computer crashed. However, she has begun to feel braver and has become more independent and more self-confident as the days have gone by, and now she is at a stage where she has no problem asking for help immediately if she needs it.

When we conducted orientation and mobility training in the school building, I asked Sarah whether she would like us to mark the first and the last step of the stairs with a coloured adhesive strip so that she would see them more easily, but she declined. Meanwhile, this was done all the same and Sarah was enthusiastic. Now, she is also able to see the step a little earlier and doesn't have to concentrate so much when walking through the building.

Support from the Special Educational Centre for Blind and Visually Impaired Children

Sarah gets two hours of support per week, and the focus is on textile arts and crafts, working with maps for Geography, assessing whether certain tasks or contents in a certain subject are feasible, catching up on problems, talking about social aspects and clarifying vision problems and special measures. As part of orientation and mobility training Sarah made several trips to Graz. She learned to use public transport, to orientate herself a little in the city centre, to ask for information, to use hints and points of orientation for finding stores, and much more. These special trips are always a particular challenge, but they serve to introduce her to being able to be independent in a new environment.

Social aspect

Primary school

Sarah was popular, was invited to various birthday parties and had several friends among her classmates. However, she did not go to visit other children in the afternoon to play. In partner games she always immediately found someone who chose her. During a week long class excursion, she was well able to find her way around. People didn't notice immediately that she was visually impaired. In fact only those who knew her and who observed her more closely noticed anything.

Secondary school

For the pupils, the self-awareness session at the beginning of first form was certainly interesting, but after a few weeks some pupils had already forgotten one or the other implication of Sarah’s visual impairment. For instance, during breaks she would get very close to her classmates, as she couldn’t recognize them otherwise. For some, this was difficult to understand and they didn’t want Sarah to follow them or to come too close. Facial expression and body language is something a person with severe visual impairment cannot see, and therefore she was not able to notice the subtle signs of indifference or rejection. It was necessary to discuss this particular challenge with the pupils over and over, and to make them understand this difficult situation. Many conversations and a variety of awareness activities changed the situation for the better. Sarah has made friends among her classmates and even goes to the cinema with them.

Conclusion

Sarah is now supported by a colleague of mine. She has become very self-confident. While preparing for this conference, I had the chance to meet with her and to reflect with her on the time we spent together during her early intervention period and integration into school life. She was very conscious of the regular support and remembered many details. She very much appreciated being prepared for difficult situations and that this would help her get better opportunities. Her overall feelings about early intervention and integration are very positive.

At an event for blind and visually impaired children some years ago, a blind child asked Sarah whether she was also blind and Sarah replied, "My sight isn't bad. I can see everything, but just a bit differently.”

25 Visual conversion problems in school aged youth, with or without diagnosed visual impaired

By: Hendriks, Annya
From: The Netherlands
Organisation: SENSIS children and youth-care

The conversion-story of Mel

Mel arrived at the Boarding-school of Sensis in Grave when she was16 years old.

She was known as partially sighted (30-40%) and during a period of mobility-training she communicated with her trainer that her visual functioning grew worse, without knowing the reason.

She worried about this and after a while she didn't follow her secondary school anymore.

She visited an ophthalmólogist who told her in her own words 'that her eye-nerve was distroyed'.

Parents and Mel were motivated that she was going to follow the boarding-school. At the moment she arrived at the institute in Grave, - two months before the summerbreak- she was functioning as a partially sighted person.

During the summer holidays Mel was staying at another Institute for partially and blind adolescents and adults, where one organised a lot of activities.

There she met some blind peers and together they had a very good time.

Once she came back to our boarding-school Mel was functioning as a blind person: rubbing in her eyes, rolling with her eyes, seeking for tactile information, asking for mobility-aids and permission to start reading Braille.

During an examination of our ophthalmólogist she only said she couldn't see anything.

During school the teachers saw different visual behaviour: groping her way (tastend haar weg zoeken) but taking a knife directly, running to the door with exact timed stop, picking up visual information from a book but telling that she heard this already, etc.

In her living-group other peers made remarks about her cane-training-competence: she learned it within a week!

Her parents complained about her attitude at home: they did not believe Mel was really blind and they felt treated like a fool. They got angry to her and the home-situation started to become annoying (vervelend).

Need for multidisciplinairy team

Together with the therapists, teachers, group counsellor, social worker, ophthalmologist, psychologist we had to conclude that we didn't have a protocol how to handle this kind of problems.

We started to study about the phenomena 'incomprehensible' (onbegrepen) visual functioning complaints. There was not too much literature about this subject, especially in relation with children and adolescents.

We found out that we didn't know enough information about the previous school period, the life-events, family-history. Also we had not enough medical visual information from the other hospital where they told about the destroyed eye-nerve.

Before we had any diagnosis we choose as a team for the slightest solution:

..take her complaints serious without getting sucked into her emotions
..no emphasis on her visual behaviour: if she says she can't see it -> OK and accept it.
But make clear that also blind people can learn to do everything, so the visual complaints are no excuse for not doing certain things

..no offer of braille-reading
..if necessary, give her help to feel independent: cane-use, later on coloured glasses
..no discussion about her visual behaviour with other peers.
..treatment as normal as possible

2-track-traetment

As we found out that Mel experienced a lot of nasty life-events, her family-history was complicated and the ophthalmologist had thought in terms of 'aggravation'.

There were a lot of stressors for Mel in the past en even in the present.

A consultation with a psychiatrist agreed with our proposal to start a 2-track-treatment:

Treatment of the psychic stressors and 'looking'-therapy.

In the following discussion with Mel and her parents we communicated that the eye-nerve was not destroyed (happily!!) but that we found out that she had something else, we call it "CONVERSION".

We explained the impact of stress on the conscious and subconscious system.

We compare the vision-problem with an opera-singer whose voice refuses to work when there is too much stress.

We proposed the weekly therapy-sessions as well as the 'looking' therapy.

Parents and Mel agreed in this treatment and we started.

Continued story

Mel became more attention from her peers because of her dancing qualities, she decreased her need for the white cane, she was doing well at school and on her practice-address with little children she started to act as a normal partially sighted person.

In complex situations and periods of time she felt back in her blind behaviour. But when the surrounding didn't pay attention to it, she could recover herself.

Mel gained many social competences.

BUT

After a while she felt back, had acting outs, had a suicidal try with pills and withdraw herself from many of the peers. We concluded that her problems had become more complicated in the direction of a border-line-syndrom. But she refused help.

She met an older man, got pregnant and left the boarding- school to live with him.

She just turned 19 and broke with her family and the Institute.

We heard she gave birth to a daughter.

26 Digital Cameras can be used as Low Vision Devices

By: Dipl.-AO. Holzapfel, Stefanie (Co-author Prof. Dr.-Ing. Schreck, Klaus)
From: Germany
Organisation: Technische Fachhochschule Berlin

Pupils and students with visually impairment integrated in the regular schools often use monocular prism-telescopes or a CCTV combined with a camera to read from the blackboard. They could use a digital camera for the same purpose. Pictures will be transferred to a notebook immediately. Thus it is possible to view the picture as such or enlarged by means of picture viewing programmes. Details can be varied in size by using + or – buttons and moved around by the number keys. The pictures can be stored and later used to study the lessons.

Which cameras to use?

Most of the new tiny compact digital cameras have a chip of 5 Mega-pixel and a 2.5” (6.25 cm) monitor that covers the back of the camera. Prices in EU are about € 300 to 400 and thus much lower than that of a CCTV. Resolution of these cameras is sufficient for their use as magnifying aids. The large monitor is important to users with visually impairments, who cannot use the view finder. When needed, the monitor can be watched with magnifying glasses.

We have examined two cameras: NIKON Coolpix S 1 and PANASONIC Lumix DMC-FX 8. Both of them have a 5 Mega-pixel chip, a 2.5” monitor and a threefold zoom-lens. The range of zoom corresponds to a focal length of 35 to l05 mm in a 35 mm film camera. In addition, both cameras have a four times digital zoom. The NIKON has the zoom lens inside the flat body of the camera, which makes it robust. The PANASONIC has a conventional zoom lens that comes out of the front.

How to use a camera in the classroom?

l) The illumination needs to be even and therefore electric light is to be switched on in addition to daylight, because the amount of daylight varies in the classroom. By using artificial illumination there is more light, spread more symmetrically on the blackboard, so that pictures can be taken with short shutter speeds, which decreases the danger of camera shaking. Flash should not be used. A flash might create irritating reflections on boards with glossy surfaces (due to long period of use).

2) Pictures should be taken with highest sensitivity (ISO 400), because it allows short times of shutter speed and a minimum of shaking of the camera. Pictures taken with high sensitivity have a noisy image in enlargements. However, the noisy image does not decrease legibility of writing. Small distortions of long lines do not decrease the value of the camera as a magnifying device.

3) Pictures should be taken with a firm hand and, if possible, fixed elbow and a self-timer to avoid shaking the camera while pressing the shutter button. The PANASONIC Lumix DMC-FX 8 has an optical image stabilizer. Switching on the stabilizer is advisable when longer shutter speeds are used, for example because of low luminance levels.

4) Pictures should be taken with the highest possible resolution (about 2.600 x l.900 pixels) and the lowest compression rate to keep even small details well visible in enlargements.

5) Pictures should be taken with the optical zoom set in the wide mode. This allows capturing a blackboard of 4 m width at a distance of 4.5 m. Yet the resolution is good enough to read hand writing in highly enlarged images. With the optical zoom, set in

the wide mode, jittering is reduced. When the blackboard is small, the distance can be shorter. In that case details are of better quality.

Special conditions in larger auditoria

In a large auditorium there might be problems in taking pictures because of the longer distances. An interesting area on the blackboard should eventually be zoomed in with the digital zoom. If a digital zoom is used, the danger of jittering increases but resolution does not improve. When the optical zoom is used, the focal distance of the lens increases and the aperture gets smaller. The exposure time increases and the picture might be jittered. Using a flash is not advisable, because the flash of these small cameras is not powerful enough and the effect is further decreased by the small aperture during the use of the optical zoom. When using the zoom, a firm hand, a fixed elbow and the self-timer may not be enough, but a tripod may be needed.

Transferring pictures to the computer

Pictures stored in the camera are transferred to the computer via the USB port. This applies for PANASONIC Lumix DMC-FX 8 and many other compact digital cameras. The camera has to be switched on and set to playback mode. The monitor of the camera is switched off during the transfer. The connection between the camera and the computer has to be switched off before new pictures can be taken.
The NIKON S 1 normally transfers pictures via the docking station, which is connected to the USB port and needs AC power outlet. Since rarely, AC power outlets are close to the pupil's desk, it is good that pictures can be transferred without using the docking station by placing the SD memory card into the card-reader of the computer.

Which computer programmes are useful?

All computers come with special programmes for image viewing or photo processing. The Windows XP programme 'Pictures and FAX' that exists in all computers may be used to view pictures. Mr. Friedrichs from the Hermann-Herzog-Schule, Frankfurt/Main, advised us to use the "IRFAN-VIEW" programme, freely available on the internet at "http://www.irfanview.de".

Monocular prism telescope versus digital camera with a computer

A picture, taken with the wide mode of the camera and shown in horizontal direction filling a 15'' monitor, is seen at a distance of 30cm in the same angle as the object itself. At a shorter distance to the monitor, the picture is seen in a wider angle. When the picture is enlarged, only parts can be seen. If a magnification 3x or 6x is used, letters and pictures of the magnified image can be seen similar to the image of a 3x or 6x monocular telescope.
The field of view of a telescope is round. The diameter of the field is related to the field stop of the telescope. The size of the magnified images on the monitor is related to the size of the monitor. On a 15'' monitor the field of view is in horizontal direction a bit wider than the field of view of the telescope. The vertical diameters are closely equal.

A visually impaired student using a monocular telescope has an instant image of the blackboard and can follow the instructions at the same time. Taking the notes is more time consuming than to the other students. If the teacher is writing several of mathematical formulas, the use of a digital camera may be more effective and may replace the notes. The digital images are useful even for the other students who may have made errors in copying from the blackboard. Digital cameras as a low vision device should not replace telescopes or the placement close enough to the blackboard.

Blackboard camera with video

In April 2005, Mr. Temmesfeld from the Staatliche Schule für Sehgeschädigte in Schleswig, reported at a conference of the AG Integration und Kommunikationstechnologien/ EDV in Friedberg how to create a mobile camera unit based on a computer and a surveillance camera. Students integrated in local schools use a remotely controlled colour video camera to observe the blackboard and to save either single images or short video sequences. The image of the video camera is seen on the monitor of the computer and - if the student so wishes – stored in the computer. According to Mr. Temmesfeld, the stored images cannot be enlarged. The resolution of the camera is not good enough.

At the VBS Congress in 2003 in Dortmund Mr. Denninghaus used a digital camera combined with magnifying glasses as a low vision device for distance. His example motivated us to fit a college student with both optical devices and a digital camera.

Magnification of a monocular telescope versus magnification at the camera monitor

The monocular telescopes are used at short distances in the classrooms and outdoors in orientation and mobility to see street signs and orientation landmarks at far distances.

The signs can be captured with the zoom mode (the highest possible focal length). The parts of the image can be viewed on the camera monitor magnified 2x, 4x, 8x or 16x. The magnified area of the image can be moved by using the cursor buttons to see all parts of it.

An image magnified 8x viewed at 15 cm distance to the camera is seen at an angle equal to the angle an image is seen through a 6x telescope. The field of view of the image shown on the monitor is smaller than the field of view of the monocular.

For a person with visually impairment it is difficult to locate the object of interest in the small image of the camera monitor. The details of the image are even more difficult to locate during magnification that requires also navigation of the image (when areas of the picture are magnified and moved). Persons with good accommodation ability may watch the image at close distance; those with loss of accommodation have to use magnifying half glasses.

Use of a digital camera to read and copy time-tables

With a digital camera one can both read a time-table and store it in the memory for later use. With a monocular telescope focussed at near, one can read a time-table but not save the information.

NIKON S 1 digital camera used as mobile electronic magnifying device

The NIKON S 1 digital camera in macro mode combined with the optical and digital zoom allows having a clear image at 10 cm distance. The image as such is magnified up to four times at the monitor. Time-tables placed behind the glass at a certain distance can be seen enlarged at the camera monitor without taking a picture.

Summary

Digital cameras as low vision devices can help persons with visually impairments. It may be difficult in the beginning to operate them as they have many small buttons, but these initial difficulties are known by most of us.

Many visually impaired students are good in computer techniques. The student, whom we worked with, immediately grasped the techniques using a camera, which had been programmed by a friend of hers. With this one positive experience of using a camera as a low vision device, we would suggest further evaluation of digital cameras in several schools.

27 Teaching Key Competences for higher Education

By: Drolshagen, Birgit and Rothenberg, Birgit
From: Germany
Organisation: Univ. of Dortmund, Fac. of Rehabilitation Sciences, Dortmund Center Handicap and Study

Students at universities acquire specialized knowledge as well as non specialized knowledge like cross-curricular competences. Cross-curricular competences make it possible to use the acquired specialized knowledge adequately. Cross-curricular competences are competences which are independent of certain contexts or contents. For example, they include skills to write scientific essays, to use modern technologies or successful techniques of presentation on the one hand and the ability to communicate, to work in teams and to solve problems on the other hand. The importance of cross-curricular competences for vocational training and work is to be seen in the term of key competences (Chur 2005).

Universities offer a lot of options to acquire these key competences. In centres which work at didactic matters there are classes where students can learn how to present a lecture, how to write an essay and so on. Students who want to learn how to use certain software which they need for their studies can enrol for courses at computer centres of the universities and so on. Teaching competences like the ability to work in teams or to solve problems is part of the curricular in many studying programmes.

To use those offers is as important for students without disabilities as for students with disabilities, but students with disabilities often don’t have the option to use them. Computer centres at universities, for example, are often not equipped with computers adapted for visually impaired students’ special needs.

These and other deficits pose serious disadvantages to disabled students. They prevent them from having equal rights in attending universities and acquiring specialized knowledge and competences (see Drolshagen 2003). The world health organisation calls these disadvantages participation restrictions.[1]

These disadvantages are extremely serious because for disabled students studying and working successfully not only means to acquire those key competences which students without disabilities have to learn, too. Further, students with disabilities have to acquire additional specific key competences because of their disabilities. These specific key competences are strategies of dealing with their own impairment as well as of compensating for restrictive structures and for the need of help due to their disability and the restrictive structures. Further they need the authority to use the strategies in a responsible and useful way. This means they need the strategy authority.

Being familiar with these strategies enables disabled students to use the mainstream university offers to acquire general key competences. In this contribution we will explain how disabled students can be enabled to acquire these additional key competences concerning how to deal with their individual need of help. Strategies of dealing with one’s own disability or the restrictive structures at universities are the strategy of handling tasks by oneself with or without using aids, the strategy of using paid or unpaid personal help, or the strategy of using services. All strategies have specific advantages and disadvantages so that students with disabilities should be able to decide on their own which strategy they wish to choose in a specific situation (Drolshagen / Rothenberg 1999). Disabled students have the authority to choose the strategy. With regards to the independent living movement they are experts in their

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[1] http://www.who.int/classification/icf/intros/ICF-Eng-Intro.pdf (15.09.2005)

own cause. As a prerequisite to practice the authority to choose between these alternative strategies Drolshagen and Rothenberg (1999/2005) point out that students with disabilities must know the different strategies of dealing with the individual need of help. Further, the students must have experiences in using them.

The Dortmund centre handicapped and study (DoBuS) pursues this principle. DoBuS was established at the University of Dortmund in 2001 as a centre conflating services and projects, some of them with many years of experience. The different facilities of DoBuS are the centre of counselling and service for students with special needs, the working place for students with special needs and pool of electronic study aids, and the adaptation service for adapting study materials suitable for visually impaired students. Before we present these facilities which support disabled students to acquire the specific key competences, we will discuss the different strategies of dealing with help. Visually impaired students may have needs for help when looking for literature in the library, when reading scientific books, when attending lessons in which a lot of written material is used, and so on (see Drolshagen / Klein / Rothenberg / Tillmann 2002).

Strategies of dealing with Help

Reflecting the different strategies of dealing with help illustrates that each strategy has pros and cons. Corresponding to the traditional aims of visually impaired persons' education and rehabilitation first the strategy of doing tasks by oneself is to be mentioned. A survey, carried out by Drolshagen and Rothenberg (1999), illustrates that the strategy of doing things by oneself makes a maximum of flexibility possible. On the other hand doing things by oneself costs much energy, time and stress. As a consequence, this strategy can produce disadvantages for the own studies.

In spite of the necessity to organize personal helpers, the strategy of using personal help can be a suitable alternative to the strategy of doing everything by oneself. In literature, the importance of payment is mentioned as a prerequisite that help, for example, supporting students in the search of literature in the library is done by the wished person, in the wished quality, and to the wanted time (MOBILE et al. 2001).

Students with disabilities often use the strategy of hiring paid helpers, called personal assistants, because it enables them to study successfully in a self-determined way. In this cases we call personal assistance study assistance.

This strategy was developed as a counter movement against doing everything by oneself by representatives of the Independent Living Movement. Personal assistance means that personal assistance users determine who will assist them, a man or a woman, with what qualification for which tasks. The personal assistance users decide when, what, and in which way a specific task is to be completed by which person. The personal assistance users can supervise the work of their personal assistants because of their supervisional and financial authority. Payment means "to call the shots" and therefore self-determinism. A detailed overview of the concept of self-determination its aims and its development is to be found in Drolshagen/Rothenberg (1999).

Referring to unpaid friends or family members is frequently not a strategy aiming for self-determined studying. Rather, such a system holds the danger of dependence on and paternalism by helping people (Drolshagen/Rothenberg 1999).

The use of services can be a strategy which allows self-determined studying comparable to personal assistance. In these cases the relationship of help is marked by payment for performed services. However, limitations concerning choice, instruction, and organisation of helpers have to be considered, for example, a service which adapts study material on tapes will order a speaker as soon as one of its speakers has free capacities to produce the tape. That's why the student, in contrast to using paid helpers, often can't choose the person who will read out the book and often can't determine the time when the speaker will have finished reading out.

Results of a Study

The results of a study on 26 handicapped students[2] with demand of help during their studies document these theoretical assumptions. The interviews showed that the students[3] took up many forms of help, whereas only one third of the students used just one strategy or method to satisfy their demands. Most of them combined different forms of realization. The combinations of methods varied depending on the different spheres in life.

Personal Assistance during the Course of Studies

Over all viewed the model of personal assistance and thus the use of helpers during the course of studies is the most frequently applied method to satisfy the demand of help. It is used by fourteen students, twelve of them using it intensively, two additionally. They engage readers and assistants for research in libraries, assistants who take notes in classes or to whom they can dictate these notes. They also engage sign language interpreters and tutors which support them in compensating for learning deficiencies due to sensual impairments. Eight students, five men and three women, study exclusively according to the personal assistance method and state that this form of help is most intensively used by them.

The strategies of „Do-It-Yourself"

Fourteen students make use of the "Do-It-Yourself" strategy, nine of them as the main method, five as additional help. Consequently, every third interviewed student does not make use of personal helpers for tasks that would need an assistant according to the students' statements. The majority (8) of the students combine different strategies. They complement this method through service, unpaid help, in exceptional cases through assistance or personal renouncement. This mainly applies to students with visual impairments. They combine above all the "Do-It-Yourself" strategy, four students with visual impairment amend this method through services. A female student says about the conversion of study materials into adaptations accessible to students with visual impairment:

„Also, wenn es dann gemacht wird [die Literatur von Lehrenden umgesetzt wird], dann ist es auch in Ordnung, weil dann kann ich ja auch bestimmen oder mitbestimmen, wie es letztendlich aussehen soll.... Ja, das dauert halt, bis sie [die Lehrenden] es [die Umsetzung von Literatur in sehbehindertengerechte Form] verstanden haben und es dann auch rechtzeitig vorhanden ist, wenn es dann vorhanden ist. Also, das sind teilweise schon ein bisschen Laufereien."[4]

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[2] 13 men and 13 women with need of personal help due to their impairment while visiting an university have been interviewed. 5 of them were deaf students and 5 were hard of hearing, 6 students were visually impaired and 2 others blind; there were also 8 physically impaired men and women.

[3] The results of the study are based on interviews (partielly standard interviews orientated on a manual) with 27 students with special needs (Rothenberg 2005). The interviews are part of a more extensive study, researching the life situation of people with different impairments and their handling with the need of personal help "Leben mit Assistenz – Selbstbestimmung und Hilfebedarf" (Birgit Drolshagen/ Birgit Rothenberg).

[4] "Thus, whensoever it will be done [adapting study materials of lecturers], then it's okay due to the fact that I can decide respectively I am part of the decision how it will look like at least....

I-St 10 (vi/ f/ 22)
Two of the students with visual impairments combine the method of „Do-It-Yourself“ with complementary services and additionally with unpaid help respectively complementary unpaid help and, if necessary, with „abdication“ of academic demands. One female student with visual impairment and one male blind student combine the “Do-It-Yourself” strategy merely with supplementary unpaid help.

Use of services

Nine students use services in order to satisfy their needs of help during their studies. However, the majority only makes supplementary use of these services (7) or in the case of urgent need. Five of them are students with visual impairment at the University of Dortmund. The university provides for this group of students special services which offer adaptations of literary works and other study materials. At the time of this evaluation these services are being built up and cannot accommodate the demands of every student yet. At other universities in which students were interviewed such services do not exist at all.

Comparable services for students with other demands at the universities attended by these interviewed students do also not exist.

Renouncement of Lessons and Other Needs During Study

Abdicating activities to avoid the demand of help is used by four students but only “infrequently”.

These few results show the variety of methods applied by students with impairments to meet their demands. However, further results reveal that students are not free in their choice of methods. Outer and inner psychic restrictions aggravate the individual and flexible choice of strategies. The statements made by the students hint at the importance of strategy competences as specific key skills for disabled students.

The Dortmund Centre Handicap and Study (Dortmunder Zentrum Behinderung und Studium - DoBuS)

Besides individual counselling and services DoBuS offers a variety of measures and activities which are offered to purposefully serve the acquirement and intensification of specific key competences. Computing and assistance tutorials, Schnupper-Uni, (a two day event for disabled prospective and first semesters students) as well as tutorials for first semester students provide a basis for disabled students to further support sovereignty in their development of strategy competences.

Using insights from resource theory (see Nestmann 2004), already at the Schnupper-Uni courses the different forms of the demands of help are equally introduced to the students. Furthermore, titles of financing a study assistant and services are explained as well as the principle of disadvantage settlements emphasized. Students of higher semesters offer their help as peers.

We consciously choose the phase of orientation because we expect the disabled students in demand of help to be especially motivated at the very beginning of their studies to deal with unknown respectively alien techniques and strategies of help offered to them. At least these students who have already before their enrolment into university or at the time of enrolment taken advantage of the relevant counselling services are willing to maintain or gain their resources.

Okay, it will take a long time till they [the lecturers] will have understood [the organsiation of adapting materials] and this material will also be ready in time, if its adapted. After all that gives me some trouble some times to manage this.“

As the interviews have shown, the arguments brought forward for or against the use of certain strategies are the same. Irrespective of the strategies they used solely or in combination, the students evaluate their quality alike (e.g. results of tasks with better quality or little effort). The reasons why they did not use certain strategies or why they did not changed methods lie outside the qualities of these strategies.

Ignorance of other strategies, missing experiences, the fact that they have to let go of an already learned strategy and the necessity of outing oneself as a disabled person were reasons mentioned by the students.

With the offer of two explicitly designated services, namely the assistance tutorial as well as the computing tutorials, DoBuS tries to strengthen the strategy competences of disabled students. Assistance tutorials are made available as group activities. Besides dealing with basic problems, they also offer help with the concrete organization of assistance and provide a basis for exchanging experiences.

In order to alleviate the start into their studies, the disabled students have the possibility to deploy helpers to practice working with assistants.

As a rule, in computing tutorials visually handicapped students have the chance to use peripherals in one-to-one lessons as well as software relevant for their studies. Through technological aid these offers add to the high quality of the "Do-It-Yourself" strategy often used by visually handicapped or blind students.

DoBuS also supports the active use of services. The service responsible for the conversion of study materials into adaptations accessible to students with visual impairment work the usual hours normal at universities. Scripts, transparencies, and study texts are made available to disabled students a week after their order. Thus visually handicapped students are able to reliably include these services into their strategies. This working strategy, however, demands that the students organize their help ahead of time and to introduce themselves to their fellow students as visually handicapped students.

With their offerings DoBuS wants the students to acquire special additional key competences which are necessary to successfully finish their studies and tasks. Strategies of dealing with one's own impairment and hindering structures go hand in hand with a confident use of the different methods to satisfy the need of help as well as a sovereign use of strategy competences. The acquirement of these special key competences enables the disabled students to take advantage of all the university courses that teach interdisciplinary key competences.

28 Pre-vocational training programme (BvB) – a new concept and its implementation, first results after 11 months

By: Göhler, Kerstin
From: Germany
Organisation: SFZ BBW für Blinde und Sehbehinderte Chemnit gGmbH

Structure

1. General information on the concept
2. Implementation at the SFZ BBW Chemnitz gGmbH
3. Evaluation of the results

1. General information

As of September 2005 the labour agency introduced a new concept for pre-vocational training (BvB). The following section compares both concepts:

Up to 08/2004 Former occupational preparatory course	As of 09/2004 New pre-vocational training (BvB)
- F1 – Duration usually 12 months - Aim: Ready for vocational training or transition to F2 - F2 – Duration 24 months - Aim: Entry into the regular labour market (unskilled) or into a sheltered workshop - F4 – Duration less than 12 months - Aim: Ready for vocational training (career changer)	- Duration max. 11 months for disabled persons, all others 10 months - Aim: Ready for vocational training, bridging the time between taking up a training position or another training measure in the regular labour market or in a sheltered workshop - When entering the regular labour market the programme can be extended to max. 18 months

Pro: As of now there is only one programme to cover all contents, allows high flexibility, transfer of the participants between programme measures not necessary.
Contra: At the beginning of the programme in Saxony only 4 hours of vocational school instruction were scheduled. During the course of the programme this number was raised to 8 hours. Later in the presentation you will see why this step was necessary.
The pre-vocational training (BvB) is not a programme designed specifically for the needs of disabled persons and this turned out to be a disadvantage in some respects in terms of the programme's implementation and the demands. We will come back to that later on.
The target group of the pre-vocational training programmes are adolescents or young adults who have not yet been vocationally trained in any way, who are under the age of 25 but who have fulfilled the compulsory education requirements. (1)

Aims of enhancing the concept:

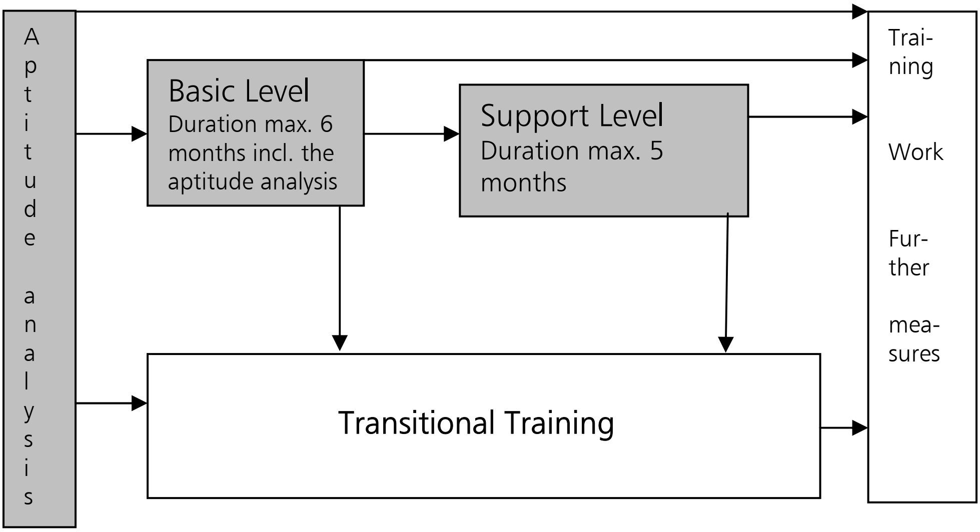
The development of the former occupational preparatory course into the new pre-vocational training programme (BvB) aims above all at

- Avoiding unemployment or the lack of a training place or helping to overcome these situations quickly
- Improving the occupational competence of the target group
- Enhancing the level of qualifications
- Providing and re-activating in-company training offers
- Raising the number of jobs and training places

- Increasing customer satisfaction

The overarching goal is an improved transfer rate of participants into apprenticeships and the world of work and, in so doing, contribute to enhancing the efficiency and effectiveness of the BvB. (1)

(1) Source: Circular of the Federal Labour AgencyStructure of the pre-vocational training contents **(1)**



Aptitude analysis: The aim of the analysis consists of drawing up a profile with the participant's strengths and weaknesses (scholastic knowledge, social and personal skills, etc.). The participants should be able to recognize their own individual stage of development. To determine a general vocational orientation they are asked to categorize themselves into certain occupational fields and assess their career ambitions and personal strengths realistically.

Basic level: The focus at this level is on the vocational orientation/career choice. The training aims at the development of personal skills in order to take up a training place or a job.

Support level: The focus at this level is on the promotion of basic vocational skills. Only those participants who have not successfully completed the basic level will be transferred to the support level.

Transitional training: The core element of the transitional training is to strengthen the participant's professional competence, which is done primarily by providing training that is of great relevance for a vocational training place or a job.

The periods of time at the different levels (see diagram) are to be understood as a maximum. It is always possible to move on to the next level sooner or even to abort the measure.

The pre-vocational training (BvB) is not limited to the development of the participants' professional competence but also focuses on promoting their personal, social and methodological skills and activities of daily living, amongst other things.

All the contents, objectives, results and support measures of the different levels are recorded in a special training plan for every student. At the end of each level the plan has to be discussed with and agreed upon by the labour agency's rehabilitation consultant responsible for the participant.

2. Implementation at the SFZ Chemnitz gGmbH vocational training centre for the blind and visually impaired (BBW)

It took us about 9 months to prepare the introduction of the new concept. From the very beginning the inter-disciplinary co-operation between all parties involved at the BBW was of great importance. The head of departments responsible for training, the boarding school, the specialist services and the school; trainers, educators, teachers, psychologists, mobility trainers etc., all participated in the introduction and the implementation of the new programme. As you see, even at this stage the staff resources required were enormous. The aim of the preparatory phase was primarily to guarantee effective implementation of the programme (avoiding duplicate recording and reviews as well as adjusting the programme to the needs of the blind and visually-impaired participants).

(1) Source: Circular of the Federal Labour Agency

Evaluation of the former occupational preparatory courses revealed that participants were very often multi-handicapped (the overwhelming majority suffered not only from a visual impairment but also from learning difficulties) and that they enrolled in the programme because they were not yet ready for vocational training. Deficits were identified in the German language and mathematics especially, as well as in the social behaviour (e. g. communication, conflict resolution behaviour etc.) .They **did not** enrol in the programme because they didn't have a job or training place! Furthermore, it became evident that in most cases after about 6 months of the programme the participants were able to orientate themselves vocationally. However, about 15 % of the participants were not able to train for an occupation even after 9 months.

We could not expect – and this proved to be the case – that the participants applying for the pre-vocational training programme (BvB) would come with different qualifications than the ones who enrolled in the former occupational preparatory course.

The new programme aims at enabling the participants to pick 3 potential occupational fields or a particular occupation after just 3 weeks. This turned out to be very difficult since the career choices for the participants are already limited from the very beginning because of their disabilities; hence these choices have to be examined very carefully to see what is possible.

What to do?

With about 30 participants, the programme could start on schedule and did not have to be delayed. Altogether, 36 participants enrolled in the programme, 2 of them joined in at a later date.

2.1 Aptitude analysis

Participating staff: trainers, teachers, educators, specialist staff (psychologists, mobility trainers, ADL teachers, an orthoptist, medical services, case manager/training coach)

Before the programme started it was decided that the case managers of the young persons would also take on the role of training coach during the programme.

Aim: - Profile of participant's strengths and weaknesses (scholastic and social qualifications),

- Mobility, ADL,

- One-day taster course without any possible restrictions to become acquainted with all occupational fields,
- Disabilities/illnesses and how they could impact on a potential career choice

It was organized in such a way that scholastic and practical reviews were carried out between 7 a.m. and 1 p.m. After 1 p.m. the specialist staff carried out their analyses.
Every afternoon the staff members involved in the aptitude analysis met to discuss and evaluate the individual participants.

How do you make sure all the colleagues involved get the results of the reviews and therefore all the important information promptly?
Each participant's personnel file including his/her personal information was scanned and made available. An extra sheet was compiled for every participant to list additional information such as disability, school education, aids used, career plans etc. This accompanying sheet was filled in before the programme started and was then made available on the intranet for all those involved in the process. Information that was not available at the beginning of the programme was added during the enrolment. This way it was possible to avoid recording information in the fields twice.
In addition, a support profile was compiled for each participant listing all the results of the workshop days. It also included information on the assignments completed, the evaluation of solutions and the results of the social skills observations.
After having concluded the aptitude analysis, a meeting was held with each student to draw up a support plan. This plan defines the actual situation, what support is needed as well as the next steps.
A training plan was then developed based on the findings of the aptitude analysis in the different fields and the support measures required. This plan lays down which support measures will be provided, where, and explains why these measures have been selected.
The training plan is supplemented after every level before being sent to the labour agency responsible, which has to approve the planned training measures and location.

Conclusion of the aptitude analysis:

With considerable staff resources, careful organisation and the great commitment of all parties involved we were able to meet the requirements to the greatest possible extent.
Never before did we know so much about the participants so early on in the programme.
However, in the vast majority of the cases the participants did not manage to pick the maximum three occupational fields or one specific occupation.
Two participants left the programme during or right after the aptitude analysis. All other participants were accepted for the basic level.

2.2 Basic level

The basic level focuses on career choice. The maximum time allocated to the basic level has been organized in such a way that the participants can get acquainted with at least three occupational fields. The occupational fields are derived from the aptitude analysis and the wishes/ideas of the participants regarding their future occupations. Acquainting the participants with the occupational fields takes place directly in the respective training fields to allow the participants to gain as much insight into the profession as possible. Support and remedial teaching provides extra assistance for the participants.

We noticed during the basic level that the participants not only showed occupational deficits but also substantial social deficits. For this reason two social education teachers introduced "social learning". May I take this opportunity to remind you of Ms. Thiele's presentation on 18 August 2005.

The aim of the basic level is to ensure the participant's readiness for vocational training. For many of the participants this goal was not achieved as it was not possible to reduce the existing deficits in the time given or the occupations that were tried out did not match with the participant's ideas. Often other occupational fields had to be tried out. These participants were transferred to the support level, all others were sent to the transitional training. In Saxony the vocational school instruction was expanded from 4 to 8 hours after about four months. This proved to be extremely important in light of the tremendous literacy and numeric skill deficits on the part of the participants and the conceptual demand at the support and transitional training levels to coordinate the working process and the teaching according to the requirements of vocational support schools.

2.3 Support level/transitional training

At this stage the new concept does not differ much from the old occupational preparatory course. Participants who have chosen a certain occupation and were attested the necessary aptitude is prepared specifically for this occupation. Participants who have not yet been declared ready test their suitability for other occupations and, once they are attested the necessary aptitude, receive job-related support. One of the essential features of the programme is that it makes use of training modules. These modules have to be developed by the educational establishment and must be submitted to the relevant chamber (chamber of commerce, chambers of handicrafts, regional authority) for certification. This means that thanks to the training module (of about 120 to 240 hours), the participants are taught some of the training contents for the job even before starting. This taught content is certified and can possibly reduce the time of the vocational training. Another conceivable option is to teach training modules for a specific job to provide subsequent entry into the field of work without prior training.

In the first year of the programme none of the participants were able to complete a training module. We will discuss the reasons for this later on in the evaluation section. Remedial and support teaching, mobility training and other agreed support measures will continue.

Four participants left the programme because an aptitude for a profession could not be determined, nor was placement on the regular labour market possible. These participants were transferred to a sheltered workshop.

3. Evaluation

Reference points for enhancement (1) and its interpretation for the blind and visually impaired participants of the vocational training centre SFZ Chemnitz gGmbH:

Basically, it can be stated that in essence the new pre-vocational training concept (BvB) has proven its worth in practice. Many contents and procedures required by the concept have already been implemented in the former F1 and F2 schemes. Nevertheless, there are a few aspects, particularly relating to disabled persons, that are impeding an ideal outcome for the programme.

Based on our experience the following can be said: The participants of this programme in the vocational training centre are generally **not yet ready for vocational training.** This and the resulting inability to choose an occupation makes it extremely difficult, if not impossible, to opt for three occupational fields or even a vocational training course after just three weeks.

- *Elimination of the scheme categories* - Does not pose a problem for our participants. In light of the substantial deficits, however, the reduced length of the programme is problematic.
- *Dividing up the pre-vocational training contents into training levels as well as support and training sequences* – The structuring does not pose a problem; but sequences such as the successful completion of training modules can rarely be achieved.
- *Aptitude analysis as the basis for successful planning of the training* – With an efficient way of working, careful organization and major HR resources, the medical, orthoptistic, psychological, mobility-related, professional and scholastic reviews can be carried out in the designated time of 3 weeks.The use of assessment methods also allows initial gauges of potential and existing key qualifications without, however, being able to make further distinctions.The young people get acquainted with the possible occupational fields. The time designated for the aptitude test and its objective to opt subsequently for 3 potential occupational fields or an occupation is not long enough, not least because the participants are not ready for vocational training. It should also be noted that the young people need more time to adjust to new situations because of their disabilities. This is true of mobility (training places, social environment, school, routes) as well as handling unfamiliar aids.

(1) Source: Circular of the Federal Labour Agency
Results after 3 weeks:
- Scholastic qualifications
- Aids/mobility
- Interests and tendencies of the young person
- Occupations that can be learned despite the disability
- But for the vast majority of the participants it was not possible to determine, given the individual capabilities, which occupations could be learned
- Strengths and weaknesses

After the implementation of the aptitude analysis it is necessary for all parties involved in the process to consult intensively with the young people and find consensus on the development of a well-constructed training plan.
It is barely possible to do this with blind or visually impaired participants in the short period of time available. We therefore advocate extending the aptitude analysis to 4 weeks.

Basic level/support level/transitional qualification

The actual occupational orientation/career choice takes place at the basic level. Because of the enormous support required in most cases, one has to differentiate between support for a specific vocation and promoting basic skills (German, mathematics). For this reason support teaching is offered outside the regular teaching hours. In retrospect the need for extra support appears to be growing, i.e. the participants’ qualifications at the time entry into the programme are becoming weaker. In addition, there are more and more motivation issues on the part of the participants and a very poor ability to assess their own capacities realistically. The social competences of the young people are rather limited. This increases the importance of “social learning“.

Thus it is evident that practical preparation for an occupation is rather limited at the basic level. First of all a multitude of other requirements have to be met. Learning motivation, measuring the learning progress and adjusting the training plans accordingly is of great importance at every level.

At the end of the basic level and despite intensive support about 20 % of the participants were still **not** ready to be trained for an occupation. This vocational aptitude had to developed at the support level. At the end of the basic level another 50 % of the participants were transferred to the support level because they had not acquired sufficient basic skills for working. Only about 20 % managed the transfer to the transitional training. 10 % of the participants did not continue with the programme; they were usually referred to a workshop. For three participants it was only possible to determine an aptitude for an occupation at the end of the programme.

The role played by training modules is rather minor. Because the participants first have to be ready for vocational training, the training contents cannot usually be anticipated at this stage. We do not believe that training contents should be broken down to such a degree that every participant can complete a training module. This is not actually the point of working with training modules and would lead to a devaluation of the training modules. For participants who entered the transitional training after the basic level, we tried to make sure they would all successfully complete at least one such module. No participant managed to successfully complete all the modules.

- *Educational coaching* – is to be rated very highly, the role was first assumed by the case manager, as of next year the training coach will take over this task
- *Job acquisition and placement into training or a job* – so far achieved for 100 % of the participants, those who were ready for vocational training were provided with a training place in the BBW centre, job placement succeeds only in exceptional cases (1 participant), transfer to sheltered workshops more common (3 participants)
- *Training agreement as an element of the rehabilitation agreement* – is practiced and enhanced in the context of the meeting on the support plan, was implemented similarly in the occupational preparatory scheme
- *Promotion of cooperation-based training offers* – with internships we tried to give the young people an idea of what everyday work in companies is like. Here the focus was more on social aspects than on teaching specific skills for the job, the search for internships turned out to be difficult
- *Nation-wide implementation of company training concepts close to the place of residence* – the sensory impairments of the pre-vocational training programmes' participants are very often coupled with learning difficulties or are so severe that the special support of a vocational training centre is crucial (as a reminder: participants who are ready for vocational training take up a vocational training programme immediately), out of the 36 programme participants this year none received the referral for an apprenticeship outside the BBW centre (18 participants into an occupation according to §66 BBIG (Vocational Training Act), 9 participants according to § 4 BBIG and 2 participants in college of health occupations. 6 participants terminated the programme prematurely or were transferred to a sheltered workshop when the programme ended. Due to the labour market situation in the Eastern Länder, the old F2 measure or the current direct inclusion into the labour market are not really relevant. This possibility was only open to one participant. A potential job could be found with a lot of time and effort. Extending the programme to 18 months was urgently required.

All in all, from the point of view of the SFZ BBW Chemnitz gGmbH, extending the period of support to the original 12 months would be a good idea. The deficits in meeting the entrance requirements for a vocational training programme are so grave that this much time will be needed in most cases as a minimum to prepare the participants for vocational training. In some cases 12 months will not even be sufficient. Therefore, we think that it should be possible in individual cases to extend the programme to 24 months. Such a compromise seems to be difficult to implement at the moment.

From our point of view, evaluation by the relevant labour agencies is an interesting solution because of the considerable increase in the workload. The feedback given regarding the enhancement of the training plan after every level and the approval of the labour agency responsible was very diverse (too much paper, we have already approved it for 11 months, very work-intensive, etc., but of course approval from the agencies as well and prompt feedback).

In conclusion we can draw a positive balance of the training measure. We were able to meet the difficulties and unforeseeable situations associated with the introduction of a new concept thanks to the commitment of all our staff and by making necessary adjustments to the content as well.

29 Functional rehabilitation-a premise for career choice and training in the case of visually impaired people

By: Preda, Vasile Liviu and Runceanu, Laura Elena
From: Romania
Organisation: Babes Bolyai University, Faculty of Psychology and Sciences of Education, Special Education Department

1. Objectives of Functional Rehabilitation

Functional rehabilitation, necessary for the learning and practising of a profession, allows the visually impaired to reach a higher personal, economic and cultural autonomy. Between the various aspects of functional rehabilitation there are strong interconnections which constitute themselves as an all-comprising process. This process is part of the career choice and training programme implemented in some centres/institutions specialising in the work with visually impaired people.

In order to achieve this, there are six objectives to be attained:

a) multisensorial rehabilitation leading to an efficient perception and processing of cognitive information;
b) the use of specific compensation techniques: the use of the cane, of guide dogs, of sonic guides for movement autonomy, techniques acquired through activities of mobility and orientation; the learning and use of the Braille system; the use of the new information technology;
c) the development of skills and abilities required by the various professions, as part of the training programme, or of professional reorientation (especially in the case of impairment acquired at a mature age). There is also training meant to lead to the development of the kinesthesic sense, of a great precision of gestures and of an appropriate orientation at the work place and outside;
d) individualised psychological counselling meant to shape a positive self image;
e) the preservation and development of social contacts with groups of fully abled people, in order to prevent possible feelings of inferiority and alienation;
f) the manifestation of autonomy in all every-day life situations and activities, which presupposes the discovery of practical solutions and a great flexibility in adapting.

Functional rehabilitation of the visually impaired requires the interplay of four key elements:

a) proper motivation on the part of the subject;
b) an individualised project and an environment suitable for functional rehabilitation;
c) a multidisciplinary approach to functional rehabilitation activities;
d) temporal planning of the activities.

2. Behaviour Types Targeted by Functional Rehabilitation of the Visually Impaired

Functional rehabilitation, which contributes to the achievement of autonomy, has four main target areas:

a) autonomy of movement, ensured by activities of mobility and spatial orientation;
b) developing skills of information acquisition and processing, as well as communicative skills; to this aim, the following are extremely useful: mastering the Braille system, typing, the usual reading and writing skills for the partially sighted, and the development of the ability to use some modern technical instruments, including information technology, which facilitate both communication, and the acquisition and processing of information;
c) developing some skills and abilities that involve: a great precision of gestures, an enhanced kinesthetic sense, suitable orientation at the work place and elsewhere;

d) the manifestation of independence in all contexts and activities of everyday life, which presupposes a great adaptive flexibility and the ability to find practical solutions.

The individualized temporal planning of the functional rehabilitation programme is based, to a great extent, on learning skills and on the capacity of achieving abilities involved in each person's individual autonomy. The time planning is variable, so as to allow the subject and his/her entourage to make the most of each element of autonomy achieved as a result of the various stages of functional rehabilitation. One day in the functional rehabilitation process can consist of three fifteen-minute sessions, meaning up to five hours of activity, done for several weeks or several months, function of each subject's potential and objectives.

The temporal planning also targets the subject's professional future, which presupposes, among others, the acquisition of professional skills, a change of habits, the redefinition of life objectives, and the formation of the abilities necessary for adjusting at the work place.

In order to achieve good educational and professional guidance in the case of partially sighted children and youths several criteria need to be applied. They regard the choice of learning the common reading-writing and/or the Braille one, and consist in the evaluation of the following conditions, function of which reading and visual writing can lose their specific qualities: viability, efficiency, adaptability, fatigability and sight predictions.

Based on the above-mentioned criteria, an individualized approach of the option for learning Braille and/or the usual (black and white) reading-writing becomes possible. F. Perez (1995) advances a typology for such an individual approach:

a) for a young person, having a visual stability relatively guaranteed, on medium or short term, able to read and write slowly, but without significant fatigability, the usual reading-writing is recommended;

b) for a young person, having visual stability, able to read and write slowly, but with significant fatigability, both the usual reading-writing and the Braille ones are recommended;

c) for a young person, having visual stability, a relatively high sensitivity to the required effort, able to read and write slowly, the Braille and the usual reading-writing are recommended;

d) for a young person, having uncertain visual stability, on medium or short term, able to read and write normally or slowly, the usual reading-writing and the Braille ones are recommended;

e) for a young person, having uncertain visual stability, able to read and write normally or slowly, but with significant fatigability, the Braille and, possibly, the usual reading-writing are recommended;

f) this synthesis according to type can be used for adults as well, taking into account the general profile of each subject's personality.

In all cases, the schooling and professional project should take into account the following factors:

a) if long-term study is aimed at, Braille should take precedence, in parallel with the development of quick reading and writing techniques;

b) if the career choice does not involve constant reading, a greater flexibility is allowed for, namely the usual reading-writing can be given precedence over Braille, for example in the case of kino therapists and masseurs;

c) some professions require access to reading from the computer monitor. In such cases, regardless of the length of professional training, great care is necessary and the criteria of adaptability, viability and, especially, fatigability must be seriously considered.

In conclusion, visual reading is rarely an exclusive solution for the partially sighted. The mixed solution, which gives precedence to one reading-writing system or the other, guarantees flexibility and higher efficiency. Thus, it is possible for the partially sighted to benefit, at the same time, from the results of functional rehabilitation and from the remarkable tool which is IT Braille.

3. Objectives and Ways of Achieving Functional Rehabilitation of People with Acquired Visual Impaired

Genicot (1986) proposes the following *taxonomy for functional rehabilitation* in the case of recent occurence of visual impairment:

a) The re-learning of locomotion and mobility according to various complementary techniques:

- auditive tracking techniques and sound tracking training;
- techniques of movement, gesture and kinesthetic training;
- the technique of cane use;
- the technique of detecting obstacles by ultrasound and laser.
- the training of the blind in order to help them represent, structure and control the nearby space (the space of their activity); this training aims at the use of hand movements, by exercises of manual skills, ergotherapy and re-activation of previous visual representation based on tactile - kinesthetic stimulation.

In order to achieve good results in activities such as the above-mentioned ones, several stages have to be covered: training the tactile - kinesthetic sense and the fingers' exploring movements; reconstructing bi-dimensional or three-dimensional models; graphic reproduction of objects perceived by tactile means; activation and development of the functioning of mental images, based on orientation according to various angles of drawn objects; bi-manual coordination; the usual writing of manuscripts, etc.

b) Learning Braille reading and writing and access to modern means of information technology (IT), of communication, (E-mail, the Internet) represent important objectives for career-choice orientation and reorientation in the case of people with acquired visual impairment.

Information technology is an invaluable tool in the job-search task, and indeed in career education and guidance generally. IT is fundamental to the acquisition and development of career-related competencies. Using a range of devices from mobile telephones and computers, the handling processing of information can be made easier, quicker, more sophisticated and more productive. Using IT to provide individualized learning support, particularly through the use of specially written software, not only enhances students' development of life skills, but increases their motivation and satisfaction. IT not only enables acces, it also helps to support them in areas such as communication .and presentation or their work. This can have a great impact on their career work. There have been developed software programmes able to: help students access them and suggest new ideas; provide information about opportunities; help students decide between alternatives; teach students how, to write an application or look for a job (Wright, 1997, p.131).

c) Developing social contacts with groups of fully-abled people is important for the prevention of inferiority complexes or of feelings of regret, which can lead to a distorted self-image.

4. Objectives of the Centres for Educational/Vocational Orientation Specialized for the Visually Impaired

The general principles of functional rehabilitation and the objectives of professional guidance centers specializing in the work with the visually impaired are based on scientific data confirmed by research done in neurophysiology, neuropsychology, cognitive psychology, developmental psychology and experimental psychology.

The research had the following main areas of responsibility: a) preparation of standards and procedures for reporting, documenting, and evaluating the counselling; b) development of strategies for staff to use in handling social situations; c) assistance in developing, describing, and implementing the system of counselling for students during the period between school and career (Appelhans, 1995, p.169). The research has proven that there are, mainly, two types of attitudes, apparently at odds, which "guide" the visually impaired in their career-choice (Schepens, 1986):

- caution, due to the inevitable limitations imposed by the impairment and by the more restricted career-choice range;
- courage and imagination, as the subjects project their reasons, wishes, aspirations, disregarding possible limitations imposed by the impairment.

Lombana (1980) suggests four factors which can affect the success of a person with disability in a given job: the ability to meet the physical demands, to accomplish tasks efficiently; not being a hazard to themselves; not jeopardising the safety of others; not aggravating the disability.

In each case, the counsellor involved in the specialised educational and professional guidance will take into account the ensemble of internal variables, regarding the visually impaired person, and of external variables, regarding his/her professional environment.

The examination of the young visually impaired is done in at least two individual sessions. It consists of an interview and a test, meant to provide ophtalmological, psychological and pedagogical information that will constitute the basis for a suitable educational and professional guidance. The vocational counselling and career educational programme offered students the following kinds of counselling and assistance (Appelhand, 1995, p. 169):

a) Counselling concerning an idividual’s visual impairment by:
- interpreting eye reports;
- checking functional vision;
- offering guidance based on a realistic estimate of particular visual problems;
- advising on a possible use of optical aids, fitting aids where appropriate, and instructing in use of the aids;

b) Assisting in the expansion of student’s capabilities by:
- providing appropriate orientation and mobility instruction;
- teaching independent daily living skills, including appropriate social behaviour;
- encouraging the application of creative thinking to daily life;

c) Preparing young people for a career while in school by:
- providing information on career and training possibilities;
- advising on making career choices;
- assisting in applying for jobs or training;
- informing students of relevant social legislation;
- helping students look for training vacancies;

d) Supporting young people during training by:
- providing specialized equipment that might be necessary and suggesting how it might be installed at the place of work/training;
- developing individual plans for vocational training and advancement;

- lending any needed support at the training site;
- giving the vocational sections of the training institutions information about the special needs of people who are visually impaired.

Career education and guidance must be an integral part of the curriculum for any young person. Specific job oriented objectives are emphasised in the curriculum for all students at all school levels.

For students who are visually impaired career education should be given particular prominence because their transition from school to work is often a more complex process. To neglect the area of career education and guidance would be not only discriminatory, but a denial of the right of a visually impaired person to be included in society through participation in the labour market (Wright, 1997, p. 133). Especially in the case of blind young people, professional guidance should be specialised in the field of examination methods and techniques devised and used by a specialised multidisciplinary team. Modern multidisciplinary guidance is progressive and flexible, being based, to a great extent, on the activity of the real potential of each person, that should tend towards achieving autonomy and socio-professional achievement. Career-choice is a derivative of the subject's case history, personality, skills attained by educational training and extra-curricular activities. In the professional guidance of the visually impaired, the team members, as well as the young visually impaired must display both imagination, and caution, against a background of rational pedagogical optimism.

Economic self-sufficiency will ultimately rely upon an appropriate educational placement and this requires prudent matching of individual needs, skills and aspirations with appropriate education and training programmes (Wright, 1997, p. 123).

The emphasis on career awareness and job search skills is an essential element of the education of all young people in transition to adulthood. Students with a visual impairment demand additional support in information gathering, decision –making and self-advocacy to ensure equal access to the labour market.

Sowers and Powers (1991) quote practical examples of potential difficulties encountered in the workplace: using the bathroom, getting into and around employment sites, eating and drinking while at work, and communicating with co-workers. Specific strategies need to be devised to overcome some barriers presented by the employment world. The latter can include: lack of legislative intervention, such as enforcement of quota systems; a benefits system which creates financial risks for those attempting work and penalises those who might wish to work part-time; the state of the labour market; lack of information and support for employers (Clare, 1991; Chazal, 1999).

For young people in educational settings where work experience schemes are available, such difficulties can be identified during work placements, and aprropriate programmes devised. Close partenership between teachers, mobility officers and employers will enchance the likelihood of successful placement.

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30 MIVI

By: Csocsán, Emmy; Sjöstedt, Solveig
From: Germany
Organisation: University of Dortmund / Ministry of Education

Dear Colleagues,

As we all know, multi impairment/visual impairment (MIVI) has been on the agenda of ICEVI for some time. As it is such a complex area, none of us has the feeling of being an overall expert in this special field of education. Because of this, all recent ICEVI teacher training workshops and conferences have had MIVI as part of the programme.

Today we will talk about the conclusions of the workshop in Budapest and about the results of our data collection about the situation of the teacher education in Europe regarding courses on MIVI.

During the last ICEVI Teacher Training Workshop in Budapest in September 2004, we chaired one of the four topics which was "How to prepare teachers to work in different educational environments. The individual education plan as a tool including MIVI students in a regular setting."

Ten teacher trainers used four intense working days to try and find a solution to the topic. Our report can be found on the ICEVI-Europe home page. It is a vital addition to the paper we are presenting today as some countries' systems are mentioned there even though they did not answer the questionnaire sent to them as basis for this presentation.

One focal point during the workshop was a Core Curriculum Analyse / teacher training program on the knowledge teachers in various settings ought to have to be able to give the child with MIVI an optimal education. (Csocsán et al. 2004, Sjöstedt 2005)

But, the main point for all of us was the need for future co-operation and shared knowledge. The list drawn up on this issue was as follows:

- Research on this topic could be offered to PhD students/candidates
- Looking for international projects and grants for research
- Offering PhD scholarships and providing sponsorships for students on an international level lead by universities which can take responsibility
- Recommendation for IsaR to collect and list all the available literature and learning materials and devises related to MIVI

Our goal after the workshop was to take the first steps towards creating a European database connected to ISaR, our already existing database on inclusion of students with visual impairment at regular schools in Germany. We decided to prepare a questionnaire to be sent to all universities and Higher Pedagogical Schools in Europe in order to get an overview of the teacher training programs regarding MIVI.

The task was not as easy as we had anticipated. As all universities did not have this information in English, it took quite good linguistic skills to find the correct faculties and persons dealing with special education. Many of the e-mail addresses and fax numbers given did not work. And one professor did not dare to open the e-mail as he did not know what MIVI stood for. But out of 34 countries, 15 institutions returned the questionnaire with the information we had asked for.

It is a pity that all southern European countries are missing especially as Italy for example is having all students in inclusive education. It would have been interesting to know to what extent they train teachers for the children and young people with MIVI.

The information we thus received was information about the institution, level on which the courses were given as well as some ideas regarding the curriculum. We were informed about hours and credits and questions on research and co-operation.

The number of children with MIVI is growing. It is not only that the number is growing, but the awareness of a possible visual impairment in pupils with other impairments is growing. We do thus find more of these children as the assessment procedures become more refined. (Buultjens et al. 2001, Walthes 2005)

Another aspect we have to consider is the need for co-operation with professors, teachers and professionals with a different expertise than ours. Inter- and intradisciplinary co-operation is the path we have to take in the future.

In comparison with many of the other "main impairments", visual impairment has affected the smallest number of children and young people. The number of teachers working with the visually impaired is thus small. And those with a working knowledge on MIVI are still fewer.

In many countries the MA and BA studies are being reformed leaving the number of lessons on VI to decline. The new technology gives us new possibilities to teach and learn. We should consider all the options given to increase the quality of teaching the new generation of teachers for the MIVI. Well structured multimedia and e-learning programs could also be delivered "over the boarders" with possibilities of in-built translation options. BUT, meeting each other and sharing knowledge, experience and know-how is still the best chance of pooling knowledge.

The main point with our questionnaire was of course to know which of the institutions offers courses in MIVI, whether the courses are compulsory or optional and at which level these courses are offered. As we can see, there are great variations both as to when the courses are offered and to the duration of the courses.

A total of 12 institutions participate in different research projects. So, not much research is going on. The range of research topics varies from how to Adapt Intelligence Test for VI children with learning disabilities to Implementing low vision training in China.

The topics of discussion show that a broad range of questions are being put forward in the different countries. Diagnostics, assessment, IEP, early intervention, methods, approaches, equal opportunities,

Placement, CVI, professional development, quality management, autism and blindness etc. We do, of course hope, that the outcome of these discussions will be presented in a database to be shared by everyone. And as we pointed out before, to share our experience through co-operation.

The co-operation requests are mostly on a more general level with shared literature, conferences, workshops and shared research projects among the wishes. International Teacher Training, teacher and student exchange are being mentioned as well.

As to the more specified subjects, the IEP, materials, curriculum adaptation and development are considered important.

The problem many of us face can be seen in the institution wishing for co-operation only if it is "research based and totally funded".

Two comments are worth noting. In UK, the fact that pupils with MIVI are about half of the population of children with VI, all teachers are expected to develop skills in this area as integral part of all their learning. (Porter 1998)

And Sweden has taken one step further. Their new Masters program promotes training models with a holistic approach on the child / adult / elderly with or without additional disabilities, i.e. "from the cradle to the grave".

So, is this our future? We know that we have to move forward, today all problems are not covered; much is poorly presented and often dependent on the professor, not the need.

There are some very good home pages, like the one of RNIB, where information on education of pupils with MIVI are available. It would be vital to have a concentrated source where this kind of information could be found.

What we need is co-operation in research, we need networking all over Europe, we need to share and have easy access to information and here IsaR could be the solution. An existing program where the structure makes it easy to access and information is easy to add. We need knowledge on ongoing developments, we need quality. We need each other to reach the stars.

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31 Touch in non verbal communication / multiple disability

By: Lee, Mary
From: Great Britain
Organisation: Royal Blind School, Canaan Campus

"Visual impairment can change the conditions and dynamics of social interaction between children, their peers and their caregivers. It is the effectiveness of adults in making these connections that is the key to overcoming some of the limits imposed by visual impairment."

Partners in Learning
Enabling educational and social inclusion for children and young people with visual impairment
RNIB

In this talk I want to explore the importance of touch in non verbal communication and how it can be used to improve our interactions with children with visual impairment and additional support needs by bringing it more into our conscious awareness.

We are largely unaware of how we use it and yet it is probably the most powerful signal that we send.

Michael Argyle says that 70% of any conversation is non verbal. When you couple this with the fact that non verbal communication is a highly visual skill, then our visually impaired pupils, operating at a non verbal level, are going to be put at a particular disadvantage.

Non verbal elements of social interaction

Michael Argyle
Olfactory
Visible
- Posture
- Gesture
- Proximity
- Facial expression
- Eye movements
- Auditory
- Vocal sounds

Tactile / Bodily contact

Bodily contact is the most basic type of social behaviour and the first to mature. Relationships between the infant and others at first consist largely of patterns of physical contact – later these are mostly replaced by visual cues of facial and gestural expression and auditory cues of speech.

Argyle states that there is a language of bodily contact – e.g. different degrees of pressure and different points of contact can signal emotional states such as fear or interpersonal attitudes such as desire for intimacy. For example, if you are frightened you might take someone by the arm and squeeze tight. Alternatively, to show you like someone you might put a hand on their arm. Touching the hand is more intimate and a lingering touch expresses more feeling. We all understand the meaning of this language of touch, as do our pupils.

However the use of touch is very much influenced by culture. Some cultures will accept touch much more readily than others.

Jourard (1966) counted the frequency of contact between couples in cafes in cities in different countries and reports the following contacts per hour:

San Juan, Puerto Rico	180
Paris, France	110
Gainesville, USA	2
London, UK	0

Clearly we in Britain have to think harder than most about how we communicate with children with visual impairment and ensure that in our discussions about what is 'appropriate', especially for older children, we are not depriving them of touch and thus communication.

In some places, it is common to hold hands while having a conversation. Perhaps we should adopt this as a simple means of interaction. It would have advantages for the visually impaired person, since when two people are in contact there is the possibility for a two way system of interaction.

Either partner can reciprocate or withdraw when they want to, to keep the interpersonal system as he or she wants it.

A common element in most kinds of bodily contact is increased intensity of involvement. Here of course we have to be careful and observe the child's need for space as well as close proximity. Some of our pupils may not be able to withdraw when they want to.

In ordinary conversation, the face is the area most closely observed during interaction.

The face signals interpersonal attitudes such as puzzlement or surprise. With the face we can comment on what's being said, without uttering a sound.

We can convey the emotional content of a conversation such as happiness, surprise, sadness, fear, anger, disgust / contempt, interest. All the things that colour a conversation and make it interesting.

Birdwhistle (1968) analysed physical movements of the face, he found:
4 eyebrow positions
4 eyelid positions
7 mouth positions etc.
33 in all

We cannot begin to represent the subtleties of communication contained in these facial expressions, however to a certain extent we can use touch to convey a number of interpersonal messages.

Video: A

In this video, the adult is using touch very skilfully to replace the missing eye contact. The conversation is conducted through vocal sounds, but watch how the adult uses touch to maintain contact and express interest and availability. This is really quite an intimate conversation; they are simply sharing their enjoyment of being together. This young person has no vision.

I would like to describe to you a bit about the Canaan Barrie 'on body' sign system that has been developed at the Royal Blind School in Edinburgh. Through the conscious use of touch and other sensory cues, we try to overcome some of the difficulties experienced by our multiply disabled, non verbal pupils.

In the early days, we used the Makaton vocabulary of signs, but quickly found that they had little meaning for our pupils, relying as they do on visual concepts and complicated hand shapes, made out in space, away from the body. We decided to go to the original BSL and adapt the signs to make them more meaningful for our visually impaired pupils.

Characteristics of the Adapted Sign Vocabulary
- Most signs have a reference point on the body
- The signs give auditory feedback, or involve movements close to child
- The signs are simplified and do not involve complex manipulative skills
- The adapted sign vocabulary reflects the everyday routines, needs and interests of the child with visual impairment

Reasons for the use of adapted signs
To encourage an understanding of language
- It brings the adult close to the child
- The adult's language is slower, simpler and clearer
- To compensate for the visual aspects of non verbal communication
- To focus the children on listening

Reasons for the use of adapted signs
- To provide tactile cues as to the meaning of words
- To give an accessible means of expressive communication
- To encourage the development of spoken language

Using the Signs
- Use all the signs in the core vocabulary to create a signing environment
- Sign keywords only in a sentence and always accompany them with speech
- Continue to accept and respond to the child's personal gestures

Methods of Signing
- In front
- On body
- Hands over

As I have said, one of the main reasons for using the on body signs is to influence how we communicate with the children. During staff training I try to put across the idea that it is not just a matter of learning the signs and using them. The signs themselves are only words, though many of them make use of natural gesture or the 'language of touch', e.g. 'good', 'bad', 'more' (imperative), 'frightened'.

On body signing is about good communication. For example:
How we put our message across
The child may not understand every word we say, but they get the message from our non - verbal cues.
In deaf sign language, the signs are supported by very skilful use of facial expression and other visual cues.
We replace the visual element with careful use of:
- Tone of voice

For example, in ordinary conversation, when we ask a question, we send the message that it is a question by raising our eyebrows.
We can replace this with tone of voice –
We can convey questions through the inflection in our voices

We might smile to give reassurance, you're O.K. to speak
The voice can also convey reassurance

- Touch

When we have finished speaking, we use eye contact to send the message, your turn to answer.
Touch can be used to show expectation – I'm still here, I'm waiting for you
We convey a lot of our feelings through touch and the children are very tuned into this.
If we are feeling nervous, they will know immediately.
Through touch we can convey:
Expectation, Pleasure, Warmth, Confidence, Reassurance, Like / dislike

- Emotion

The emotional content is the most important part of any conversation
With it we convey enthusiasm, interest, fun, boredom
Even the simple act of passing on information is done in such a way as to convey e.g. 'I want you to know this'.
Our conversations are all about relationship.
A lot of this is done through eye contact and facial expression; therefore we must become aware of using our voices more dramatically and of using touch more consciously.

- Emphasis / timing

Signing helps us to emphasise key words, it changes the way we use our voice.
It acts as a back up to the spoken word.

Timing is crucial to successful communication.

- Give the children time to absorb the message
- Repeat words if necessary, in a natural way
- Allow pauses, don't be tempted to fill with words

Some people have a tendency to talk too much as a way of replacing eye contact.
When the child seems not to react, or there is a long pause, they feel their message has not been put across, so they repeat it verbally. Leaving your hands available for the child to sign with is a good way of keeping contact and not breaking the communication during pauses.
We should develop our awareness of how we are using these.
It's not a matter of giving instruction in non verbal communication to staff, but of bringing to people's consciousness, the very natural means of communication that we all use and that the children can benefit from. 'On body' signing is the platform from which they can begin to communicate more effectively.

'On body' signing is about relationship.
Signing ordinarily is very visual using lots of facial expression. It does not involve invading another's space.
With 'on body' signing, we need permission to touch.
We need to constantly watch for the child's reaction so that we can be sure that we are not imposing on the child.

If we are communicating well, then this should not be a problem.
We will know from the child's reaction

- if we have been understood
- if we are going too fast / slow
- whether touch is accepted at that time, depending on mood

Issues arising

- Difficulties when in with sighted peers / lack of incidental learning

Tendency for culture in mixed groups, to be weighted towards sighted children. Since this is also our natural way of being, it can be much more difficult to keep remembering the needs of one who has not seen our face or gesture. As we have seen this takes an enormous amount of self awareness. Staff often do not want to use different sign systems. We sometimes advocate the use of 'On body' signing with all PMLD students.

- Special difficulties of MDVI – dependent on us to notice / interpret

Sighted children can very easily gain attention through eye contact. We respond to this quite readily. We have to remain aware and watchful for the visually impaired child's attempts to communicate that may not be sent as a signal in the same way.

- 'On body' signing is part of a wider programme

The signs themselves are only a small part of the approach that involves the use of early interaction and natural gesture, with the needs of the person with multiple disability and visual impairment in mind.

- Case for standardised system?

We have lectured throughout Britain and increasingly in Europe and there is a lot of interest in 'on body' signing. We are often asked if it is a universal system or whether it should be adapted to suit different countries own signs. That is for people to decide for themselves, but my comments are:

a) Many of the signs are quite simple and employ natural gestures common to us all
b) It has taken us 20 years to get this far! Would children in other countries have to wait another 20 years?

For further information see:
Lee M. and MacWilliam L. (2002) Learning Together
A creative approach to learning for children with multiple disabilities and a visual impairment RNIB, London
Video:
Movement, Gesture and Sign
An interactive approach to sign communication for children who are visually impaired with additional disabilities, Available from RNIB

32 An Innovative Approach to Accessing and Developing Sensory Stories for MDVI Pupils

By: Mc Gregor, Morag
From: Great Britain
Organisation: Royal Blind School, Edinburgh, Scotland

Over the past 18 months I have been working to improve access to story-telling for a multi disabled, visually impaired client group. As a school we found that many of the current initiatives for adaptation of books e.g. Story Sacks, still left the stories inaccessible for our pupils.

There is a gap in the commercial market to provide stories that are both stimulating and enjoyable for multi disabled visually impaired children.

Many books that are available with simple language are often not age appropriate and in addition can also be very graphic and colourful, relying on the reader having good functional vision.

Initially I began by looking at what we get out of reading a story. The responses were varied:

- Entertainment
- Escapism
- Getting to know new characters
- Relaxation
- Food for your imagination
- Fantasy
- Exploring of different environments
- Triggering memories
- Making sense of your own life/environment

It was important to look at exactly what is gained from reading stories and how this could be recreated for the pupils.

Of key importance, I feel, is the sense of 'journey' which each story creates for its reader. From starting to finish there is always something that has changed for the reader. This needed to be considered when adapting stories for our pupils. The only solution was to develop our own 'Sensory Stories'.

I will use our first story as an example to demonstrate the process involved in creating a Sensory Story.

Our starting point was the class theme for the term of People in Society, with the specific topic being The Middle East. We wanted to use the well known tale of Aladdin but the version we had was too complex for our children. The book itself was very colourful and graphic depending on the reader having vision. The language used was not at an appropriate level and the complex plot and characters left the story quite inaccessible for our pupils.

What the tale of Aladdin did have was mystery, magic and a sense of journey. We needed to adapt it to encapsulate these elements and make it accessible for a multi-disabled and visually impaired client group.

The story was broken down to the main settings and all the unnecessary language cut out. The structure was then based on the idea of a sensory journey linked by music interspersed with a small amount of dialogue and poetry.

Pieces of music were selected to create the atmosphere of the story, with a variety of contrasting music types from modern popular tunes to classical and world music, adding to the sense of 'journey'. We then recorded the whole journey onto a tape. The story could then be 'performed' with the tape as the base and the staff free to build on that foundation.

The final stage really was to introduce props and a programme for environmental controls e.g. lighting. These would allow the children to experience the story in a multi sensory way offering tactile and olfactory sensations as well as visual and auditory ones.
The result was our own story, 'The Genie and the Lamp – A Sensory Journey'. Based on a sensory journey, Linked with music/sound effects, interspersed with appropriate amounts of dialogue/poetry and enhanced with props and environmental controls. The story is an all engaging one and offers a fully multi-sensory experience involving touch, smell, sound, movement and taste as well as the visual.

What does this offer us?

We now have a resource available to the whole school which can be accessed by children of many ages and abilities. Each can learn at their own level from the same material. This provides both staff and pupil with an interesting and rather novel tool for promoting the development of pre-linguistic communication skills, psychosocial development and a range of sensory and motor skills.

Pre linguistic Communication Skills: Listening and attention, turn-taking, anticipation and language learning.
Psychosocial Development: A sense of self, understanding and relating to ones environment
Sensory and Motor Skills: Exploration and awareness of objects and self through sensory systems e.g. proprioception and tactile.

Setting up for a Sensory Story Session

- Choose a suitable room for your journey. It could be your classroom, a gym hall or a visual stimulation room. It will need to be big enough to house everyone involved plus any equipment. Think about: will you be moving about will you need lighting controls will there be interruptions
- Nominate one staff member to be the group's 'technician'. They will be responsible for distributing all the props at the appropriate times and seeing to the lighting controls etc. This leaves the remaining staff free to focus on the pupils.
- Get all your props laid out in the order they will be required.
- Have a checklist to use during the session as a reminder of the run through.
- Ensure all your environmental controls are ready, i.e. if you are using UV or other special lighting, fans etc.
- Ensure the tape recorder and tape are ready.
- When positioning the children, be prepared to try different positions. Sitting, lying out on beanbags, in wheelchair to allow movement, supported on a bench – each of these positions will allow the child to experience the story differently.
- Decide which staff member is supporting each child. Ideal ratio would be 1:1 with an extra adult to be the 'technician'.
- Make sure everyone is comfortable and ready before you begin. This will minimise any disruptions during the story.
- Place a DO NOT DISTURB sign on the door!

Resource Packs

Following on from 'The Genie and the Lamp', further Sensory Stories Resource Packs have been developed in a user friendly format, covering a range of curriculum themes. Accessibility for class staff is crucial and having each story in a pack like this, with all materials together, has proved very helpful in the smooth running of the sessions.

Packs have included guidelines, tapes, scripts, song lyrics and props, as well as ideas for other related classroom activities.

Multi-disciplinary working has played a large part in developing these packs. Whole Class teams have been involved in creating these resources and feedback has been positive with staff feeling a sense of ownership of their stories. This of course has a positive impact on there use within the school.

In summary- What is a Sensory Story?

Each story is structured based on the idea of a sensory journey. It is linked by music interspersed with an appropriate amount of dialogue and/or poetry, and enhanced with props and environmental controls e.g. lighting. These allow the pupils a multi sensory experience, offering tactile and olfactory sensations as well as visual and auditory ones.

The stories are recorded onto a cassette to allow the session to be 'performed' with the tape as the base and the staff free to work with the children, building on that foundation.

Sensory stories can be used with children of many ages and abilities. Each can learn at their own level from the same material. These resources provide a tool for promoting the development of pre-linguistic communication skills, psychosocial development and a range of sensory and motor skills.

Finally, I feel it is worth mentioning that one other benefit from running story sessions in this way is that it provides us as adults with an important learning opportunity to work closely in either a group or 1-1 basis, tuning into the reactions of the pupils to the story and their experience of it, as it unfolds around them.

33 E-Learning - a way to empower pupils and students with visually impairments?!

Workshop

By: Wiedemann, Heike; Dr. Wiedemann, Uwe
From: Germany
Organisation: SFZ Sächsisches Förderzentrum Chemnitz gGmbH

Abstract

For more information please contact the author: heike@flemminggebiet.de

To learn with the help of electronic media is on vogue as well in distance learning as in presence learning. On webbased learning platforms meanwhile whole training programmes are made available. It is maintained that e-learning is learner-centered and has many financial, organisational and pedagogical advantages. It is easy even for blind or visually impaired pupils and students to take an e-learning course with learning management systems like ATutor. But we have to consider many issues if we offer pupils our students an e-learning course. The key point is that we have always to check out whether e-learning improves other teaching and learning methodes in a special case.
There is an online version of the workshop at: http://www.brailleware.de. You must register and than login.

34 No sight, no limits

Video
By: Kish, Daniel
From: USA
Organisation: World access for the blind

Abstract

For more information please contact the author: dankish@worldaccessfortheblind.org

This informative video presents an approach to enhance one's functional image of the environment through human echolocation. Echolocation is briefly defined as the ability to see with sound in a manner comparable to seeing with dim flashes of light. Using echolocation, one can participate in a wider range of activities with more safety and precision, and with less dependence. Improved participation leads to greater freedom and life quality. Optimizing spatial hearing is considered fundamental to nonvisual spatial perception and interaction. Echolocation is one component of a broader, No-Limits approach to instruction and living. Limits should not be imposed on anyone; that everyone should enjoy the freedom and strength of character to discover our own limits and strengths. Activities presented include solo mountain biking, mountaineering, and ball play.

35 The experimental field of Academy Pedagogical Sciences

Video

By: Vasyunyk, Mariya
From: Ukraine
Organisation: Ukrainian Representative to ICEVI

Abstract

The experimental field of Academy Pedagogical Sciences & Ministry of Education and Science of Ukraine is on the basis of Educational Rehabilitation Centre for VI children "Lewenia" in Lviv since 1996. The aim of it is to establish the system of early correction & intervention for visually impaired children in Ukraine & model of innovative educational establishment for children of such kind. The service of early multiple help in Educational Rehabilitation Centre "Lewenia" was founded in the result of search. Main tasks of service: creation of data base of severe visually impaired children from Lviv and Lviv region; thorough examination of child and family; conducting of correction to a child in Centre and at home; teaching parents the pedagogical technologies of co-operation with the child, methods of education and studies; family therapy to all members. Since early age the blind child and family needs special psycho-pedagogical guidance. Main principles of child guidance: recommended character of advice; priority of child and family interests; permanent guidance; multidisciplinary approach; seeking for co-operation. Main stages of system guidance: diagnostic, searching, advisory-specified, efficient. The process of establishing the system of early intervention experiences certain difficulties and needs serious state backing.

Keynote speech

36 Professionalism

By: Ph.D.Lewi-Dumont, Natalie
From: France
Organisation: Paris teachers college, Cnefei (Suresnes) and GPEAA

Mr President, Mr Chairman, Dear colleagues,
I am greatly honoured to have been asked to present a keynote address in this ICEVI European conference. For complicated reasons linked to the French university system, I am presently involved in linguistics and French didactic initial and continuous training of regular classroom teachers in primary and secondary schools. This takes place in the Paris teachers college. Previously, I taught for a long time in the national centre for teachers training in special education (Cnefei, Suresnes) and headed the visually impaired department. My thesis in linguistics deals with reading acquisition of blind young readers. I am still involved in special training for a few courses, I keep in touch with several colleagues and parents, I continue to read papers and to check on Internet sites, but preparing this lecture has been a challenge and I particularly thank Eberhard Fuchs and the ICEVI European Committee for their confidence and my French colleagues and friends for their kind help. I hope I did not miss any major item and I beg your indulgence for my English too.

For this presentation, I used several books, articles or reports about mainstreaming and special education. Concerning visual impairment, of course, I especially studied the proceedings of the ICEVI world and European conferences, and the teachers' training workshops. Different tools helped me to be up to date on the current practices in several European countries, especially the European Agency for Development in Special Needs Education website and brochures. I used also the Transter site which gives a comparative study of terms of the educational systems in France, Great Britain, Hungary and Catalonia, dealing with ordinary school and special education needs[5].

After that introduction, I will try to develop a few points, which, hopefully, will help us to think about professionalism, which focuses on needs and training of staff involved with visually impaired. Teaching and teachers' training are the subjects I know best, and France too, so most of my examples will come out of them. Other speakers have dealt or will deal with the other subjects.
First, although inclusion is claimed everywhere, Europe is a plural reality and professional practice is linked to general training and to different ways of handling the education of the visually impaired in the different countries. The evolution of professionalism follows mentalities and laws, and each job is included in a system.
Second, constraints of professionalism for visually impaired children are very specific: what I want to insist on, is that those specificities are, sometimes, complementary and professionals should be aware of what others are doing. Needs of the visually impaired children, although in constant evolution, should guide the responsible persons for the training and the action of professionals.

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[5] Languages are in English, Spanish and French.

Professionalism is included in an educational system and follows its evolution

First I want to stress that training and practices of personnel involved with visually impaired education are not independent from general policies of education and school system of the country, and from the policy and school system for handicapped pupils in general, and that history and evolution of mentalities have a big influence on conceptions and on practices.

Current trend in Europe is to develop integration of pupils with special educational needs in the regular schools. But a recent European Agency report (2003a) groups countries in 3 categories in terms of integration or inclusion:

- The one track approach which develops inclusive practices for almost all the students, for instance, Spain, Italy, Sweden, Norway.
- The multi track approach proposes different possibilities between inclusive school and special education, for instance Poland, Slovakia, Ireland and France.
- The two track approach gathers the countries where there are two distinct education systems, special schools and mainstream schools. Special education is for instance well developed in Belgium or in Switzerland, but recently countries which used to belong to the third category have evolved to the second one.

Also, one must stress that the development of inclusion varies a lot from one country to another. In Italy, Sweden or Denmark, clear inclusive policies started very early, whereas in other countries, there have been many recent changes in laws, like parents' choice, decentralisation, integration at high school level. Each change has an influence on professionalism: for example, if parents choose mainstreaming for their children rather than special education, a country will need more itinerant teachers than classroom special teachers. If students with special needs are more often mainstreamed in high schools, new professionals should be trained, this is, we will see, what is happening in France.

To continue with this idea of a systemic organisation, the training to be a professional for visual impairment is not independent of the general training in the field concerned. To become a teacher for the blind or partially sighted is different if you were first a teacher for average pupils or if you are trained first for visually impaired students and this varies according to the nations.

Weight of history, tradition and evolution: example of France

If I take the example of France, shall I mention that Valentin Haüy created in Paris the first school for the Blind in 1784, through a charity organisation? Later, from the 19th century, religious held most of the schools for the blind and also deaf children. The National education services were proposed much later, and, clearly, expertise was on the private school side.

It is from this tradition that the handling of the education of the blind and deaf has been organised, and schooling for visually impaired and deaf can still be under the responsibility of the Ministry of health or of the Ministry of National education. This is why, in France, there are still two training systems for the teachers for the visually impaired. It seems strange, and the two ministries have been trying to solve this problem, in vain for the moment.

For 30 years, many official texts recall the educational right of all children, but the latest is a law, voted in 2005 by the Parliament, called "law for equality of rights and chances, participation and citizenship for handicapped people", which is very generous in the title and in the content. It asserts "each child or youngster with a handicap is registered at the closest school to his house". If it is not possible, pupils can go somewhere else or in a more protective school (but I am afraid the possibility could be the reluctance of the school team and I hope parents will be able to fight).

Traditionally, blind and partially sighted are not students with trouble to be accepted in mainstream schools. Even in the 19th century, some blind bright students were mainstreamed in schools and universities. Now, the philosophy changed, as every child is considered to have the right to go to school, whether he is brilliant or not.

For the vs. who might have more difficulties, a more important support must be supplied, especially for the partially sighted, who sometimes, go unnoticed, don't complain, their problems increase, and then they are labelled as students with learning disabilities. If a good assessment would have been done early, and a good educational plan organised, this would not happen and would facilitate their success in high school.

Precisely, various country reports show inclusion generally progresses well at the primary education level, when at secondary level serious problems emerge. They are due to a big organisational difference between primary and secondary level and to increasing topics specialisation in high school. It is the case in France: we were very late, compared to other European countries, and there was a lack of ambition about academic hopes for those children. Even if they went to high school, the pedagogical support, in the national education system, was held by specialised elementary teachers, and some times it was difficult for them to take care of all the different subjects, maths, physics, foreign languages...

It should be stressed that most countries agreed that the topic of inclusion at the secondary level should be one of the main areas of concern. Specific problem areas are insufficient teacher training and less positive teacher attitudes.

That's why in France, although the closest school is preferred, was decided, in 2001, to create, in high schools, what we call Unités pédagogiques d'intégration -UPI- (Pedagogical Unit for Integration): students who need more support are in a school which has one dedicated to their proper handicap, and although they are in their reference class, they are able to ask for support in the resource room to the special teacher or the school assistant. For example, those personnel may sometimes go in the regular classroom for geometry lessons. The specialised teacher is particularly important in regular teachers' support: those units are pedagogical, technical (for adapted documents in Braille and print, for instance) and re-educational device: a special service is in charge of the medical and re-educational care linked to their proper handicap: other professionals, like ergotherapist, orthoptist, Orientation and mobility teacher can take care of the youngster. UPI can be an intermediate step if the teenager does not feel ready to be the only one in a school, and this feeling happens, or if he needs a lot of technical support. This unit is not at all a special class inside the high school. The fact those units exist implies that the ministry had to organise training for high school teachers. This is the core of my subject.

Those considerations were here just to show how history and organisation of teaching has an influence on professionalism. As Eberhard Fuchs noticed in Cracow, 5 years ago, "the school for the visually impaired is changing", and professionalism and training have to change too.

In the teacher training managed by the Ministry of health, teachers used to be in special schools, at elementary and secondary levels, but now they are more and more itinerant teachers in mainstream schools. After 3 years at the University, schools or resource centres hire them, and then, sometimes after one or two years, they follow a training to qualify for the degree in special education. To advise them in their teaching, they have an experimented colleague. The training lasts 18 weeks spread over 3 years, including one week in a mainstream school and one in a different special school than the one the student works for. The week in a mainstream school, which has been added recently, is extremely important, since it is difficult to understand the requirements of regular schools if you have always taught in a special school.

In the National Education system, which I am part of priority is first to train regular teachers and later people choose to be teachers for the blind, or deaf, or learning disabled, etc. In France, you become a teacher with a civil servant status when you pass a competitive exam after at least three years at university, one year of preparation of this exam and one year of training. In this training, much summarized information about special educational needs, prevention of learning disabilities, etc. is provided. The special teacher training can be asked afterwards. I must admit, although the degree allows the teachers to increase their salary a little, these positions are not very attractive, and now, as there are not enough special teachers, they can follow the training even if they just finished teachers college. In several other countries, it is necessary to work in the mainstream system beforehand and in most of them, a minimum period is even imposed, such as Portugal or Greece.

Special training and certification for National Education teachers changed this year. It used to be only for elementary teachers and lasted a whole school year, with some periods on the field. Now, elementary teachers have their teaching job (class or itinerant, or both) and have 15 weeks of training, in a little more than one year.

This year too, a training and a degree in special education have been also proposed to secondary teachers, including vocational training teachers: it lasts only 6 weeks, since those persons don’t have to learn how to adapt didactics in all disciplines. Those teachers will be able to help their pupils inside their class without an external support or to coordinate the Pedagogical Unit for Integration I was mentioning above.

Some secondary teachers ask for the training without having an impaired student. Their request is motivated either by their concern for preparation to visually impaired students to come, in case there is one in their school, or by mere interest. This is a radical improvement in mentalities about the special educational need students’ schooling.

With less training time, teachers’ ability in Braille might decline, especially when there are fewer pupils working in Braille grade 2. Hence, the Ministry proposed immediately an in-service training to those who need to progress in Braille (in particular the secondary teachers) or those with minimal initial training about very specific topics, as deaf-blind children or children with severe multiple disabilities and visual impairment, who are in France very seldom in mainstream schools.

Of course, if the aim of the Bologna Declaration (1999) is achieved, creating a European space for higher education, with comparable degrees in 2010, which is tomorrow, will be a big progress. As Renathe Walthes underlined in the latest ICEVI teachers training workshop, there are already a lot of similarities, but also many differences in those degrees, and the weight of history is important. You can get all the details in the Budapest workshop proceedings (2004) and in the European Agency reports (2003a).

Constraints of professionalism for visually impaired children are very specific.

It is a good thing that, in most European countries, all classroom teachers get a minimal background about children with special educational needs, but one should not forget that a special child has special needs, and, as a matter of fact, blind and partially sighted students, besides very special educational needs, have also reeducational needs to be able to get autonomous, not only intellectually, but also in their daily and social life.

Of course, early intervention and work with parents is a priority like for all other children with special needs, but with visually impaired, other specific sectors must be covered.

- Independence: daily living skills, orientation and mobility and also some social skills needed to be taught when you cannot imitate by sight
- Technical skills: technology of communication and Braille

For the topics linked to independence, one must underline that the child has to be taken as a whole. That's why it is so important, in training programs, that the personnel would be well aware of all their clients' needs. Also, and I could not really figure out if it's true in other countries, in France, there is a cruel lack of some professionals, above all O & M teachers: maybe if there were a European standard for this job, some vs. youngsters would not suffer from a delay preventing them from living their adolescent life decently.

For technical skills, the first thing is that the professionals should master the subjects. Again, Information and Communication Technology in special needs education training depends, like in the other fields, on the knowledge the teachers had before. There is and will be an evolution in the training since more and more students, before and after high school, have no problems with computers. You will find very interesting considerations about ICT in Special Needs Education (using and training) in the European agency thematic publication *Special Needs Education in Europe* (2003a). They are not only rehabilitation tools, but, and this is particularly true for the visually impaired, teaching and learning tools and communication tools. The publication shows the training should aim at being flexible by taking in account the individual needs of the classroom teacher and of the pupils. That requires a good coordination between the teacher and the ICT support teacher, who then cannot be a mere technician.

A very high technical skill is very important, but the technique is not a miracle: the danger for example would be to give up Braille, thinking that electronic devices could replace it. I am really scared when I hear persons in charge of local school systems saying there is no problem with the mainstreaming of blind pupils as soon as they get a computer, and that Braille is not needed anymore since computers can allow reading by audition: of course, it is easier for sighted persons but it would make blind people go back to the 19th century, before Braille invented his system. Besides, computers, even if they changed life of visually impaired persons, will never replace for children a human aid, that means persons with their human warmth and their professionalism. And learning techniques should not prevent from learning use of other senses, like touch, audition, which are essential to people with low vision.

It is important that professionals know the techniques, but also understand what they do: if I take the example of Braille translators, if the document contains drawings and pictures, the translation cannot be mechanical and must take account of the teacher's pedagogical objectives. The techniques in the conception of raised pictures are improving and in the entire technical field, the evolution is constant, so a frequent in-service training is essential so that the best will be provided to the students.

Communication between professionals and evolution of practice

Without going into details, I would, again, like to insist on the systemic aspect of professionalism.

Technical skills are very important for professionalism to the benefit of visually impaired, and they should be thought complementary to other skills: that requires teamwork, at different levels.

Professionalism is an interlock of comprehension of other professionals practice, ability to explain one's own approach to the other professionals and to parents. One is not deprived of his professionalism by doing so.

For example, when I was responsible for the VI teachers training program, I thought it was very important that not only ophthalmologists, but also low vision training teachers would be part of the training staff. I had trouble to find a professional who was willing to share with teachers what exercises she did with the children. Most of them limited themselves to general considerations about different troubles of vision, which my students knew by heart. And daily living skills and orientation and mobility teachers took an identical bias. Why? Because knowledge is power, and school teachers are able, in their daily practice, to transfer the know-how of those professionals in teaching: use of coloring books, eye-hand coordination in writing, requirements about putting clothes or shoes in the moments of breaks, about finding his way alone in the classroom or in the playground, etc.

To share knowledge is not to loose knowledge; the professional identity is built from what the others do and should be thought as being complementary, not rival.

And sometimes to be trained together can be a good mean to share knowledge and understanding. I used to be involved in national and European programs for deaf-blind education. We had training sessions with different professionals and parents: it was always very stimulating, enriching for everybody, and finally, this is what is important, useful to deaf-blind persons. I did that also in in-service training sessions about the mainstreaming of vs. students, where I had primary and secondary teachers, special teachers for the vs., school assistants and even a school doctor. I did it too in in-service sessions about the education of MDVI children, attended by educators, teachers, reeducates, orthoptists, psychologists, and where I included the teachers initially trained to be special teachers for the vs. and parents. Finally those heterogeneous groups had a lot to learn together, and a lot to bring. To my mind, it helps personnel to be conscious of its individual and collective responsibilities in the education of a child and to behave as a team.

Even during the training, besides technical aspects, a reflection on partnerships and quality of work is necessary. All partners should have the same goals, although they don't use identical means to reach them. The European Agency report on Inclusive Education and Classroom Practices mentions that one of the effective practices within the context of inclusive education is cooperative teaching. That's why it is so important to display regulation and communication procedures.

Professionalism would be also to accept that visually impaired students with no other handicaps are able, when they are in mainstream schools, to follow the program with less support from the itinerant or special teacher as soon as they have good and motivated regular classroom teachers, good technical equipment and support of a school assistant. Don't put words in my mind: a school assistant is not equivalent to teacher, although some governments would like parents to believe inclusion is effective with a computer and a teaching assistant, regardless to the child's needs. But, when there is a good coordination between teachers and their assistant, he understands the pedagogical objectives of the special and regular teachers and that he is here to help, not to substitute, neither to the child nor to the teachers. In several countries a teaching assistant training allows now an improved practice. Teacher assistants' interventions give more time to the special teacher to concentrate on pupils with more difficulties, learning problems and/ or additional handicaps. This is a change of the teaching profession, which is not easy to admit. It is usually much more gratifying to take care of a bright child who progresses quickly than a child who is slower and sometimes regresses, etc. This is the evolution of all teaching jobs, even with "normal" pupils and that's why in regular classes there are more and more group works and differentiated pedagogy.

Individual Educational Plan (IEP) as a mean of improving practice

One of the keys of professionalism is to focus on each child's needs. That's why, in most European countries, stress is put on elaboration and realization of the Individual Educational Plan (IEP); it has different names in different countries. It is a planning, teaching and assessing tool recording key short-term and / or long-term targets and strategies for an individual pupil. They are different from, or additional to those in place for the rest of the group or class. This plan should fit in the curriculum. In France, the plan is not only educational, but also reeducational if needed.

It is really an improvement because it gives a multidisciplinary approach of the child, who is not only a pupil, and allows crossed insights about him.

With regards to professionalism, the work concerning this individual program forces personnel to work together and to think about the priorities for a given child and a given year. Each professional and I would say it's a strong tendency amongst teachers, tends to believe his subject is the most important one. In the individual program, the first focus is the child's needs: a visually impaired student in a mainstream school has sometimes a hectic schedule. One has to let him live his childhood or teenager's life: then, when we prepare the individual plan, we should organize the activities into a hierarchy, to adapt them to the curriculum and to the pupil's needs: the final aim is to learn, to be independent, to have a balanced social life, later to be able to earn his life in the field he chooses, in relation with his inclinations and his abilities, and finally to be happy, which is maybe the most important. This is a final aim, and all persons having a child in charge, including parents, have this objective, but there is no emergency to fulfil everything at once. I am always surprised when I see young blind children taught how to cross streets by themselves whereas sighted children of their age hold their parents' hand. According to the European Agency documents, in almost all countries, the IEP plays a major role for inclusive special needs education. It is one of the current trends across Europe to use such an individual document to specify the pupils' needs, goals and means, and to detail the degree and type of adaptations to be made to the mainstream curriculum to evaluate the progresses of the concerned pupils. The individual plan or program exists in many countries for several years: it changes the way we educate students. The fact that all professionals have to be together, to think about what they do, to assess their work and to make the plan evolve has an incidence on their own practice. The written document may also serve as a contract between the different actors: parents, teachers and all the professionals, and sometimes the student himself.

The era where we were trained for our whole life for the same job is over, and it is true for professionals in charge of visually impaired students. Evolution of mentalities and of laws in Europe gives the priority to inclusion in regular teaching settings. That means ordinary teachers training evolves too.

To my mind, it is really good that all beginning teachers get a short training on the probability they will have in their classroom, several times in their career, students with special needs, but it would be very dangerous for them (and above all for the children) to believe that this training is enough. To become sensitive to a problem is one thing, to be a professional is another.

As far as blindness or partial sight is concerned, some topics are very specific and require a special training for teachers and other professionals, as Braille, adapted new technologies, daily living skills, orientation and mobility, etc. It would be a big temptation to train professionals in a general way and to have, for example, a degree in general special education that will allow teachers to take care of blind pupils as well of deaf pupils or all pupils with a disability. We have to be cautious, because the low prevalence of visual impairment among children in developed countries might have those children needs forgotten.

As the population of visually impaired evolves, and they are more and more MDVI children who need care and are able to make progress, as we saw in many parallel sessions during this conference, professionals have to be flexible and to be able to change their own practice during their career. The idea of not being trained for one's whole life but learning all along life is very stimulating.

Besides, the professional does not work alone anymore and can be in a professional network around the child's IEP, or in a larger network. To conclude, I wanted to refer to what Tula Baxter presented in Cracow, "together everyone achieves more" (TEAM), but I can also refer to what Professor Degenhardt said in his opening report: " Excellence can never be achieved alone. It must be put into practice in a network". This Chemnitz conference, continuing the others, will be one of the major tools to constitute a bigger network of professionals and parents, for the benefit of visually impaired students.

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www.cnefei.fr; http://european-agency.org; www.eurydice.org/

http://www.icevi.org/ and http://www.icevi-europe.org/

Keynote speech

37 Between the rock and the sand

By: Carey, Kevin
From: Great Britain
Organisation: HumanITy

Usually I hate the detritus of promotional events but in 1979 I was given a key ring by Sagem, the French producer of the first computer driven braille embosser that I ever saw. I remember the presenter saying that anything that could be produced digitally in text could be rendered by this embosser in faultless braille. Sadly, the key ring, which was solid metal and beautifully tooled, was stolen; but the secret of the braille embosser never has been stolen; it is still largely a secret. I have seen wonderful output from embossers, including spread sheets and bar charts, maps and sketches but, by and large, the impact of the computer on tactile material has been pathetic; blind people are still expected to be satisfied with 4% of published books and less than 0.4% of other material. About the same time I saw a Clarke & Smith refreshable braille display which I quite reasonably thought would save the cost of a great deal of braille embossing. Unfortunately the cost of cells for braille displays has remained prohibitively expensive. So while the basic processing and storage capacity of computers has improved beyond recognition in the last 25 years, braille output devices and their use have got stuck in a time warp.

In the last month I have been looking at the specifications for a computer being built in Japan which will, by March 2011, be able to process the whole of the world's meteorological system or all known astronomy; at the other end of the scale, I have been working on computing networks that are created by aerosol sprays. In a few cases computing will continue the tradition of the 1940s Turing main frame, the impenetrable rock in the corner, but in most cases computing will be like sand. Embracing both these phenomena of the very big and the very small there will be the seemingly immutable laws of increasing processing speed and intelligence, widening automation; and falling processing and storage costs.

What have all of these done for us? Well, I am sorry to say that the answer is, next to nothing.

Let me first explore this idea in its digital ecology. All major technological breakthroughs advantage early adopters, the rich, the powerful and the competent; just think of the influence of railways or electricity. Although everybody ended up better off from these developments, those who lived near lines or received power early were at a tremendous advantage over those who did not. Look at that principle in our field and you will see that although blind people will ultimately benefit in absolute terms from computing they will suffer increasing comparative disadvantage; in other words, the gap between them and their sighted peers will widen comparatively even though those on both sides of the divide will be absolutely better off. That is bad enough in respect of static and moving pictures, graphics and animation; but when this means that we cannot even maintain our percentage access to mainstream publishing, the sector is in severe difficulty. While Microsoft and Apple, IBM and Sun Microsystems, have forged ahead, the monastic orders of braille code legislators have stood out against one braille symbol to one print character code with no governing context rules. For two decades there has been a struggle to find a single braille code for English and this has unnecessarily held up agreement on a unified braille code for all Roman script so that blind people can download any HTML from the Internet and read it in a universally recognised code. At the last count I had learned five braille embossing codes and four braille computer codes. This is madness. It reminds me of the speech I made at the ICEVI World Conference at Wurzburg in 1987 when I described a childhood of writing backwards and using a frame with pegs where number value was determined by the angle of a square pin which only had eight positions for ten digits; a situation which was relieved by the introduction of the abacus so that I had the pleasure of learning to add from left to right having spent years adding from right to left. It is difficult enough being a blind person without being subjected to all this nonsense. Sagem demonstrated that coding wasn't a serious problem but for 25 years we have known that automated braille layout has been a serious barrier to the production of high quality braille. You can't tell that to the code freaks. While a universal character code is not possible, as it will have to vary to deal with different scripts such as Cyrillic or Arabic, this is no bar to a universal set of braille layout macros. That may be a little ambitious but, in the meantime, we need a unified braille code for Roman script; and that means Grade One, uncontracted, standard braille as a default, for the embosser and the refreshable braille device; any additional coding or rules should be an optional extra. Full stop; end of story.

As for the context of braille, we still view it in a technological vacuum. Very few children learn their braille simultaneously with synthetic speech and screen magnification. It isn't difficult to press dot one and be told "A" and shown a massive A on a screen. It would be even more helpful if such instruction could be fortified with pictures and sound. Remember, sighted children, even in a classroom setting, do not learn to read print in isolation, they have picture books; and outside the classroom they learn to read in everything they do because they are subjected to so much incidental print, on shop fronts, in magazines, on television, on clothing. Another feature of learning to read that must be borne in mind is this; a sighted child's incentive to read is that it is subversive, giving the child autonomy and access to material adults forbid; for a blind child learning to read reinforces authoritarian uniformity; it gives no freedom unless the act of reading leads to the act of surfing with sighted peers or unsupervised surfing with the ability to download and consume. I have yet to see a blind child below the age of 12 surfing, downloading and producing braille, synthetic speech or modified print. If we are not going to fight for our children's right to read what their sighted peers read through standard production systems then the least we can do is to give them the equipment and let them get on with it. Or would it be too subversive quite deliberately to introduce subversive elements into the reading curriculum? If learning to read actually widens the gap between sighted children and their blind peers, what incentive is there for the blind children to imprison themselves further? It might be argued that learning to read opens the way to knowledge but for growing children the question of control is crucial. For seeing children information technology has widened autonomy way beyond shop fronts, fashion logos and the limited choice of analogue television to embrace the hundreds of channels of digital television and the whole internet. What are the educational implications of this widening gap for children and what are we going to do about them?

We also need to distinguish between the ability to read braille and the ability to write it. It is vital that blind children read braille but not so vital that they write it; there is no reason why they should not input on a standard keyboard while receiving output in braille. Braille is a means to an end, not an end in itself and our children spend far too much time on it for very little return; I have already noted the poor return in respect of available content to read but most blind children never write Braille well and in any case will only need it for private notes and labels. All this would be made a great deal easier if we could bring ourselves to look at producing different accessible media from a single source file. Braille is a natural and cheap by-product of a source file which is processed through templates (cascading style sheets) primarily to produce different kinds of print and synthetic speech. The persistence of silo braille production makes it prohibitively expensive because the production cost is centred on a niche product for a niche market. There is a massive potential market for modified print but the sector has too often articulated a false choice between more braille and more modified print when both should come from the same source file.

Of course, it doesn't matter how good the technology is if you can't use it effectively. I have already outlined problems within the sector but we have been terribly hampered by the disgraceful refusal of the European Union to exclude access to alternative formats from its most recent Copyright Directive. The sector campaign on this issue was decidedly patchy but we can no longer allow a situation to continue where governments legislate curricular requirements for our blind and visually impaired children but will not support legislation to give them rights of access to basic text; and provide the funding to pay for it. We need a Europe-wide campaign to force Governments to pay for what they legislate whether this is a right of access to curriculum materials or basic education itself.

So much for text. In an increasingly visual world we must look carefully at the effect of the graphics explosion on our children. The first thing to say is that the ability to describe is an art form primarily exercised by authors and journalists. Teachers of blind children and their carers are unfortunately not usually trained in it. I am frequently limited at what I can eat from a buffet because specialists in work with blind people cannot even describe an array of food. So what chance do children have if what they hear is muddled and imprecise? And just as our children like well read stories, audio books and high quality radio, they also need a rich describing and interactive environment. If we will not train our teachers to describe and use language beautifully and effectively then we must import authors to add some spice to a linguistically dull environment. And while we still struggle for some kind of global agreement on an alternative format text archive, it is time for us to establish a global audio archive.

A few years ago I went to an open air exhibition of memorial sculpture which contained many kinds of calligraphy and relief sculpture. I thought that it would be interesting to gather a group of blind and visually impaired children and see how they got on with the exhibits. I was appalled that none of them had been taught how to approach an object and use their touch effectively. Asking questions, I found that the children, aged eight and over, had never been taken to a sculpture exhibition nor taught about roman script and its variants. They were unfamiliar with the conventions of relief sculpture and their only really effective interaction was with the human figure where, even then, their unfamiliarity was both sad and enraging; how can we allow nine year old children not to know what their fellow human beings really feel like? I am sure that this deprivation is not universal but since that experience I have paid special attention and have been struck by how poor most congenitally blind people are at using their hands. So what does this have to do with technology?

Well, there are two areas which are crucial to our field but seem so far to have been almost universally ignored; they are 3D printing and haptics. Most of us think that a piece of paper containing ink print is a two dimensional object but ink, of course, has thickness. It is therefore easy to see that if you stack a massive number of print specifications on top of one another instead of sequencing them, which is what you do for a document, you will, with the right chemical polymer, produce a solid object. This methodology is already being used to produce solid objects from scanning devices, notably the skulls of mummies have been produced without unwrapping them. This technology will free us from the prohibitive costs of the sculptor, the model maker and the carpenter and it should bring massive new model and artistic resources to our children. Even more exciting, however, is the prospect of using the kind of processing power of the Japanese computer I mentioned earlier so that massive stacks of specifications used for 3D printing can be sequenced to produce haptic objects so that you not only create a model of a cow, you create a cow with a heartbeat; such a cow is already been used to provide vets with practice in calving without needing live animals.

Here we have two technologies of overwhelming importance to our children but most people I talk to in the field say they have never heard of them. I think that both of these technologies offer immense potential and if you want to be short term and pragmatic, at the very least they will introduce reality and take the embarrassment out of sex education. These two topics raise important questions about those in our sector responsible for information technology. In my experience most of them are struggling with the basic functionality of Microsoft Office and how special access devices relate to it without any conceptual framework about what computing is and what computing can do.

I have spent a great deal of time on one of the two major areas of deprivation faced by blind and visually impaired children, namely, information and communications. The other area is physical mobility about which I want to say just a few words because what we need to do in this area is not all that difficult; the policy makers, not the technology, will be the problem. At the high technical end, it is already possible for blind people to travel strange streets alone using data from satellite systems which can tell them where they are to within five metres. With the ubiquitous computing networks I mentioned at the beginning, that resolution will reduce to five centimetres so a blind person will, literally, be able to locate a shop door handle. This sounds as if it is great stuff for the few who want that kind of independent mobility but the corollary of such fine grained networks is the ability simply to gesture by waving your computer chip woven sleeve or shouting in order to get instant help. Ubiquitous computing, in your clothes and in every paving slab will offer safe environments and also the two major attributes of normal life which blind people most lack when they are in unfamiliar surroundings, serendipity and flexibility. For most people, however, the key technology has been with us for two decades, namely the mobile phone; what blind people, including blind children, really need to break their isolation is a mobile phone account and a taxi account. The guide dog and long cane technique are as iconic and as narrowly relevant as contracted braille. At the very least, these new technologies associated with text generation and processing on the one hand and orientation and mobility on the other hand pose serious questions not only for curriculum designers concerned with the needs of blind children but also for those who design the curriculum for the training of their teachers and instructors. If there were more than 24 hours in the day and seven days in the week then it would be possible to argue that trainee teachers should continue spending huge amounts of time on Braille skills with instructors spending huge amounts of time on independent mobility besides learning all the new skills associated with powerful, network computing but we all know there are not; and some difficult choices will have to be made. All that can be asked for at this point is that professionals put the interests of children ahead of the icons that define their profession

In the next section of this presentation I want to look at some more general technological trends and their implications for our sector.

First, we usually think of digital technology as having three integrated components:

the input device, the processor, and the monitor. Traditionally these were integrated into one hardware lump in a television or a radio but the first division came with the remote controller, separating the input device from the other two. Now the monitor component, usually a screen, is being disconnected from the processor. Soon we will have a personalised input device which will drive everything digital, a tiny processor of our own just in case we end up in a place that lacks public processing, and a monitor. For many blind people this will mean a discrete braille display which can be Bluetoothed to anything; for even more of our children it will mean a portable screen of whatever size suits them, or the use of everyday objects like dining tables as screens; think of those children who can currently only access print by crawling on the floor. As the devices we think of as televisions, radios, CD players, games consoles, computers and mobile telephones all converge into one massive networked environment where we will only want our personalised input device and our own monitor; the prospects for information access are truly amazing. In theory, but on a much larger scale and in much greater variety than the Sagem, you will be able to have what you want, how and when you want it; but we must not throw away the next quarter century as we have thrown away the last.

Which brings us back to the concept of comparative disadvantage. The immediate and overwhelming consequence of information technology is that we will have to be realistic about where our children can compete and where they cannot. They will not be able to compete in autonomously accessing and processing masses of information at high speed; but they will be able to work in teams as a new kind of division of labour emerges from the information explosion. At the moment, because of the novelty of the new technologies, you see business executives processing their own email on trains and running their own diaries from their mobile phones; but ubiquitous networking and the shortage of highly skilled managers to make sense of an increasingly complex environment will mean that team working will again become central to efficiency. Because high speed, portable processing is a novelty, powerful men want to show off with it; but when it is ubiquitous and free, they will turn to something else.

What defines us as human beings in general and our directive activity in particular is pattern recognition: High speed processing produces very useful, instant pattern recognition; more deliberative processing can produce more profound pattern recognition. We ought to be able to strike a balance between relatively superficial pattern recognition and the more profound sort so that the more of the first is taken care of by automated processors, the more time our children will have for the second. This kind of change should be part of our fundamental debate about the curriculum, the importance of syndicate rather than solo learning, and a processing specialisation which is the 21st Century digital equivalent of the switchboard operator or the physiotherapist.

Finally and even more fundamentally, we need to think carefully about content creation. So far I have concentrated on content reception and processing but we must find an environment in which our children can talk and create for themselves. In spite of our deep and lifelong commitment to improving their lives, we have largely failed to represent them so effectively that they are socially valued and accorded the equal concern and respect to which they are entitled. Congenitally blind children who grow to be adults are largely marginalised and what expression they have is through well meaning intermediaries like us. What we need to do in our new environment is to think of our world as a communications network and enable all our people to communicate; every organisation that is connected with blind children and adults should be a broadcaster and publisher of original information created by or at least with blind and visually impaired people. In the information age we are competing for audience as an absolute precondition of competing for attention and resources. The importance of new information technology is not the technology itself but what it is doing to society. Look at the millions of images created by cameras in mobile phones, think about the massive volume of text messaging, count the increasing number of channels on your television and radio, think of how much time you now spend on the mobile telephone and using email; think of the number of web loggers and the volumes of information now being poured onto the internet in measures designated as LOCs, or Libraries of Congress; and think of how much more information will be poured onto the internet when the global entertainment corporations abandon spectrum-based television and offer all their goods in catalogue form on a broadband internet. 100 years ago the problem was information scarcity, now we are facing a world where we are short of information processors and synthesisers, brokers and aggregators; but right down at root the only way to compete in an information age is to create, alone or, most likely in the case of blind people, collaboratively; we have to ask ourselves whether learning braille and keyboard skills is enough; how much labour do we save through voice input and how much creativity do we allow through the use of recording and editing facilities?

It may well be that we will be able to leverage the new situation to find new employment opportunities for blind people in such areas as community radio, sound engineering and spot trading but one underlying trend which presents us with serious challenges is the erosion of the value of basic skills because of automated processing. Think for a moment about the kind of things you do for yourself on the internet that 10 years ago involved visiting a shop or an office. The truth is that as the need for high end processing skills increases, the need for low end skills is decreasing because of automation. So we have to be very clear about why we are teaching children (and adults for that matter) certain skills. It is important that everyone learns IT skills to the greatest degree possible but we have to think of these as life skills and not job skills. Some of these skills may help with the job and applying some of these skills may constitute a job in itself; but I doubt that many blind people will be able to compete successfully for IT jobs per se although they will need IT skills to enable them to occupy most jobs.

For many years we have been in denial about the under employment of blind adults and we may have to design fulfilling lives for our people without a paid employment component. Preparing children for a life of unemployment is something that we have not so far dared to face.

But underlying this I have a much deeper concern. Data production, transmission and processing are all becoming democratised and integral not just to work but, to borrow a phrase from the American Constitution, they are becoming integral to our understanding of life, liberty and the pursuit of happiness, and of these three, to parody St. Paul, the most important for our children is the pursuit of happiness, particularly if they cannot find paid work. No matter how important it is for all of us in the sector to work with children to equip them for training and work, in the end it is fulfilling citizenship and a happy family life that count for most. For the last three decades we have been struggling with the three curricula: the mainstream, standard curriculum; the additional curriculum of communications and mobility skills (braille and canes); and the hidden curriculum of socialisation. The new technological paradigm will force us to think again. We never could impart these three curricula to children because concentrating on any one marginalised the other two; but as we look forward we must not make the same mistake again. Our task, confronted by this new technological paradigm, is to skip the 20th Century altogether, to jump from Louis

Braille and the Heidelberg press of the 19th Century into the 21st Century as if the typewriter, the fixed line phone, the analogue television and the cinema had never existed. We will need a great deal of courage because in all technological change the barriers to success are the people not the technologies; but let us also wish ourselves luck; we, and our children, are going to need it!

38 Blind students and spelling: An Investigation into braille literacy skills.

By: Argyropoulos, Vassilios; Martos, Aineias; Leotsakou, Betty
From: Greece
Organisation: University of Thessaly and Ministry of Education

1. Introduction

A common definition of literacy is the ability to read and write at such level that a person would be able to meet daily living needs. "Literacy is a continuum from basic reading and writing skills all the way up to various technical literacies" (Troughtan, 1992, p14). In essence, the acquisition of literacy skills provides all the prerequisites for achieving in many areas of life, from school to employment (Koenig & Holbrook, 2000).

For individuals who are blind or visually impaired, the merit of literacy skills is equally significant. The processes of development of literacy for children who use Braille and print are approximately the same (McCall, 1999). What may differ is the way in which students with visual impairments develop their literacy skills (Koenig & Holbrook, 2000).

One dimension of writing Braille which blind students feel very uncomfortable with it is the concept of spelling. There is evidence that children with severe visual impairments are more likely to experience difficulties in achieving the levels of accuracy in spelling of their sighted peers (McCall, 1999).

The development of spelling concepts has been one of the major issues which occupy professionals and the misspelling phenomenon has been observed not only in Greek blind students' performances but it has turned to be an international phenomenon (Kuell, 2000). There is an increase of the number of illiterate blind people with prominent feature the development of the concept of spelling (Spungin, 1989, 1996). Researchers and Program Services of the American Foundation for the Blind (AFB) have studied possible reasons which have led to the above situation. They argue that the decline in Braille usage may be seen as resultant of negative attitudes towards blindness and Braille, increased emphasis on use of residual vision and increased use of audio-tape and voice output devices (assistive technology in general) (Spungin, 1989; Troughton, 1992; Miller, 1999).

2. Aim of the Study – Sub aims

The general question which this research addresses relates to blind students' developing in writing Braille in particular to the way in which they develop the concept of spelling

Sub aims

The main research theme is divided into the following sub aims

- Investigate the types of the students' errors in spelling
- Investigate the attitude of students when dealing with spelling
- Investigate the relationship between spelling and strategies of reading

3. Context of the study - Participants

The context of the study was a special school for students with visual impairments in Greece (Athens), the Centre for Education and Rehabilitation of the Blind (KEAT).

Sixteen participants took part in this study and the age range was from 11 years to 18 years. They were all students of different levels in the same special school. More analytically, four students were attending elementary school (ages 11-12), five students were in high school (ages 14-16) and seven students were attending lyceum (ages 16-18). All students were braillists and according to their files had no other additional disabilities.

4. Method

a. Semi-structured interviews

This part of the research was exploratory and had as target the highlighting of themes such as the students' preferences with respect to the way of their reading (aural reading or tactile/Braille reading) as well as the students' concepts and attitudes towards spelling. Apart from the semi-structured interviews a discussion also took place in order to clarify the purpose of the experiment and the process itself.

b. Experiments

The process was the following: initially, every pupil listened to an aural presentation text presented by one of the researchers and then the latter read the text asking the students to write it down in Braille. This method of spelling task (dictation) is probably the most frequently used in classrooms (Tindal & Marston, 1990).

The analysis of the data was based on categories. According to Tindal & Marston (1990), to categorise "spelling error patterns a classification system is necessary to organise word types and students' responses" (p194). Hence, we developed a classification system which met the peculiarities of the Greek language. The spelling error pattern used in this research is a synthesis of other similar patterns (Tindal & Marston, 1990; Kotoulas & Padeliadou, 1999; Papapavlou & Yiakoumetti, 1999) and consists of two broad categories. The first refers to errors of phonological type and the second to errors of non phonological type. The latter category splits again into another two subcategories; errors of historical type and errors of morphological type respectively. We considered as errors of phonological type those which change the acoustic image of the word (e.g., fin for fine). On the contrary, errors of non phonological type do not alter the auditory representation of the word; instead, this type refers to errors which are opposed to the correct spelling of the word in terms of the historical evolution of the language in conjunction with grammatical rules. To avoid errors of historical type, students have to memorize the structure of the word as it appears in the textbooks, whereas to avoid errors of morphological type students have to memorize grammatical and syntactic rules and apply them in their spelling tasks.

5. Preliminary Outcomes

5a. Data drawn from the Experiments

The results from the experiments addressed comparisons between the performances of blind students at all levels of education (i.e. elementary, high school and lyceum).

Figure 1 provides information about errors of Phonological Type

Figure 1: Results regarding Errors of Phonological Type

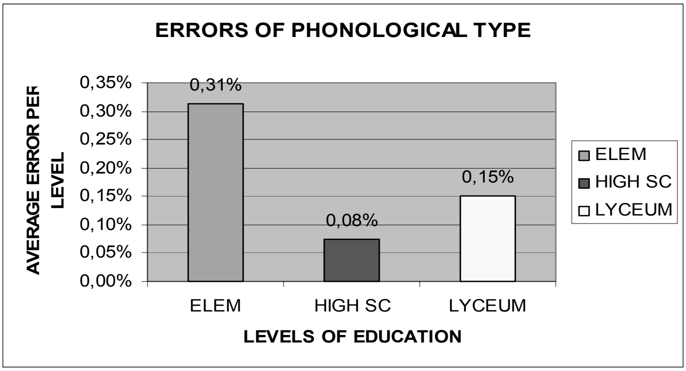

Figure 1 indicates

i. the students' written responses in Braille were at high level of accuracy in terms of the phonological type
ii. that students in elementary school had more errors of phonological type than their peers had in high school and lyceum (college)
iii. the interesting increase of errors in lyceum towards high school; almost double the value of the average in high school, 0,08% average in high school toward 0,15% in lyceum

Figure 2 provides information about errors of non Phonological Type

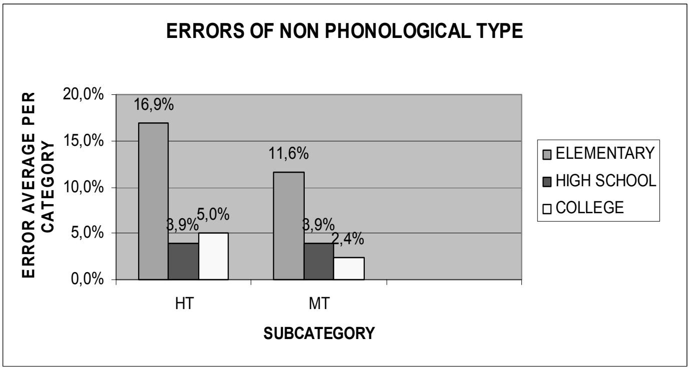

Figure 2: Results regarding Errors of Non Phonological Type

Figure 2 indicates

i. the average of the errors of this type is higher in elementary school – something which was expected
ii. the average of the errors of this type remains constant in high school
iii. the average of the errors of the students in lyceum (college) in terms of historical type was higher than their peers' in high school.

5b. Data drawn from the semi-structured interviews

The data obtained from the semi-structured interviews provided the information that all blind students who attended elementary school preferred to read their homework in Braille rather than in listening pre-recorded study materials. However, there was an increase in using tapes in high school and lyceum (college). Highlighting the students' verbal responses we have the following main arguments/propositions:

- Pupils in high school and in lyceum mentioned that the demands of tests and exams forced them in a way to use more pre-recorded study materials than Braille.
- All students held the view that reading Braille is a kind of communication with the textbook and consequently with the writer of the textbook and this feeling helped them to comprehend better the content of the subject they were studying.
- There was frustration about spelling whereas all students mentioned its importance in their lives.
- Students (mainly in high school & lyceum) considered spelling and employment as mutually dependent

Also, some interesting and illuminating extracts are provided below, from the semi-structured interviews reflecting the students' concepts and attitudes toward spelling.

- "spelling is when you don't make mistakes and therefore people are not laughing at you"
- "spelling is when you write words not as a part of a task but as part of the every day life"
- "spelling is a set of specific regulations like maths, two times three always equals six"
- "spelling is letters and grammar"
- "spelling helps you easily to find out who knows and who does not know"
- "when you know how to write then you have more chances to find a job"

The above answers provided evidence about the approach of blind students when dealing with spelling. Spelling was considered not only as the correct order of letters in words but students have given to its meaning social and emotional dimensions as well. Nevertheless, few students had an accurate concept of spelling embedded in the context of phonological or non phonological type.

6. Discussion

The purpose of the experiments was to classify blind students' spelling errors formulating an error mapping. This was feasible via the classification system used in this study, which categorised errors into phonological and non phonological type meeting at the same time the peculiarities of the Greek language (section 4b). It was felt that it was essential for this study the usage of the classification system, which served well the purposes of the 1st sub-aim in identifying and organising the students' errors. The most important finding from the classification system and its analysis was the fact that the students in lyceum although attending higher level of education performed more errors of phonological and historical type compared with the students attending high school. From the semi-structured interviews it was emerged that the students in lyceum (college) in order to bear the burden of the work in school they ended up in acoustic reading to save time and as a result the images of the words and all the relevant grammatical rules have begun to fade (3rd sub aim). This finding also reveals a critical role which haptic stimulation occupies when students read and write Braille. Haptic stimulation consolidates the images of the words which lead to the formulation of haptic memory (memory by touch). These memories constitute intellectual structures called schemata (Wadsworth, 1989).

It is expected that the information obtained from the above will provide an understanding of the impact of the consequences on blind students when not cultivating their Braille literacy skills. Sullivan (1996) has also stressed out that despite the fact that assistive technology may serve people with little or no sight tremendously (e.g. the audio interaction with the computer is faster – and therefore more preferable - than the Braille control of the computer or the phenomenon of excessive usage of qwerty keyboards compared with that of Braille keyboards) but on the other hand the cultivation of literacy skills may be delayed significantly and the phenomenon of illiteracy may be increased.

It is also worth mentioning children's attitudes and comments about spelling. All of them considered spelling as a very important issue in their every day life including employment. Nevertheless, the issue "spelling" created anxieties because they did not have much experience of its usage and reasoning (2nd sub aim).

Finally, children's interview responses indicated their belief in the fact that are more acceptable by society when they know how to read and write correctly and almost, all blind students underlined the usefulness of spelling as they argued "to know how to write is indispensable qualification to find a proper job".

7. Conclusions

Such findings indicate the need for promotion of awareness programmes linking the importance of developing Braille literacy skills with employment and hence with independence and happiness. One of the most critical periods in the life of a young person is the transition from school to the world of employment and to life as an adult. Developing independence, exploring interests, and pursuing employment or additional schooling – such as assistive technology training - are just some of the challenges faced by youths in transition from school to adult life (Wolfee, 2003).

Hence, teachers must be assertive in requesting Braille material (Rex, 1989) and provide direct instruction in Braille and other compensatory literacy skills (Koenig & Holbrook, 2000). A team approach is essential, with the T.VI (Teachers of the visually impaired), parents, and classroom teacher(s) working together to encourage and reinforce both print and braille skills at school and home.

Amount of inclusion in classroom activities in addition to individual instruction in braille literacy needs to be monitored to make sure the child is not missing essential experiences in the classroom.

Specialized skills need to be addressed, such as visual efficiency, tactual readiness, and use of literacy tools (braille, technology devices).

Ongoing assessment of literacy learning is crucial to document the child's progress and make sure that vital skills are being addressed. Students must also be offered work-related experiences applying their knowledge into everyday life building their life skills (Cattani, 2003).

Flexible scheduling is an option which might turn to be helpful in some cases "so "mini-lessons" can be given in areas of need. For example, if the class is working on a lesson that the child has already mastered, the TVI may be able to fit in an "extra" lesson on a braille skill, or do an enrichment activity in another area" (DOT, 1999).

The classification of the students' errors will enable teachers to conceptualize the nature and the characteristics of these errors and as a result will construct effective supplementary direct instruction. All the above may also lead to the need to change the curriculum and adapt it more to the needs of blind students instead of following a rigid instructional form.

Further research is needed regarding spelling error patterns and the phenomenon of Braille decline and Braille illiteracy. One of the up-to date issues which this study underscored was the impact on blind students' developing literacy skills which may have the excessive usage of assistive technology such as screen readers in combination with Braille displays.

Finally, there is a need for studies that will provide a better understanding about the role of social and cultural context on blind children's perceptions regarding issues such as Braille, literacy skills and employment.

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39 Development of a Quality Program for the Education of Blind and Visually Impaired Pupils

By: Beyer, Friederike
From: Germany
Organisation: Humboldt-Universität zu Berlin, Institut für Rehabilitationswissenschaften, Abteilung Blinden- und Sehbehindertenpädagogik

Abstract

For more information please contact the author: friederike.beyer@reha.hu-berlin.de

The discussion about school quality in Germany concerns all kinds of schools. Meanwhile the general quality concept becomes more and more differentiated, it is still a problem to transfer it to the schools for blind and visually impaired children. Often, due to a lack of special knowledge, quality experts do not feel able to help these schools to develop quality. Nevertheless, the schools for the blind and visually impaired want to develop quality and to sharpen their profiles as centres of special competencies. So it is necessary to develop specific concepts of quality and to transfer them into a system of voluntary self-evaluation. In this lecture, the research for the development of a quality program for the blind and visually impaired is presented and the participants of the conference are invited to discuss it.

40 Power off the People – Power in the People – Power to the People Self-determination and Consequenses for Specialism

By: Rothenberg, Birgit
From: Germany

The following article[6] tries to develop basic ideas about a revised specialism as consequence of the paradigm of self-determination (see Rothenberg 2002).

Self-determination in the special education debate

Self-determination is an idea, a principle, a counter-concept to non-autonomy (see Steiner 2001). It was developed as a life perspective for disabled people by disabled people against non-autonomy, exclusion and discrimination. Self-determination in the german independent living movement does not simply correspond to a trend ascribed to the present zeitgeist (see Theunissen 1995, 166). It means resistance to the environment and deprivation of rights by the professionals, to be considered and legally declared incapable, resistance to the denial of opportunities to live and learn and the denial of civil rights etc., as was first openly declared to be a violations of human rights in a welfare state at the Krüppeltribunal (Engl. cripple tribunal) 1981 (see Daniels and others1983, Steiner 1996). Self-determination as counter-concept to non-autonomy and (personal) assistance are concepts which have been defined and operationalised by the political disability movement. The principle of self-determination is based on the people with disabilities finding out themselves how they want to live and take part in our society (Rothenberg 2000). It is about a self-determined definition of their role as citizens (Steiner 1996), that is, about a self-determined exercising of rights and duties as citizens.

Professional work is based on a specific human image and a supporting specialism comprised of criteria determined for the people concerned. The relevance of "self-determination" for the work with people with disabilities, for promotion, care, rehabilitation etc. is, after years of almost total ignorance (see Rothenberg 2002, 175f), finally undisputed. At least it is now considered a necessity for a change in the services for people with disabilities as well as a for change within specialism (see Hephata 2000, 6).

With a few exceptions[7] the new concepts have only changed the tone of the demands of the German disability movement, but unfortunately not the content. Even concepts that are explicitly related to the (german) independent living movement are predominantly used in a different, sometimes distorting and reality-concealing way. If you look more closely at the relevant literature it becomes clear that scientists did not take notice of the political disability movement, their texts, actions, speeches, positions for years, let alone started a discussion with them. Rohrmann pointed to that already in 1994. He warns about an inflationary use of "self-determination" and "assistance", and demands radicalisation and rehistorisation of the concepts (Rohrmann 1994, 19).

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[6] The title symbolises the revision of empowerment ideas from professional patronising to professional empowerment.

[7] Exceptions are usually contributions of members of the political disability movement, who are active in self-help organisations or work in universities or research centres, for example: Drolshagen, Frehe, Miles-Paul, Österwitz, E. Rohrmann, Rothenberg, Schönwiese, Sierck, Steiner.

Radicalised and rehistoricised concepts and a consistent specialism

Even for the development of a consistently revised specialism the process of radicalisation and rehistorisation is necessary, since the political disability- and cripple movement that became the independent living movement formulates as political movement basic criticism about the disability support system, the care taking system and the specialism with its professionals, among them educational staff members (see Steiner 1999a, 105; 2002, 166f).

The criticism about the nonautonomous structures and the according to the disability movement basically nonautonomous-oriented qualifications finally led to the model of personal assistance. This model makes the professionals and the assistants to employees, which implies "a position of diminished power" (Steiner 1999a, 107). According to the independent living movement "experts on their own behalf" will be equipped with a self-determination-securing structure. They are employers of their assistants. Particularly the authority to personnel and to train the assistants serves here as protection against nonautonomous specialism. This is why members of the independent living movement prefer untrained lay personnel as assistants, employ and train them according to their individual needs (Frehe 1993). This is first of all to avoid non-autonomy enforced by beforehand trained assistants.

The inflationary use of the concept of *assistance* by the disability aid organisations as well by the relevant literature ignores the clear operationalism of the concept of (personal) assistance, deprives it of its power as 'concept for battle', and additionally contributes to the concealment of the real balance of power in the supporting relationship, and thus to non-autonomy[8].

In order to avoid this the first step is to introduce new concepts which do not conceal the balance of power[9], but keep in mind that the broad and structure-based protection from non-autonomy gradually decreases in the model of (personal) assistance. For the maintenance of self-determination instruments of user control and reinforcement of clients are introduced. The observance of the free choice between two alternatives is very important. At the same time "revised specialism" becomes relevant. The consequence is that the concept of assistance is in fact not a synonym for a revised specialism. The maintenance of self-determination is realised by an organisational model.

Characteristics of a specialism as consequence of the paradigm of self-determination

Based on the so far developed demands on specialism by peer counsellors the first characteristics of a revised specialism can be defined. Other elements can be developed

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[8] This is why the concepts chosen by Theunissen „advocatory, social integrating and facilatory assistance "(2000, 408) are also improper. The „assisting interventions" about which he speaks as synonyms for interventions, for instance in case of self-endangering or endangering others underline the euphemism (Theunissen 1998, 85).

[9] For reasons of time I would like to point to definitions and concepts which I have developed together with my colleague Birgit Drolshagen based on the model of „Self-determined Life with Personal Assistance" (MOBILE a.m. 2002, 23ff.):

- personal or direct assistance
- indirect assistance
- support from organisations oriented towards personal assistance
- support from service providers oriented towards the principle of self-advocacy
- support from professionals working according to a self-advocacy-oriented specialism

And clearly differentiated:

- Support by unpaid people

from the principles of the independent living movement and the structural elements of self-determination.

Specialist knowledge in the cooperation process

Steiner demands to acquire not only specialist knowledge but also a kind of specialism, as renunciation from the patronising specialism of the old system, which does not render the clients into objects of problem-definition- and solving-strategies. "… On the one hand the maintenance of the principle of responsibility of each person, on the other hand the introduction of further skills in a process of cooperation, in which everybody individually reaches his goal in a self-determined manner" (Steiner 1999b, 189).

According to the high significance of peer counselling and peer support as „educational tools of the independent living movement" (Miles-Paul 1992, 14) cooperation models about professional work should be developed together with the peer counsellors, apart from the original services.

Unmasking of non-autonomy-oriented structures in the support system

A revised specialism assumes that non-autonomy-oriented structures in the support system and its (non-autonomy-oriented) specialism are recognised and uncovered. You can also speak about "sensitisation for the misuse of power in a relationship of dependence", as Martin Hahn does (1994, 90). He considers this "latent temptation to non-autonomy" to be a consequence of "more social dependency" in the relation with disabled people and in institutional regulations (1994, 90f).

The change of norms

Self-determination according to the independent living movement does not simply mean independence, but making one's own decisions independently from institutional, factual or personal constraints. Being as independent as possible is a norm which influences socialisation and educational work and expects from the people from a certain age on to live their life as independently as possible. This implicit "pressure to do it oneself" means that people with disabilities have a lot more to organise and this often prevents them from independently deciding for or against "doing it themselves" or asking for support respectively. The methods of "doing it oneself/independently" and "doing it in a self-determined manner" (with the support of services or personnel) are still not treated equally within the special educational goals "independence and autonomy". Nor are the needs for personal assistance discussed. On the contrary, it still exists a clear hierarchy in favour of "doing it oneself", which is considered to be the basis for reaching the goal of autonomy.

Thus, the consequence for a revised specialism is that rehabilitation and schools must teach and offer different choices and social competencies in both areas. The training of orientation and mobility must also be a part of a respectively changed curriculum[10] (see Drolshagen/Rothenberg 1999).

Uncovering structural violence

Self-determination means to have the choice between equal opportunities. Specialism must have the goal to enable people to recognise alternatives, choose between them and resume competencies, but also to find out about the lack of alternatives in the

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[10] There are in fact some recent publications which support a re-orientation as to the content of the training, particularly with reference to the basic understanding of perception and mobility. However, the aspect of a self-determined life with personal assistance is being ignored.

support system determined by system-induced and factual constraints as well as institutional regulations (see Galtung 1975; Hahn 2000; Steiner 2001), and finally to claim those alternatives.

The principle of „self-determination as a counter-concept to non-autonomy“, that is non-autonomy per "system-induced and factual constraints", means for a consistent specialism to analyse the constraints, look for alternatives, uncover elements that are part of the constraints, to make the whole system transparent for the people concerned, make it public and support the people and their organisations in their efforts to find a remedy.

Basic understanding of self-determination as dialectical process

Non-autonomous elements in the life of social groups or individuals cause counter-concepts and counter-strategies, which leads to possible changes. These changes might be compromises with new, even non-autonomous elements, due to limited choices or limited individual chances of achievement. Altered non-autonomous elements, but also elements that allow a different form of self-determination, cause „new“ goals as well as new dialectical concepts.

A consistent specialism wants to identify the respective socially relevant counter-concepts and use them for its work as well as by means of biographical access to identify the respective individual counter-concepts, in order to find possible counter-strategies.

Basic understanding of self-determination as expression of a different self-confidence

A self-determined life means to see disability as socially caused and thus considering it changeable. Due to this self-confidence people with disabilities succeed in leaving behind their predetermined life and realise their own goals. Ratzka says: "The driving force and guidelines of this work is our self-respect" (1988, 183). A consistent specialism must support this self-confidence. Professionals must not interfere with this development process, they must not mediate. Such a self-confidence develops only if people have the chance to live and learn in a social area of conflict (see Steiner 1974).

The idea of self-determination has been developed in groups. Some disabled people left their predetermined life, developed their own individual life concepts, experienced the support from groups and/or represented a positive example for others. A consistent specialism thus requires the support from self-help groups, a further building of groups and also the (necessary) accompaniment for group participants.

Basic understanding of a self-determined life as a life in a social area of conflict

A consistent specialism furthermore requires an understanding about socially-caused disability. This must also be understood as a dialectical process, reinforced by a cooperative, that is dialogue-oriented work with the clients as experts on their own behalf, with clients with a "new" self-confidence, or a process reinforced by a systematic control of (educational) services by the disabled users. This basic understanding is something that professionals have to learn in a process of participation together with children and adolescents as well as adults and elderly with impairments. Thus they are in a social area of conflict, sometimes even with their employers, at least when uncovering institutional constraints in their own institutions.

Basis understanding of a self-determined life as a principle for children and adults

The instances of socialisation must offer alternatives, real opportunities to assume competencies. This is the only way to experience self-determination and to encounter the depriving of the competence of problem-solving from the individual. In the process of de-hospitalisation, after having left ‘total’ institutions, or after a “loving” hospitalisation, for instance in a nuclear family, the competence of problem-solving must be regained as well as the acquired absence of needs be fought against. All this and the demand for the development of adult education services for (also intellectually) disabled men and women require the abandonment of special education from the focus on children, adolescents, or school.

Power off the people - power in the people - power to the people

This statement by Adolph Ratzka actually applies to people with disabilities, but also to professionals:

„The driving force and guidelines of this work is our self-respect. The environment is always bombarding us with hints that our life is pitiful, unworthy to live and unwelcome, that we are second-class citizens. Many among us grew up with this attitude and believe firmly in it. We must vaccinate us against this brain-washing, since if we are not convinced ourselves about deserving the same quality of life like all the others, we will not fight against being put into institutions or homes, and not for a life wherever we want. … Then we will not be forced into a pathological dependence on our family members, but demand individual services, which make us free” (Ratzka 1988, 183).

Many people must first be cured from the damages of years of adaptation to in-patient and out-patient nursing homes, of self-limitation and disposal, until they are convinced that they able to put their life into their own hands“ (Ratzka 1988, 198).

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41 Between Quality and Price - Vocational Rehabilitation for the Blind and Visually Impaired in Germany

By: Denninghaus, Erwin
From: Germany
Organisation: Berufsbildungswerk Soest

Abstract

For morre information please contact the author: Erwin.Denninghaus@lwl.org

Europe is growing and growing together. Not only economy, but also the social systems are changing during this process. Developments in the vocational rehabilitation of the visually impaired and blind in Germany are lined out and discussed in comparison with other European countries.

42 Innovative learning and training in vocational education

By: Kruiyer, Truda
From: The Netherlands
Organisation: Sonneheerdt Opleidng & Arbeid

Introduction contents

- Dutch context and consequences for vocational education goals.
- Competence-focused learning: what is it and what does it mean for set-up of vocational education
- Translating into VIP within Sonneheerdt
- Two practical examples

Dutch context

In the Netherlands, as well as in surrounding countries, a number of changes are taking place that will have an effect on the development of training curriculae and in particular vocational training.
The following developments can be summarised:

- The welfare state that is familiar in the Netherlands is undergoing a change.

Employment and going-to-work are important goals of Government policy.
This takes place in an environment where market-forces play an important part. Organisations are challenged to compete with one another, to work efficiently and what used to take place under the flag of public ownership is now organised via private enterprise.
"No cure, no pay" or "no cure, less pay" are becoming well-known terms.
In this environment the visually impaired are often labelled as a vulnerable group, who are difficult to employ and in whom a lot of investment is needed to overcome these difficulties.

- The labour market is also changing.

From employees is much more expected than just knowledge and basic skills and the content of many occupations is changing.
New technologies are being developed and production methods are changing. Employees are expected to show more initiative, to bear responsibility, and also to be able to work together as a team.
Employability and mobility in the labour market have become the norm and international affairs have their influence on the work floor.
These developments have consequences on the development of training curriculae and in particular vocational training. Students are expected to show more initiative and to provide more input in the learning process (decide own direction). In this way the gap between school and work is supposed to be smaller.

- Changes in legislation and ideas about effective learning.

To adapt to this changeable environment and different needs, the organisations responsible for vocational education have to adjust their goals. In the Netherlands this takes place under the name "Competence-focused study plan".
Where before the accent was placed upon the acquisition of knowledge and routine skills, the accent now is placed upon developing occupational competences.

Also the notions of effective learning have changed. Effective learning will be achieved when learning is seen as an active process, whereby the essence lies in linking knowledge to experience.

Competence-focused learning

Competence can be defined as:
The ability of the individual to act adequately in an appropriate product and process orientated manner within a relevant work-related environment.
Competence-focused learning is based upon the requirements which have to be met by someone beginning in a professional working environment.
So critical working situations are central by developing the study plan.
Students are taught to act competently in such situations.
The student directs his or her own learning process, thus allowing career possibilities to be discovered and used.
During the training attention is given to practical knowledge, continual development of knowledge and skills and career introspection.

The ultimate goal is a competent student who has a diploma, who is capable of transfer and who has "learnt to learn".

Competence-focused learning is a concept, not a blue print!
Each College makes its own choices when developing a study plan.
A summary of the most important key points is:

- Professional practice is the heart of each training
- The student is central to the whole process and directs the own learning process
- The teacher is also mentor and coach

The principles of education development within Sonneheerdt / translating into VIP within Sonneheerdt

From recent study (see B. van Lierop "Reïntegratie na scholing", 1999) a picture has been obtained of the obstructive and constructive aspects that play a role in obtaining work for the visually impaired in the Netherlands. The conclusion from this study is that successful placing of a visually impaired student in the labour market can be improved by:

- giving more attention to all facets of personal development (e.g. empowerment, gain insight into one's own strong and weak points regarding functioning)
- giving attention to increasing productivity
- giving attention to prevention of unnecessary absence through illness
- lots of attention for developing social skills

For Sonneheerdt this has led to the following goals regarding the development of education:

- to develop and provide study programmes on "hard" and especially "soft" skills needed for successful participation in the labour market
- every individual has special educational needs, a tailor-made approach is needed
- stay focused on learning within the Dutch formal qualification structure.

Two practical examples

a. Business administration simulation office (Simson)

Simson features:

- Simson is an officially certified simulation company. The environment of a company is simulated.
- Simson is completely adapted for people with a visual handicap. Simson is the first education company for the visually impaired in the Netherlands.
- The simulation company is open, that is to say it deals with other simulation companies in the Netherlands and all the day-to-day processes are handled, just like in a real company. The only process missing is the product flow. This is meant as preparation for a traineeship and eventually a job.
- The students are employees and work at specific times in different departments (reception, secretary's office, purchase, sales, accounts and invoicing). Each employee is responsible for the tasks that have to be carried out within the department.
- Teachers are the managers. The employees receive guidance and progress and development is measured using job evaluations and assessments. Employees can be fired.

Evaluation

- Students are enthusiastic about this study method and apply for jobs within Simson on their own initiative.
- Opening times have been extended in 2005.
- In 2005 Simson gets more floor space due to increased intake of students.
- The practical experience obtained here fits in with the national qualification structure. Successful performance leads to a diploma.
- The Regional College wants to integrate into this project.
- Teachers are enthusiastic and take initiative within their responsibilities as project leaders.

B. Natural learning (Tatoe) for students with a low educational level and negative school experiences

Tatoe features

- For students who want or need a lot of practical experience. They go straight into practical situations and familiarise themselves with different work situations. They discover what suits them best and what they are good in.
- Within a year be able to obtain the assistant-diploma (level 1)
- Participants can choose from a scala of realistic assignments (not devised by the teachers) that are supplied by companies and establishments where students could possibly start a traineeship or work there in the future. Students formulate their own study plan and then look for relevant assignments. These assignments are called achievements and cover a number of days or weeks.

  Examples of achievements:
  aring for animals in an animal shelter
  pkeep of gardens
  tock-keeping in a shop
  elivering post
  reparing fish
  eceiving guests in a restaurant

elping in a child care centre)
or the visually impaired the achievements are regularly adjusted for the handicap.

- Working together in a group
- No more schoolbooks, no more classical learning methods
- Learning possibilities are offered via workshops, presentations, training and traineeships (examples are workshop “dealing with colleagues”, “receiving feed-back”, “sales skills”, “presentation techniques”)
- Practical work experience is finished off with a short report and, where possible, with photo’s (building up a portfolio)
- Continual checking of the learning process is very important. A difference is made between instructors and tutors. The instructor guides the professional development, the tutor aims more for the personal development and the career path.
- With co-operation from the Regional College, the requirements from the Dutch qualification structure are met. Once they have obtained a diploma, students can choose to either look for a job or carry on to a higher level of education. Sonneheerdt gives them guidance in this.

Evaluation

- Students are enthusiastic and motivated.
- The intake is flexible and the number of students is increasing (from three to seven). The number of increase is especially prevalent among students with a lower education, who don’t know what they want to do or have less other possibilities.
- For autistic students this programme is less suitable.
- At the end of the first year the students received a diploma and they will attend further education after the summer holidays.
- Instructors and tutors are enthusiastic, learn all sorts of new things and are showing new initiatives.

Conclusion

Simson and Tatoe are two different types of competence learning for two different types of sub-groups within Sonneheerdt.

Both types fit into the requirements of the Dutch qualification structure, are based upon the needs of the client and are adaptable.

A lot of attention is given to factors that play a role in increasing the chances of finding work. Compared to regular education, a lot of attention is paid to introspection, social skills, empowerment en “learning to learn”.

Students, teachers and companies that work with this scheme are enthusiastic.

We are of the opinion that this gives our students a much stronger position and increases their chances at the labour market.

Based upon the above experiences preparations have begun to start-up a real employment agency solely run by students.

43 The Role of Case Management during Vocational Training of Persons with Visual Impairment

By: Hastreiter, Catrin
From: Germany
Organisation: SFZ BBW für Blinde und Sehbehinderte Chemnitz gGmbH

Today the term "case management" crops up often in the field of health care, social services and in rehabilitation.

What is the aim of case management? What defines case management? Is it just another buzzword and, above all, is everything that is labelled case management really case management?

Due to the complexity, specialisation and high costs of support processes, the aim of case management is to optimise the processes of services dealing with people. It is about defining responsibility for the process and management, the commitment of the individual client and the transparency of the procedure for all those involved.

In the 1970's, as countries such as Great Britain and the USA moved away from large psychiatric clinics, the need to coordinate all the various different outpatient services under one meaningful system became apparent. Today, the German health system and the rehabilitation sector face this challenge of having to optimise services without curtailing the responsibilities of the individual stakeholders.

In his presentation "Qualität sehgeschädigten- pädagogischer Prozesse in der Umklammerung sächlicher und personeller Rahmenbedingungen"[11] at the last VBS Conference in 2003 in Dortmund Mr S. Degenhardt referred to the core processes of diagnostics and support. Currently, one of the major challenges in our rehabilitation work with blind and visually impaired people is ensuring a smooth transition between different phases.

After a time of strategic planning in the vocational training centre (BBW) we decided to introduce case management. Our aim is to:

- improve cooperation between vocational training, the boarding school, school and specialist services
- provide support in an optimum way and design processes accordingly
- tap into hidden potential and prepare the trainees for the labour market more effectively
- increase process transparency
- adapt ourselves to developments in the field of vocational rehabilitation (e.g. regionalisation) more effectively

Before I describe the actual implementation of case management in the BBW, I would first like to explain the concept of case management.

Case management is defined as a working method that is tailored to the needs of an individual case and which serves as a reference framework for the analysis, planning, implementation, coordination, monitoring and evaluation of the services needed to meet the individual's requirements as well as how these can be provided based on the resources available while ensuring quality and cost-effectiveness.

(Slide 1)

This means that case management coordinates the cooperation of the stakeholders and structures the general organisation of the support processes for each individual case.

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[11] "The quality of educational processes for the visually impaired in the context of the general conditions surrounding staff and resources".

The following core elements are (all) indispensable:

- **Outreach** as a means of reaching the user
- **Reception**
- **Assessment** to analyse the situation and the needs (what is the case?)
- **Planning** - agreement on targets, channels and resources used
- **Implementation** as the translation into practice with monitoring of the processes at every step
- **Evaluation** - what has been achieved? If necessary review planning
- **Reporting** (accountability)

It is useful to distinguish between the different levels of case management realisation

Case management was originally designed as a method of organising an individual case. Today, the concept is very often used as a systemic management tool.

Case management on the systems level structures processes. In the institution that is a **precondition** for case management in individual cases.

In general, the case manager acts in a field of activity and conflict where the client's wishes regarding certain services and support meet the actual services and support available and the health insurance fund's assessment of the nature and extent of the support needed (slide 4). This is where in many cases consultations are required and the search for compromises begins.

So how did we proceed in the vocational training centre for the blind and visually impaired in Chemnitz?

We began by establishing support and development planning based on the following starting points:

- there is an individual need for support, which is connected to the individual capacity (diagnostics)
- different professions/fields with different and similar aims are involved
- support should be holistic and adaptive
- support is provided with the young person and not against him/her

The young person also assumes responsibility for his/her training by participating in the development conferences.

Since 2001 we have been holding a performance and development conference with each young person twice a year. At these conferences we update the support and development plan, which lays down the initial situation, targets and methods employed in all fields. Special attention is given to target orientation as opposed to listing all the deficits.

After gaining some experience with these support and development plans we ascertained that these agreements seem to work quite well, but that the implementation has not been successful enough so far. Therefore, we need someone for the planning, coordination and monitoring on an interdisciplinary level.

This led us to introduce case management as a working method that does not curtail the responsibilities of the individual stakeholders but improves their cooperation and monitors implementation.

At the beginning we had six employees all working client-oriented and for approximately 20 hours a week in the different federal states.

The activities began with the core process, i.e. support and development planning, but the scope was quickly extended to include reception and integration. The case manager for the respective federal state gets in touch with the students when they are still in school and informs them on the education services available (e. g. rehabilitation close to the place of residence). In this way, future trainees, parents and staff of the federal agency or other funding bodies have one fixed contact person from the very beginning who can provide information in all areas.

The case managers act as chairpersons during the performance and development conferences, coordinate any necessary interventions and report back to the funding bodies. Towards the end of the vocational training, the focus of the case management is on finding a job. And once again it is the case manager who pools all activities and carries out the job application training.

Later, during their working life, the young person can get in touch with his/her case manager; he/she might then even have a suitable training course to offer.

As the scope of duties continued to expand, it was possible to relieve the burden on the specialist departments involved and since then many of the processes have been running much smoother and more target-oriented. The social and integration counselling as a separate service was merged with the case management.

With case management we are today able to organise fragmented training measures for visually impaired adults as well.

At this point the target-oriented nature of the training becomes clear again – it is not about training for the sake of training, it is about training for a specific job. Of course, this requires an analysis of the individual needs, based on which the individual goals can be elaborated in the context of the prevailing labour market situation.

Besides assessing functional vision, psychological diagnostics and testing technical and optical aids as well as a aptitude analysis to test compatibility for various occupations, it is above all individual conversations on personal and professional life situations that are used to find as many resources as possible (also in the social settings) but also to identify barriers and develop solutions together.

The working method described has already led to encouraging results in the case of eleven clients. The tailor-made solutions ranged from in-house transfers accompanied by work-place adjustments to complete re-training.

In summary we can say that the introduction of case management led to major quality improvements, something that was proven by the EFQM process (quality management). Other practical experiences of its application are shown on slide 8.

Case management is also an ongoing learning process, which grows with each new challenge. In light of the diversity and complexity of the requirements, I would say the work ahead of us will continue to be stimulating.

44 Rehabilitation by means of education of children with Visual Impairment

By: Plaksina, Liubov
From: Russia
Organisation: Institute of Special Education RAE

Abstract

For more information please contact the author: belyakova.n@mail.ru

Now in Russia there are some kinds of special preschool and school establishments. A day nursery - gardens and school for children with visual impairment accept blind, visually impaired and children with a squint with 2 till 7 years. There is a new kind of special establishment - a day nursery - kindergarten school where children can be with 2 till 10-11 years.

In all special establishments the complex medical, psychological, pedagogical help is carried out. Training of children with visual impairment at special schools allows receiving full qualification education for 12 years.

Both in kindergartens, and at school special employment on correctional work will be carried out: physiotherapy exercises, to rhythmic, development of sight and visual perception, orientation in space, to development of touch, social orientation, logopedics.

For perfection of system of special education at schools the decision of a problem of integration of children with infringement of sight in a society is necessary due to maintenance of model of continuous medical, psychological, pedagogical support of children with visual impairment as in conditions special, and general educational establishments and in family.

The main problem there is maintenance of the special standard of education blind and visually impaired for a way of their successful integration to a society

45 Features of mental development and the early help to visually impairment children

By: Plastunova, Lilja; Ivanov, E.S.
From: Russia
Organisation: State consulting and rehabilitation centre for children

Disturbances of psychophysical development of children is a many-sided problem. It includes a plenty of clinical forms unequal on the pathogenesis, but being in difficult etiologic and pathogentic interrelation. To such forms concern in particular: mental defective, delays of mental development, a children's cerebral paralysis, the infantile autism, separate forms of disorder of the person, etc. The disturbances in psychophysical development of visually impairment children, is a part of this wide and difficult problem. Unfortunately, it is necessary to ascertain, that last three decades the precise tendency of growth of these disturbances worldwide comes to light.

The information of disturbances of psychophysical development of children is available in N.A.Vlasova, E.S.Ivanov, K.S.Lebedinskaja, N.N.Malofeev, O.S.Nikolskaja, L.M.Shipitsinaja works, A.Adler, Z.Piazhe, A.Vallon. The similar information on a role of a visual pathology in mental development of children is available in A.G.Litvak, L.I.Plaksina, L.G.Plastunova, L.I.Solntseva, V.A.Feoktistova, A.V.Hvatova, D.Hjubel's publications, Lea Hyvarinen, etc.

It is known, that the child receives the greatest quantity of the information on an external world through sight. Sight is defining in formation of representations about subjects and the phenomena. D.A.Farber confirms, that among external influences of a different modality for cognitive developments of the child visual stimulation is the basic, because of most significant information channel creating an image of an external world is the visual channal.

Value of sight in mental development of the child is unique. Disturbance of its activity causes the difficulties in knowledge of the surrounding validity, narrowing social contacts, limiting the orientation and opportunities to be engaged in many kinds of activity.

Features of mental development differently and in a unequal degree find out themselves at each age stage. But all of them are fraught with serious consequences for formation of the person of the child (Ivanov E.S). Disturbances of psychophysical development of children on the first year of a life if they in due time are not removed, are aggravated during the subsequent age periods. The early childhood, especially the period of the first year of a life, is the major stage of becoming of cognitive-emotional sphere of the child. Formation of this sphere basically is based on development of mechanisms of visual perception.

Disturbance of function of the visual system excludes an opportunity of occurrence of reaction of a concentration - one of the basic parameters of mental development of the first weeks of a life. L.I.Solntseva, confirming these data, marks, that the child does not receive any stock of visual representations.

Doctor L.I.Filchikova researched children of early age with various defeats of nervously-visual system. This research shows, that psychophysical formation occurs through a weak involvement both perceiving and processing mechanisms of the visual information.

The eye is an organ not only perceiving the information, but a part of nervous system also. Neurophisiological system of visual perception depends not only on damage of visual system, but also from a condition of the central nervous system as a whole. It defines the specificity of behavioral reactions to visual stimulus of infants (L.I.Solntseva).

The early maturing of projective cortex zones causes their participation in reception of the sensory information from the first hours of a life of the child. Knowledge of these features important for special psychology and pedagogic, in particular for the organization scientifically-proved habilitation and rehabilitation work.

Research was spent in the Center of habilitation for v.i. children in St.-Petersburg. In the Center the complex medicine-psychology-pedagogical approach is realized, and solve questions: ophthalmologic assessment of the eye, pathways and neurological assessment of changes in the brain; early diagnostics of neurological-and-behavioral development of the child; treatment; psychological and psychotherapeutic help to children with disturbances in development; psychological support to family and their early inclusion in habilitation work, with the purpose of assistance to optimum development of the child and its adaptation in society.

100 children of the first year of a life with visual impairment and pathology of the central nervous system took part in research. Children of experimental group have been subdivided on two subgroups in accordance of the severe of their visual impairments.

The first subgroup consisted of 50 children. There were total blindness and children with light sense. The acuity of vision of these children makes 0 - 0,08 units. The gradation of the acuity of vision is given by E.I.Kovalevski.

Children of this subgroup have been deprived an opportunity to receive the visual information and to communicate with relatives through sight.

The second subgroup consisted of 50 children. There were partially sighted and low vision children. The acuity of vision was more than 0,08 units, but less than 0,3 units. Children of this group received more visual information and had higher level of communication, than children of the first experimental group. The diagnostic technique «Determination of a level of neurological-and-behavioral development of infants» by O.V.Bazhenova has been used. This technique allows to take data about psychological development of the child of the first year of life by such criteria: moving reactions (M); sensory reactions (S); actions with subjects (A); ways of communication with the adult (C); emotional reactions (E); voice reactions (V).

These criteria have different degree of expressiveness: mild, average and severe. The degrees of disturbance of development are resulted in parameters, table №1.

Table 1

Exponents of degrees of disturbance of development

Reactions degrees	M	S	A	C	E	V
Mild	6 - 9,4	8 – 9,4	7,5 – 9,6	5 – 8,6	5 - 7	0 – 8,4
Average	4 - 6	5 - 7	3 - 7	2.5 - 5	More severe 0 - 5	
Severe	0 - 4	0 - 5	0 - 2	0 - 2		

Figures mean an index of development (ID). ID in points from 0 up to 10 has been accepted. The value equal 10, is normative value of neurological-and-behavioral development.

The parameters of healthy children were used as the control.

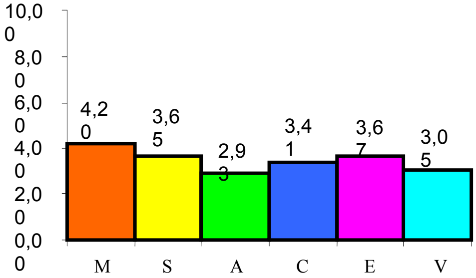
The structure of neurological-and-behavioral development of children in the first experimental subgroup is presented in figure №1.

Figure 1

Neurological-and-behavioral development of children of the first experimental group

Criteria of development are noted across: moving (M), sensory (S), actions with subjects (A), communication with the adult (C), emotional (E), voice reactions (V).

On a vertical - an index of development (ID) in points from 0 up to 10. The height of a column corresponds the size of an index of development.



From the diagram it is visible, that neurological-and-behavioral development of children in this group is characterized more likely as a severe at rather uniform character of disturbances. It proves to be true by supervision over children also.

Features of neurological-and-behavioral development of children in this group characterized by sharp discrepancy to age-specific. The indifference over an external world, absence of interest to people and subjects dominates in behavior. The most of reactions remains not generated up to the end of the first year of a life. Insignificant reactions of short-term tracing of glance and fixing of subjects, localizations of sounds in space, grasping of subjects are recognized. Some children have the attempts of grasping of subjects, but only after tactile stimulation by a toy of baby's hands; the toy putted into the hand was kept shortly; actions with a toy were stereotypic, nonspecific and short. The visual control over actions with a toy was absent. The children of observed group have extreme development delay of a motivational sphere, weakness of visual, emotional contacts to the adult. Simultaneously with severe disturbance of some reactions less disturbanced of development of moving, emotional, voice reactions took place. That is reactions of the most important for communication.

The analysis of the neurological-and-behavioral development of children in the first experimental subgroup testifies that different degree of vision reduce during the development of visual system in critical period and complex neurological disorders causes to disturbances of visual perception integrity and to deviations in cognitive and moving development of a child.

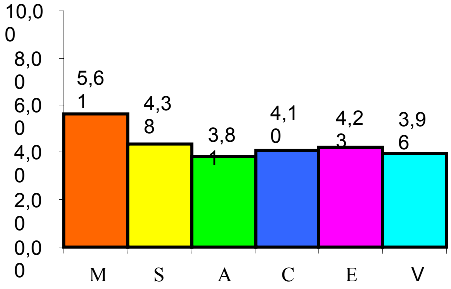
The received data gives an idea, that children with a severe degree of deficiency of some functions had deeply not generated those reactions which development is connected with a social factor. It proves to be true also that the most of these children has been deprived communication with mother in connection with intensive therapy, hardware actions. These actions stimulated development of a phenomenon negative imprinting at a part of children. Similar disturbances were not observed in parameters of children of the second experimental subgroup and group of healthy children.

The deficiency of the actions with subjects is as mainly result of deprivation of communication with mother, other adults and their inability to find adequate ways of stimulation and training of the child to cooperate with a subject.

Parameters of sensory development are sharply lowered and statistically differ from parameters of sensory development in the group of healthy children. The level of

development of emotional sphere is lowered, thus parameters of emotional reaction to a tactile touch at children of experimental group above, than at healthy children.
The analysis of data in the second experimental subgroup is presented on fig. №2

Figure 2
Neurological-and-behavioral developments of children of the second experimental group



Criteria of development are noted across: moving (M), sensory (S), actions with subjects (A), communication with the adult (C), emotional (E), voice reactions (V).
On a vertical - an index of development (ID) in points from 0 up to 10. Value ID equal 10, is considered normative. The height of a column corresponds to size of an index of development of corresponding sphere.
From the diagram it is visible, that neurological-and-behavioral development of children in the second experimental group can be characterized as an average. They have rather uniform of developmental lagging of rate of all mental functions. But development of sensory sphere in connection with severe defeat of the central nervous system especially lags behind. Actions with subjects and communication with adults can be considered as an average level of the disturbed development. This feature of mental development testifies that genetically programmed social forms of activity (human) have suffered in rate of development less. This part as more safe should be an original support at the organization of habilitation works.
Feature of mental development of children in this group is characterized by inability, because of low visual acuity, to carry out long sighting a subject, listening. To carry out the reactions connected with the advent of objects in different parts of visual field are difficult. It is complicated for infants to organize the behavior according to image of object just disappeared from a visual field. Most of children have nonspecific manipulations; they cannot operate more than with one toy. The visual control over actions with a subject are incidental. Communication with the adult is limited also. Children have visually and emotionally lability in communication with adults. They cannot concentrate for a long time attention on game actions of the adult, but sometimes they smile. They have own simple ways of attraction the adult's attention, by crying. Some children understand of elementary gestures, for example to make a reach in reply to the reached hands of the adult.
The main feature of mental development of children in this group is low mental activity, impossibility to organize the actions connected with overcoming of barrier, costing on a way to achievement of the purpose set directly in a situation.
Last few years in the Center the techniques helping to the child more actively to include their compensatory capacity already on first year of the life are developed. Position at which steal up: not the child to techniques, and techniques to the child is

basic, i.e. opportunities of the child for work by this or that technique are considered. The techniques creating psychoemoshionally communication of the child with mother - «a skin to a skin», « eyes in eyes » are applied. Mothers are trained in emotional-tactile communication with the child. Such dialogue forms feeling of motherhood, the warm emotional relation to the child. Such communication helps child to develop adequate sensual experience.

To psychoemoshionally methods of habilitation concerns music therapy for children with the lowered mental activity and irritability. Musical therapy is focused on stimulation of development of speech and communication of children.

Sight is a function of the organism, giving in to training. In the Center we spent trainings, developing visual capacity. We use the exercises and recommendations developed by Finnish doctor Lea Hjuvjarinen also.

By means of a technique «Little room», developed by the Netherlands experts, the baby is trained in sensations of space. The constancy, the organization and the importance of an environment are necessary for development of the adequate adaptation to world around. Employment and the games promoting early psychomotor development is spent by A.S.Spivakovskaja technique. By means of a technique of drawing fingers by liquid gouache the psychomotor and emotional irritability decreases.

We widely used the aromatherapy as a method of stimulation of psychomotor development and cognitive activity in any age groups.

The groups of socialization are spent for parents. We try to help families, as soon as possible, to orient in a problem, to leave a depression. So-called "Mum-classes" are widely used. It is training employment for transfer the experience of education and bringing up of the child in the family.

46 Preparation to professional education: actual problems of special schools for the blind and visually impaired in Russia.

By: Deniskina, Venera
From: Russia
Organisation: Academy of improvement of professional skill of workers of education

The Experience and Problems of Preparing Blind and Partially Sighted School Children for Professional Education in Russia

Preparing blind and partially sighted children for professional education in Russian schools includes three main stages:

At the first stage (1-4 classes} children learn self-service, household work. work in nature (looking after plants and animals in the school yard, working with vegetable plants, garden, flower garden) and hand work (working with paper and cardboard, fabrics and sewing, with wood, with natural and other materials). To the end of first stage pupils should acquire elementary knowledge about professional adult activities, their interests and skills should be studied, their interests and talents should be identified, and directions of correction and development of those personal characteristics, which are required for professional activities, should be planned (independence, responsibility, tidiness, diligence, communication skills, and etc).

At the second stage (5-9 classes) skills, which were formed at the first stage, are being kept and extended. Significant attention is given to such activities as sewing and knitting, wood engraving, tatting and etc.

At lessons of labour learning, in 5-9 classes, school children develop Technical skills, constructive creaTive imagination. They are introduced to electro technology, radio engineering, and metal-working. Such teaching is determined by the fact that many manufacturing firms of All-Russian Association of the Blind specialize in mechanic, radio and electrics works.

15 years ago each school was attached to a manufacturing firm of All-Russian Association of the Blind. All students, of 10 to 12 classes, learned labour professions in compliance with the profile of a firm. At first children worked in school Workshops then attended practical classes at a firm. It made the third finishing stage of preparing for acquiring labour professions.

If a school graduate got the Job at the firm of All-Russian Association of the Blind, specializing in the area, which he didn't study at school, (for example, his school was situated in another city), then school polytechnic learning allowed him to quickly acquire new profession straight at the work place. As usual, there were apartments for workers, infant educational school for children of workers and the school, and the house for spare time near to manufacturing firms for blind people.

At the same time with listed stages, pupils were prepared for getting Professional education, which they could acquire in specialized and technical schools (now Colleges) or universities after graduating from their school. The process of the career-guidance of pupils was always underfocus of individual approach, taking into consideration physical limitations and intellectual skills of each school Student.

So, 15 years ago blind school children were prepared either to master labour professions for ftrrns of All-Russian Association of the blind, or to pass entrance examinations for technical Colleges, Institutes and universities.

Today, the third stage of professional education has seriously changed: actually, now school children are not prepared for those labour professions, which exist at firms for blind people. The reason for that in modern Russian economic conditions, when firms for the blind can't stand competition and close, and the number of blind and partially sighted workers decreases.

Nowadays we face the serious problem of preparing pupils to such professions, which would be demanded at opened labour-market.

However, opened labour-market requires high competitiveness, significant mobility and communication skills from blind and partially sighted people. Unfortunately, there are almost no Services for blind infant children and their parents in Russia.

Even in special schools blind and partially sighted children still are unsufficiently taught skills of communication, social, household and outdoors mobility. It all makes difficulties for social adaptation and Integration of blind and partially sighted pupils, negatively affecting their Professional education after a school and represents one of major problems in practical teaching of blind and partially sighted pupils.

If blind or partially sighted person wishes and ready to work outside of Association of the Blind, then usually he/she gets Professional education within the framework of integrated education. However, it's early to talk about following the principle of equal opportunities in access to prestige professions in the society.

There are two main reasons:

The insufficient training of pupils for independent life; the underestimation of skills of people with sight problems by sighted employers.

Now schools not only prepare pupils for integrated professional education in regular universities and Colleges. There are three educational institutions with customized conditions for professional education of blind and partially sighted pupils in Russia:

- The Specialized Institute of Art (Moscow). Blind and partially sighted pupils study various professions at musical faculty of the institute.
- The Musical College (boarding school) for blind and partially sighted children (Kursk).
- The Medical College (Kislovodsk). Besides, there are specialized groups at medical Colleges in number of Russian towns, where blind and partially sighted pupils acquire the profession of masseur with general specialization. Therefore, pupils are taught the profession of massage and those qualities and skills, which are required by the profession (well physical state, strong hands, developed moves), in many schools.

Some schools for partially sighted children prepare their pupils for such professions as: florist, shoemaker, hair-styler, watchmaker, metalworker, and bookbinder. Pupils learn those professions at specialized educational industrial complexes, which also serve number of schools for sighted pupils.

School specialists (teachers with psychologist and social worker) identify skills (musical, litrary, pedagogical, managerial and etc) of each school student in specific areas of activities and orientate him/her towards appropriate professions.

A teacher helps a school student to make an individual plan of self-development for professional activities in the period of 5-7 classes (a dates depend on individual psychological and physical condition of the child). Then they choose approximate area of activity and specify the individual professional plan. In 10-12 classes, professional intentions and bases of decision on Professional choose are reviewed and finalized.

School student skills to one or another profession are considered along with his/her health conditions, including recommendations of the ophthalmologist, at the process of choosing profession and work place.

Professions, where people with sight limitations gained success, are given particular consideration during planning the professional orientation activities:

- Teachers of history, literature, mathematics, foreign language, jurisprudence, philosophy, psychology;
- Musical professlons: performing musicians) pianists, violinists, bayan-players, accordionists and etc), composers, singers, musicologists, accompanists, tuners. TraditionaJly good musical education is given in Russian schools for blind and partially sighted children that are why many of school graduates choose musical career.
- Programmers. There are some schools, where pupils from 11-12 classes are introduced to basics of programme in order to prepare them for studying this profession in the university.
- Masseurs; Jurists, lawyers;
- Professions concern with the management: managers of manufacturing firms, managers of ultural Sports Rehabilitation Center, directors of social organiza-tions for the blind, directors of schools for children with sight limitations.
- Translators; Philologists; Editors; Writers, poets. journalists;
- Political scientists;
- Economists;
- Workers of specialized libraries for the blind;
- Psychologists;
- Coaches of Sports for the blind;
- Managers;
- Workers of referral Services;
- Woodcutters; And others.

Blind and partially sighted people have already acquired more than 70 intellectual professions. A lot of blind people are successful in managing their business in modern Russia. Considering this, children are given basic economic knowledge at schools.

Teachine Computer knowledge on how to find and keep Information is one of required components in preparing blind and partially sighted pupils for future profession. Practically, there are Computers for the acquirement of Computer literacy by pupils in all schools for the blind and partially sighted children. However, schools have lack, of qualified Computer teachers, specialized methods of teaching and also Computers. Those problems require to be solved in nearest time in Russia.

The structure of professional orientation for blind and partially sighted pupils:

- Lessons of Labor activities;
- Art lessons: modeling, drawing, designing, painting;
- Vickers-work, knitting classes;
- The study of pupil's interests and skills;
- Diagnostics and pedagogical correction of professional self-determination of blind and partially sighted teenagers;
- Discussions on professions, where skills of blind and partially sighted people are successfully applied;
- Consulting pupils and their parents by doctors, teachers and psychologists on issues of Professional choice;
- Introduction of school children to future profession and ways of getting Professional education;
- Meetings with graduates from schools for blind and partially sighted children.

Therefore, the professional orientation of blind and partially sighted children includes: professional education, studying and teaching of the professional interests and skills, Consulting for pupils and their parents by doctors, teachers and psychologists on issues of professional choice, activities on forming theoretical and practical readiness for learning the chosen profession.

The professional education includes: introduction of school children to future profession and ways of getting professional education, requirements of each profession to health, psychological, physical and personal qualities of person.

47 From School to Resource Centre

By: Allen, Brian
From: Ireland
Organisation: St. Josephs School for the Visually Impaired

Abstract

For more information please contact the author: dsmyth.stjosephs@indigo.ie

The delivery of an appropriate and effective education for pupils with a visual impairment (VI) has been dominated in recent years by a debate between those who wish to place pupils exclusively in a mainstream setting and those who believe that the expert provision available through special schools should continue to be available for pupils for whom a mainstream provision is not suitable. This Comenius school development project aims to move beyond this debate by developing the role played by special schools to include a national resource centre provision available for all to use.

A model was produced of a special school resource centre based on the agreed European Good Practice established through a series of studies.

The special school (vi) resources centre model identified seven key areas where support services should be developed:

1. I CT and Access Technology
2. Family Support Services
3. Learning Resources Production
4. Assessment of Multiple Disabilities and a Visual Impairment
5. Activities for Daily Living
6. Teacher Training, Research and Development
7. Support for Learning and Leisure.

The range of provision should be developed for above identifying what would be ideal complements of services which could be made available.

48 ImPAct MDVI

By: Prain, Iain
From: Great Britain
Organisation: Royal Blind School

Throughout this conference I am hearing many people talking about the need for common strategies and approaches in the education of MDVI across Europe. The project I am going to introduce you to today is looking at developing a holistic teaching approach, centred on activities, participation and involvement in real life situations for young people aged 3-18 with MDVI.

The project came from MDVI Euronet discussions on theme 5 - Staff training and professional development. Pre planning started in Spring 2002 and an application for a Comenius 2.1 - Training of School Education staff - was submitted in Spring 2003 and accepted in summer 2003. The project will run from October 2003 to October 2006. It will conclude with a dissemination seminar in September 2006, probably in Portugal, followed by a final report. If you are interested in looking further at the project we have a web site, which we keep regularly updated, www.impact-mdvi.org

Funding to attend the seminar may be supported if an individual educator applies for a grant under Comenius 2.2 funding. Watch the web site for news and development regarding the project and seminar.

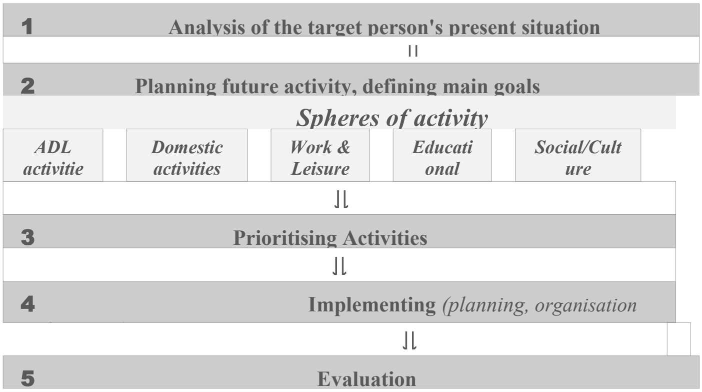
It is important to note that this project is still in year two of a three year project. We will be collecting data and developing the methodology until later this year; it is a project still very much in development and I am here today to tell you about the basic principles and hopefully get you interested, which we hope you will follow up by using our web site or attending the dissemination seminar and contributing to the project through these channels. It is still very much a work in progress.

Who are involved in the project?

- School of Education, Campus IPS, Lisbon, Portugal
- Blindeninstitut, Wurzburg, Germany
- Early Intervention Centre, Prague, Czech Republic.
- Lega Del Filo d'Oro, Osimo, Italy
- Oslo University, Norway
- Royal Blind School, Edinburgh, Scotland
- St Josephs school for the Visually Impaired, Dublin, Ireland
- Tambartun, Trondheim, Norway

The project addresses concerns expressed by teachers of Multi Disabled Visually Impaired children as to how they are expected to integrate the diverse curriculum elements and particular skills they have been taught into a meaningful educational process. This was a common theme that we found in our pre planning work for the project. We teach educators of MDVI techniques and skills and then very often they are forced to make these techniques and skills fit into an educational system designed for a totally different client group ie year groups and classes in standard grade schools. We have therefore been looking to develop a holistic teaching and this very much includes the planning of the approach, centred on activities, participation and involvement in real life situations and based upon the framework set out in the ICF/WHO Perspectives on Rehabilitation (1998/2000). This is being achieved by applying an innovative five step working methodology, (Tellevik J. and Elmerskog B. 2001). The project will develop training resources and is presently educating and support tutors from six participating EU countries, who are in turn each working with five educators to introduce the innovative five step approach to programme planning for MDVI children. Teachers, therapists and parents will learn about the approach through the training course, an interactive web site, European seminar and a booklet. The expected outcome is an effective teacher-planning tool for educators of MDVI that will deliver relevant curriculum content within a socially inclusive context. What is the five step model?

What is the 5 step model?



The spheres of activity are a major area we are focussing on. It was our view and this has been borne out by the data being collected by Professor Tellevik from returning forms from the tutors and their students, that most of the young people’s lives are focussed in domains 1 – ADL and 4 - Educational activities. In terms of the ‘Perspectives on Rehabilitation’ framework they have unbalanced lives. One of the questions the project still has to come to an agreed answer upon is the parameters and definition of work versus leisure in category 3. How do we resolve this in an increasingly globalised corporate world where for many the old concept of ‘work’ for those with complex disability, often in adult centres is now out of favour. This is another theme that MDVI Euronet are actively pursuing at present and for now will not be answered except in terms of how it fits into this ImPAct MDVI project.
How do we turn this model into practice? We use a standard set of forms, different forms being used at different stages.

ImPAct MDVI – core forms
Form 1- basic information
Form 2- assessment of present participation and activity + possible areas for development
Form 3 - Activity analysis
Task
"How-to-do-it"-description of the task/instruction
Organisation/ph. Adaptation
Form 3.1 - Description of behaviour changes observed during activity training

We also have a form 4 and 4.1 which have been described as ‘mobility’ forms but we have some debate within the project as to the meaning of mobility.
It may be for some MDVI children, such as we all know, that being aware that the pressure on their cheek is a switch and that allowing them to operate this switch, to give a binary yes/no response or access auditory cueing, is a movement of maybe only

a centimetre but it can still be seen as mobility. It is a slight sub issue to this presentation but I though you might find this definition by Dr. Jeff Applin of interest.
'Mobility is about all purposeful movement.
Mobility encompasses all the movements of everyday activities.
Mobility education is a term used to refer to the sequence of teaching which is offered to visually impaired children through childhood and adolescence to meet this need. It is of concern to everyone involved and is increasingly seen as integral to the work of the school. It follows a movement curriculum in which children learn to understand the layout of space, to recognise and understand the objects in it, and to perfect the movements required for any activity.'

Dr Geoff Applin

Finally before we briefly look at some of the forms, what have been some of the early conclusions? These following conclusions are my personal view and do not necessarily reflect those of other project members or the project in general.

Positives
Gives a drive to programmes
Present approaches very often follow set 'curricula' or record what is happening at present. Often leaves parents and educators with questions 'so ok but what do I do now?'

- Less experienced staff feel more supported.
- Parents very positive, feel a shared vision.
- Good vehicle for inter disciplinary working.
- Makes sure all staff working to same shared goals encouraged by vision they have all contributed to.
- Very much fits with concept of social and educational inclusion.

Difficulties
Forms

- Some experienced staff feel it is too mechanistic but we are not looking at or trying to support experienced staff. If it works for you ok but across the growing population of MDVI few will get access to 'experienced' staff.
- The balance between a planning structure and what you put into this structure in terms of advice on teaching techniques is difficult given the diversity of skill and experience levels of educators. This is still a live issue for the project.

The presentation finished with examples of form 2 and 3.1 being shown.

49 The Swedish support system for visually impaired students

By: Kruk, Birgit; Westerberg, Christina
From: Sweden
Organisation: Specialpedagogiska institutet

Presentation

My name is Christina Westerberg and my name is Birgit Kruk. We both work as advisers in a national authority co-ordinating governmental support of special needs education for children, youths and adult students with disabilities.

The Swedish Institute for Special needs Education

Our organisation, the Swedish Institute for Special Needs Education, is a part of the Swedish system for support to children and youths who are visually impaired. The current organisation is rather new, it has only existed for 4 years. It has meant a different way for us to work and also a different way for the schools to get support for the visually impaired children and students.

The institute is a national authority co-ordinating governmental support of special needs education for children, young people and adult students with disabilities. It is divided into 5 regions and it works together with the local authorities, schools, county councils, teacher training providers and disability organisations and provides support, primarily to decision-makers and to pre-school and school staff.

It also develops, adapts and sells educational materials if the needs are not being met by publishers or other producers.

We would like to describe a project that we have been working on during the last two years, where we have tried to find a contact person in a number of municipalities. A person, who would know where and who to ask for support and so help to make the school situation the best possible for the child or student with visual impairment. The project also shows what consequences the new system can have for them.

But before we do you might wonder why the government changed the system? To understand the context we would like to make a short retrospect of the Swedish system as it was.

In **1888** the Tomteboda Blind institute opened its doors for all Braille-reading pupils in Sweden and it took many years before some pupils started returning to their home school. When they did in the late **1950s early 60s** there arose the need for support to these pupils.

In the **1970s** the Low vision clinics started for technical aids and medical support. In the coming decades it became more and more common that visually impaired with low vision as well as Braille reading pupils spent all their school years in the home school. This meant that the need for a special school became less and the Tomteboda School closed in **1986.** Tomteboda became a resource centre. Only one special school for multiple disability and visual impairment remains, the Eke school in Örebro.

At that time there were about 30 advisors for preschool children and 30 advisors for students with visual impairment in Sweden.

OH

In **1991** SIH – The National Swedish Agency for Special Needs Education – started in order to provide support to the municipalities.

In **1995** a governmental investigation – FUNKIS – started to look at the situation for **all** children and students with disabilities. The Committee was directed to investigate the advisor organisation at SIH and the activities at different "Resource Centres".
In **2001** SIH ends and the new Swedish Institute for Special Needs Education starts. Until 2001 the group of children or youths and adults who received support was a clearly defined group, namely children or youths with visual, motor or multiple disabilities and adults with both visual and hearing impairment.

The system/organisation

So in what way does the new system differ from the old one? Let us look at this picture of the organisation! **System? Birgit, ska det verkligen vara organisation här, eller system? Om vi ska ändra måste det göras i powerbilden också.**

The State decides e.g. about legislation, it supervises the work in the municipalities for instance how the schools fulfil their task. It also offers pedagogical support through the Swedish Institute for Special Needs education. The County Council, through the Low vision clinics, gives support with technical aids and medical support to the child, youth or adult with visual impairment. The municipalities have the full responsibility for **all** children or students within the municipality concerning education.

Until 2001

This picture shows us what it looked like before 2001.
As you can see we got information from the county, in this case the low vision clinics, with which we had a close contact, and kept a registration of all children and students with visual impairment within a geographical area. The initiative to contact the preschool or school usually came from the advisor at the institute (the state).

From 2001

After 2001, when the institute started, the picture looks different. Now there is no registration or information from the low vision clinics to our organisation. It is also **not** the institute that contacts the schools to give information or support but the schools that have to ask the institute for advice.
It is an obvious shift from the state and the counties towards the municipalities as the key responsible actor for support to all persons, and by that also people with special needs or in a special need situation.

The project

After the change we noticed that very few demands or questions concerning visual impairment reached us and we therefore started to think about the reason for this. Didn´t the schools feel any need for support for these children? Did anyone else give the support? Did they know where to turn for help?
To try and find answers to all these questions we decided to start a project where we could meet people from the municipalities to find out how they were thinking about these matters, how they coped with the situation and also to try and find a way to close the gap.
We turned to 8 municipalities, some small, some bigger. We contacted someone in a leading position within the school authorities and asked them if they were interested to participate. We were hoping to find someone in each of these municipalities to be a contact person between the municipality and the institute. Someone who would know where all children and pupils with visual impairments were and who would know who to contact in case of need for support, the low vision clinic or the institute for special

needs education. We also invited people from the low vision clinics to the meetings. We met these persons (most of them were special needs teachers) at a number of meetings.

The Project

The purpose of these meetings was to let the participants investigate the situation in their own municipality concerning both the number of individuals with visual impairment and routines for co-operation with the county and the state. They were also asked to investigate the need for support.

During the project we were asked to give some basic information about visual impairment and to clarify the assignment of the different authorities.

We also had a platform on the internet with the possibility to discuss, watch films and listen to video lectures about this subject.

The result

The result of the project was that in one of the municipalities the organisation has been changed. They are creating routines for cooperation with the low vision clinic and one of the special needs teachers has been given the task to develop the work concerning visually impaired children and pupils.

The reason for this to succeed is (according to themselves):

- The number of visually impaired children and pupils is comparatively high (40 of 50.000)
- All levels in the municipality agree about the need of a functional support system for children and pupils with visual impairment
- Personal interest and engagement
- Mandate from the school authorities - Legitimacy from other teachers
- Competence about the disability
- A flexible organisation

SWOT-analysis

We asked ourselves why only one municipality made this change. We looked for answers by making a SWOT-analysis with the participants and we found the following answers:

- The group of visually impaired is small – other disabilities are more frequent and take more resources. The municipalitiy decides what has the highest priority.
- The organisation of the municipality can be an obstacle as well as an opportunity.
  The FUNKIS investigation proposed that the support from SIT should be given to the municipal support teams, which therefore in many cases is impossible. In the 8 municipalities about 50% lacked municipal support teams.
- There is a lack of overview in the big municipalities, easier in a small one with more informal knowledge about the inhabitants.
- We discovered that there were no routines for cooperation between the municipalities and the low vision clinics and the knowledge about the assignment for the clinics was low. The same conditions applied to the institute.

Summary

The result of the project in terms of finding a contact person in the municipality was, as you see, rather discouraging, but we learnt a lot ourselves for instance the gap in the system became obvious. We also have some questions that we would like to find answers to. Because there are so few visually impaired students, compared with the number of students with other disabilities, we think the visually impaired students will

have less support. Will they have more difficulties to succeed in their school situation and their future? An other question is how the students are managing today?
Regardless of what the answers would be we think it is very important that the municipalities know **when, how** and **where** to get answers to their questions regarding the support of visually impaired students and this is *a task for us to work further on.*

50 Project Yapalim - Mach mit

By: Duve, Gesine
From: Germany
Organisation: BBW Stuttgart Nikolauspflege

Abstract

For more information please contact teh author: gesine.duve@nikolauspflege.de

Conflicts are usually perceived as a threat. In such a situation one feels insecure, on defence, and often aggressive. The acquisition of the ability of solving a conflict constructively will result in a more self-confident way in meeting people, and is also supportive in dealing with one's own difficulties.

For many of the inflicted, visual impairment and blindness means that the understanding of gestic and mimic of the person, they are facing is very limited.

Therefore, an important instrument of communication is restricted or not at all feasible. The ability of understanding the person facing me, listening carefully as to what he or she is trying to communicate, developing emphatic skills is an important aim in our work.

The Conflict Management Program in BBW Stuttgart emphasizes a wholesome approach towards the conflicting situations, and pursues a lasting change within our pedagogic institution.

The program includes offers for trainees in job connected training, and post graduate training for staff members coming from the areas schooling, job connected training, housing, special faculties and for personal in leading positions.

The introduction of the Conflict Management Program to all areas throughout the institution is helping the pupils or trainees to react positively towards an oncoming conflict. In these situations they can also turn to our qualified staff for assistance.

Our aim is to offer assistance for visually impaired young people, in order to help them take a closer look at themselves and others and thereby further integration into working life.

51 Development of moral notions of primary school children with vision disorders

By: Minenkova, Inna
From: Belarus
Organisation: Academy of Postgraduate Education, senior teacher of Defectology Department

Abstract

For more information please contact the author: min_inna2004@mail.ru

One of the ways to provide social orientation of teaching and upbringing is the development of moral notions of primary school children. As vision disorders promote the lagging of cognitive activity development of blind children and those with poor sight, on the one hand, and restrict the sphere of their social contacts, on the other hand, it may be assumed that there are peculiarities in the development of moral notions of primary school children with vision disorders. Integrated study on moral notions of blind primary school children and those with poor sight has been conducted in order to objectify these peculiarities. The study included detailed research of the education development peculiarities in general and the specificity detection of forming its structure components. The results of the study proved the fact that effective pedagogical support of moral notions development of children with vision disorders is necessary and possible, and helped to detect the specific aspects of this support.

52 Problems of getting higher education for visually impaired students in Russia

By: Zarubina, Irina
From: Russia
Organisation: Nikolayevna

Usually in Russia blind and visually impaired persons get higher education in main stream universities and colleges and in main stream groups. The integrated education of disabled students means having studied the education of programs in full accordance with state educational standards and schedules. During the 20th century, in Russia aproximately 6500 visually impaired students have achieved their university education while they were already handicapped. According to the statstics of the All Russian Association for the Blind 6536 blind specialists are busy in the field of academic professions. Among them there are 299 college and university teachers, 575 school teachers, 148 specialists of computer technology, 113 lawyers, etc.

According to the statistics of the Russian Ministry of Education and Science, there are nowadays about 15000 disabled students at university. 936 of them are members of the All Russian Association for the Blind. However, the total number of blind and visually impaired students is much higher.

The integrated education is not simply an inclusion of visually impaired students into the standard educational process, but the realisation of the full complex of additional services and creating of the system of psychological and pedagogical help for visually impaired students. This is related to the whole complex of problems that many young visually impaired people meet during their vocational training

In Russia and abroad, there exist several models of organising additional services for visually impaired students. By the opinion of Nikolay Molofeev, the director of the the institute for the training of disabled persons of Russian Academia of Education the crating of system of additional services for disabled persons has to become the state program in special social, cultural and economic terms wich differ very much from European ones.

The main forms of education of disabled and visual impaired in colleges and universities in Russia are the following:

- visual impaired students study in specialized universities for example spesialized institute of art in Moscouw, medical college No. 2 in Kislowodsk, Kursk music aboarding college etc.
- visual impaired students study in specialized groups in mainstreem university or college for example Moscouw psychology and teachers training university, Krasnodar institute of culture, Tomsk medical college etc.
- visual impaired students study in mainstreem group. At the same time they get additional help in ressource centers in universities, e. g. Chelabinsk State University, Novosibirsk State University.
- Visually impaired students study in main stream groups and main stream universities or colleges without any additional help from resource centers or non-governmental centers.

Studying in special groups, universities and colleges allows organising the optimal educational process, not to forget the special methods and ways of teaching visually impaired students. In such groups students do not have stress related to the the study among normal students. On the other hand such an organisation of an educational process leads to worse formation of social skills. It is negative for employment and for work among sighted persons.

Aproximately 45-50 % of blind and visually impaired persons studying in special groups, universities and colleges and 6 % study in specialized institutes of art or in special groups in main stream universities.

Resource and rehabilitation centers are the effective form of organisation of additional help for visually impaired persons. Such centers are organising in Moscow, Novosibirsk, Chelabinsk, Nizhniy Novgorod, Mahachkala, Saratov and other Russian cities. They are created on the base of universities e. g. Chelabinsk State University, Kaleningrad University, in special libraries for the blind, e.g. Saratov, Stavropol and Novosibirsk, and non-governmental organisations, e.g. All Russian Association for the Blind.

8 % of blind and visually impaired students have got additional help at resource and rehabilitation centers and about 80 % of visually impaires students have got additional help in non-governmental organisations and in specialized libraries for the blind.

In 2003 in the framework of an international conference professional training of visually impaired persons experience, problems, and perspectives was held, which was organised by the Russian ministry of education and science, institute for the training of disabled persons and the non-governmental organisation (IRIS). In this conference it became clear that there are no elaborated methods of distant learning for visually impaired persons.

Our Russian experience shows that students need a special qualified psychological, pedagogical and rehabilitational training for visually impaired persons, if they, having finished their studies at university, want to be taken into a job of their choice without any credit to their handicap.

53 Improving quality of life through alternative perception

Workshop
By: Kish, Daniel
From: USA
Organisation: World access for the blind

Alternative perception refers to the implementation of adaptive strategies or technologies to develop and use one's full perceptual system to perceive and interact with one's environment more completely and accurately. For the visually impaired, this means developing one's nonvisual perceptions and remaining vision to "see" without sight. Thus the term "alternative" refers to alternative ways of "seeing" the environment. "Perception" is defined as the self directed process of gathering, endeavoring to comprehend, and acting upon information about the environment and about oneself.

When vision is reduced, distorted, or absent, one may face considerable challenges to gathering information and governing action. This is especially true if the information being sought is primarily available to the eye, as is the case in modern society. In the case of recent blindness, one's functioning in a sighted world can be challenged by substantial changes to how one must access information. World Access for the Blind applies technological and strategic approaches to foster in students the ability to access critical information, and gain or regain a quality of life of their choosing. Under the direction of a blind Developmental Psychologist and Special Educator, perception specialists and scientists have developed and integrated innovative, high impact approaches to enhance remaining vision and nonvisual perception. This means that blind people can develop other ways of "seeing" their environment with little or no vision. Although we implement many strategies, do paper

will focus on the use of Flash Sonar, which is a strategy based in the principals of echolocation - the ability to perceive and act upon reflected waves of sound instead of light. This allows the organism literally to see with sound.

In order to survive, people must be able to meet their needs by the locating, acquiring, and utilizing resources in the form of good, services, and companionship. One of the most instrumental aspects of this process involves the ability to transport oneself from one place to another. The inability to move can be said to curtail sharply a person's ability to obtain and apply needed resources. The ability to move in a goal directed way is directly connected to the perceptual system. Traditionally for the totally blind, oandm approaches have emphasized awareness of information within reach of arm or cane, or through the eyes of others. This approach is limited in its ability to foster an expanded measure of confidence, independence, and safety for many students. Therefore, a perception based program of instruction which allows perception of distant objects is needed with primary focus on the development of perceptual skills to enhance the processes of movement and navigation.

Dan Kish defines disability as: "A lack of capacity to function in life due to diminished access to physical, psychological, and/or social resources." (Smith-Roley & Schneck, 2001.) This definition does not focus on individual impairments or presumptions about how impairments must impact the individual. Rather, it focuses on how one access the world, on one's relationship to oneself and one's environment. Thus, we consider disability to be relatively separate from impairment. Anyone can be disabled or highly capable regardless of the extent to which they may be impaired.

The key to effective living is how well we adapt to maximize our access to ourselves and our environment. Our first duty as teachers is to help foster students' ability to gain fully functional and esthetic access to their environment. to do this, we use perception based instruction to focus on a student's ability to perceive the environment more completely, process what is perceived with more sophistication, and act on the environment with greater facility. It is through optimized perception that we can be most aware of our options, and be able to exercise them to maximum effect. With this in mind, we infuse our instructional practice with the following principals:

In brief, our program teaches blind individuals how to get from any point to any other point safely, gracefully, confidently, with enjoyment, and without undue reliance on others. Students learn to handle any needed or desired task or activity. With this approach and attitude we have found this not to be just a far-fetched ideal, but an attainable reality for most blind students who wish it to be. Since movement comfort and competence has been found to correlate highly with employment and psychological adjustment, we anticipate that intensive training in alternative perception will help blind students become more socially and vocationally adjusted, and improve quality of life overall.

The distillation of disability into the simple notion of quality of access leads to the idea that quality of access is based on the efficacy of the perceptual system, which includes how efficiently we comprehend and use information that we perceive to govern our actions. Our perceptual system is our connection and bridge to our environment. A sensitive and well tuned perceptual system allows us to be aware of our options, and exercise them with comprehension of consequence and implication. Thus, we help students maximize their access by focusing on their development of a healthy perceptual process that is effective and reliable, and accurate.

Perception Based Instruction

Aside from autonomic functions, it can be argued that the brain's primary function is perception - to seek and gather information, process that information to glean patterns to aid comprehension, and govern interaction with the environment based on its comprehension of the information gathered and processed.

The latest in neural research demonstrates that the perceptual system with regard to movement and navigation is designed around spatial processing, not just visual processing. The healthy perceptual system is an integrated whole with no single sensory modality eclipsing the others. All sensory modalities contribute to the construction of dynamic, spatial images. Images are composit mental representations formed from data gathered through all of our senses, as well as past experiences, and our ideas and feelings. The perceptual system governs interaction with the environment based on these images. When vision is compromised or absent, the brain naturally attempts to maintain its primary function by constructing dynamic, functional spatial images from information gathered through remaining modalities, and govern interaction using remaining modalities. Although this is a natural process, it seems to be a fragile process that can be impeded by negative external forces, such as low expectations, over use of external guidance, disrupted environment, or accompanying involvements. However, we have found success in fostering development of nonvisual spatial imaging through instruction in optimizing the health of the perceptual system. We capitalize on the brain's natural function of gathering and processing information, and guiding interaction. The brain generally responds readily to perception based instruction, because perception and interaction are the brain's primary functions.

The key factor here is that the human perceptual system assimilates information and matures based on a process that we call "Self Directed Discovery." In essence our senses register elements or events in our surroundings, we endeavor to draw meaning by our own consciousness from what we register, and we use this meaningful information to establish intent about how to act. Very often, we govern our bodies to interact with these elements so that we can understand them better, and find adaptive or interesting uses for them. The stronger is our perceptual process, the stronger, more interactive, and more adaptive can be our intentional action. This process is scaffolded or supported by "those who've been there", but it is directed intrinsically by the organism's will and interest as stimulated by a direct connection to the environment. This is not only true among humans, but among all mammals, and many other animal species.

We may think of the perceptual system as analogous to the intake, digestion, and metabolization of food. Information is like food. With it, we nourish our minds, and support adaptive action. A healthy perceptual system seeks information, distinguishes useful from nonuseful information, then processes this information to develop insights and ideas, and gain better access to all aspects of the environment. We use information to govern our interaction with our environment. Thus, a healthy perceptual system fosters a healthy style of interaction with our environment, a style that is adaptive.

Our perception based program is not tailored according to the "specific" or "individualized" needs of students. We believe that all students have the same basic needs - to gain full access to their environment in order to participate fully and in a self-directed manner in society, within cultural imperatives. The individualization requirement of educational and rehabilitation legislation has been mis-understood to mean that different students have different basic needs. These individualized needs are often determined by assessments, and written into individualized plans as outcomes. This interpretation leaves huge margins for allowing "needs" and "outcomes" to be determined according to variables not related to the student - administrative imperatives, budget, personnel availability, and teacher qualifications. By this interpretation, it can be decided that some students just don't "need" as much access to the world as others, or that meeting this need is too much trouble for some. Sufficient instruction, technology, and support required to meet these basic needs has become confused with the basic needs themselves. The individualized planning process has become a method of determining what supports to provide based on individual student need, rather than ensuring the provision of supports to meet basic needs which should be considered sovereign to all contributing members of society. Yet, focus on the true need, access, is often lost.

Our approach is to begin a priori with the assertion that all students have the need to participate equally in society at all levels, according to informed choice. These needs are broken down according to access to the physical, symbolic, social, psychological, and physiological environments. Full access to these environments optimizes self-directed participation in society, and quality of life. Our goals and objectives are not about what a student needs, because the needs are already self evident. Our goals and objectives are about strategies for meeting these needs. It is assumed that these needs can be met for all students who are conscious, motivated, and capable of learning, regardless of the extent of disability, given the appropriate strategies. It is further assumed that most students are capable of learning when the learning style is understood, and that the motivation of most students can be encouraged or triggered by a respectful recognition of the student's potential, and commit to their need for access. When we maintain sight of the basic need, our strategies remain true to those needs, and do not become obscured by factors not relevant to the student.

Disruption to the Perceptual Process: Blind people often face many disruptions to themselves and their environment that are secondary to blindness. These may include invasive medical procedures, compromised health or physical functioning, emotional distress of caregivers, stress to the family dynamic, maladaptive regard by the community (including reduced expectations, restriction from community activities, prejudice, withholding of social companionship, even contempt or ostracism). While the effects of these many sources of disruption can face blind individuals with significant challenges to positive adaptation apart from blindness alone, our focus is on the impact of disruption directly to the development of the perceptual system.

Usually out of the best of intentions, blind people are often erroneously subjected to a great deal of physical and verbal direction imposed on them by others throughout their early years, and throughout the stages of adaptation in recently blinded adults. These take the form of accessive physical and verbal guidance, and undue restriction of movement and self care activity. Blind people are often carried along on someone's arm for most of their movement activities - whisked through the environment without opportunity to engage what passes by, or to take their own initiative to explore. They are often pushed, prodded, and pulled through activities. They are often prevented or discouraged from undertaking conventional activities, such as games, household chores, self care, social, and vocational. They are often relegated to being acted upon or around, often not called upon or allowed to act. These external impositions of direction shifts the organism's locus of control from internal to external - from self-direction to direction by others. In other words, the organism learns to forego interaction through self-direction, and becomes a recipient of direction by others, subject to the purposes and conditions of others. This often happens at a time when the individual is vulnerable to inculcating external influences into a perception of self. In the process of growth, we often take in and process whatever is at hand, without necessarily discriminating beneficial from harmful. Blind individuals are often conditioned from the early stages of blindness to accept the food of care and guidance often most available to them. These negative influences can become deeply seeded to develop a self with diminished capacity to engage in the self directed discovery process, and therefore suffers a stunting of perceptual maturity. Access to the environment becomes mediated by and relegated to external forces and agents. The organism comes to be directed by a kind of proxy perceiver which commandeers many of the functions that should have developed in the perceptual system of the self. Although humans appear to be receptive to this negative condition, the human perceptual system doesn't mature under this condition. When direct connection to the environment and the self-will process is usurped or blocked by frequent direction imposed by an external agent, the perceptual development process becomes short circuited and fails to thrive. If we examine human and animal behaviour, we rarely observe the perceptual system fostered by direction from external forces. It would seem that we aren't wired to mature under these restrictive conditions. A baby bear may occasionally ride on its momma's back, but it remains connected to the surrounding environment while it travels, and typically enjoys discovering the meaning of what it senses when it is not being carried. When a blind child or newly blinded adult is tied to the arm of another, or is restrained from using his cane or his sonar, direct connection to the environment is broken, and the individual is forced to give up the reigns to the rider in charge. The individual becomes a passenger to another's perceptual process. In this way, the perceptual process of the individual is relegated to a second class status, and the adaptation process through self directed discovery is crippled or altogether negated. In the early stages of blindness, it only takes a few such incidents to throw the adaptation process completely off kilter.

The organism, humans in this case, must be free to explore with his or her own body, directed by his or her own perceptual system. The scaffolding that may occur from caregivers is intended only to foster the organism's ability to reach beyond himself with assurance and purpose. The intent is to point the developing organism in directions that caregivers have found to be adaptive and relatively safe. But, this is not done by consistently taking over control of the learner's functioning. It is done by mentoring, encouragement, and facilitation with a minimum of force or direction.

Self Directed Discovery

Effective teaching is about helping a student develop a dynamic means of establishing a relationship with the world for themselves based on their direct awareness of the environment through their own senses. In this way, they form their own comprehension of what is correct, what is effective, what is adaptive, what gives them the best access to what they want and need. It is often more richly nourishing to touch the flame for oneself than to heed the warning of another. In our program, our students literally reach into the flames with us so they understand the heat, but also learn to consider what is best to touch or not touch. We mean this literally in our cooking classes, but also figuratively in all our classes. While hiking, for instance, our students are never physically guided, and rarely verbally prompted on where to go. They are instructed on how to decide for themselves where to go, and how to get there. Even if they follow the sounds of another ahead of them, they do
so under their own perceptual-motor abilities, and not the helping hand of another.

This process of scaffolding often necessitates facing students or offspring with situations which are uncomfortable. Challenging situations typically are uncomfortable. This is because the nervous system undergoes a period of disequilibrium when facing a novel situation until the new information is assimilated, and the individual becomes familiar with the factors of the challenge - bringing it back into equilibrium.

Self-Directed Attitude Building

In our definition of perception, we include awareness of information about oneself as well as the environment. At the foundation of our system, we teach and apply techniques of self-directed attitude building and mindfulness. Our approach rests on the understanding that progress is made most quickly and naturally when attitudes about oneself, one's relationship to the world, and one's future are positive and without perception of limits imposed by others. Although we understand that everyone faces limits, we help our students understand that it is not in their best interest to accept limits presumed upon them by others. They have the right to enjoy the freedom and strength of character to seek and discover their own limits and strengths.

A key part of this involves the management of apprehensions or doubts about oneself and the world. We use high impact methods of sensory integration and meditative focusing to teach students how to calm their minds so that perceptions become open and un-confused. For example, many blind children exhibit difficulty listening attentively to gain information before acting. They often fidget or bounce unproductively, and move in directions that seem random. We've discovered that placing small but heavy beanbags on their head, shoulders, or wrists greatly improves body concepts, and increases attention to mutually meaningful, self-directed movement. Another example: many blind adults, especially those who have once driven, are jumpy, bewildered, and apprehensive around traffic in parking lots and street crossings. We provide several strategies for attending thoroughly and calmly to surroundings so that important ow"ation is not missed. For example, awareness of breathing and open perception. With open perception, the student and instructor compare notes about what they can hear and perceive in their surroundings. This simple method challenges students (and instructors) to attend more mindfully to what is around them, by bringing to light the wealth of information that we miss by inattention.

Tactual/Kinesthetic Instruction

We apply a curriculum of sophisticated orientation strategies - both technical and mental. Among the technical, we focus attention on use of talking global positioning systems and use of a braille compass. Training in cardinal directions is useful, but we have found that specific training in compass use dramatically speeds up the training process, and improve student assurance at a minimal cost.

Specialized tactual/kinesthetic techniques are used to improve awareness of surface gradient and textural information. Refined tactual awareness improves sidewalk travel, crossing driveways, and maintenance of alignment during street crossings. For example, a stimulus transfer technique combined with street cambre analysis and echo detection is applied to improve street crossing ability. With tactual awareness, one can learn how to maintain one's alignment based on how cement panels are laid in sidewalks. These panels are usually laid at right angles to each other, and at right angles to nearby structures. In this way, especially for those with reduced hearing, improved orientation to surrounding structures can be achieved by tactual awareness of ground surface construction.

Manual coordination issues are also addressed where needed using a new technique based on perceptual psychology called successive approximation. This is used to improve manual and daily living tasks. This is combined with a freeze frame approach to perfect shoe tieing - a common difficulty for young blind children.

A key area that we address is community participation through leisure and recreational involvement. Recreational movement and exploration is found to be the key catalyst for body awareness, social development, and psycho emotional development. Ball play, mountaineering, and bicycling are a few of the pastimes that we address. We find that improvement of perceptions and skills is best facilitated for blind people in the same way that it is for sighted people - through frequent practice and experience under challenging circumstances, within a context of high standards and mutual respect. Recreation is a highly effective medium, because the perceptual development process is enhanced by enjoyment, mutual cooperation, and friendly competition. Kids in particular must move. It is central to healthy development for blind as well as sighted children. To restrict free movement among blind kids, as is too often done, is to place blind children at risk for impaired development, giving rise to abnormalities of social behaviour, self-stemming, and emotional self management. It is common knowledge among recreation specialists that children hone their perceptual/motor skills through engaging in a variety of physically demanding recreational activities. They develop an awareness of their bodies, and how to relate their bodies actively and dynamically with the environment. Such activities are also commonly used to develop good sportsmanship, team play, and a positive sense of self and personal achievement. Practice and challenge are the most important keys to unlocking the potential that we seek. Practice is the only thing that can reinforce and sharpen skills, and challenge brings those skills to the highest level. Thus, our program works to improve the processing of remaining vision and non-visual perception and skills in blind people through frequent undertaking of highly challenging activities. We find that all perceptual skills and personal confidence developed through this approach brings the capacity of blind individuals to perform all daily functions in normal life to a higher level. With this poise and competence, we facilitate, as necessary, participation of blind students in mainstream community programs, such as scouts, youth and senior clubs, extracurricular activities, regular school based physical education, league sports, and casual recreation in and out of school and other community settings.

Flash Sonar: Central among our sensory techniques is the use of Flash Sonar, which is a technique, based in natural human echolocation. With flash sonar, blind people can establish direct connections with their environment through a process of hearing space. Flash sonar and related technology leads to enhanced perception of physical objects, spatial boundaries, and environmental features. This greatly improves object to object and self to object relational awareness, plus recognition of distinct environmental features, such as openings, corners, alcoves and entry ways, passageways, landmarks, landscaping, and very much more. Open spaces can be crossed without disorientation. Objects such as trees, cars, buildings, planters, poles, and so on can be recognized tens or even hundreds of feet away. Students learn to use sound instead of light to sense their surroundings much like a bat. Blind humans using flash sonar can move about as though they have a crude but effective form of vision. They are well oriented, negotiate obstacles gracefully, quickly, and safely, and enjoy a broad variety of meaningful life activities.

In this way, spatial concept building is approached through expanded spatial perception based on sound rather than light. What is more easily perceived can be more easily conceived. Sighted people are connected to their surroundings largely through vision.

Two key aspects of movement and navigation may be asserted - security and efficiency. According to jansson (1989), the process of blind movement can be divided into two functions: walking toward and walking along. Walking toward involves the process of maintaining one's orientation toward a goal. This may be a proximate or distant goal. Walking along refers to the ongoing process of controlling one's locomotion with respect to the environment - processing environmental features and acting in accordance with them.

The ability to maintain one's orientation and good control over one's locomotion constitutes efficient travel, but efficiency must go hand in hand with security. Studies in blind mobility suggest three factors that constitute secure travel (Leonard, 1972; Armstrong, 1975): the ability to stay on a chosen course without accidental departure or disorientation, the ability to avoid bodily contact with objects, and the ability to negotiate vehicular traffic without apprehension or incident. Barth and Foulke (1979) discuss variables of security and efficiency in terms of "preview" - the ability to perceive adequately the features of an environment in advance of one's position. They argue compellingly that advanced awareness allows for effective planning and appropriate responses to conditions ahead and around the traveler. Well controlled studies in the 1960's demonstrate the ability of echolocation to provide distance information to the listener to address these key issues of mobility. Juurmaa and associates conducted a series of well controlled studies of echolocation involving over enough" blind participants to determine the relationship between echolocation and spatial orientation ability (1965, 1967a, 1967b, 1969). The echolocation tasks involved surface detection at different distances and obstacle avoidance. The orientation measure involved such tasks as having to find one's way back to a starting point after being lead circuitously away and returning to an original orientation after being spun about. Juurmaa found that echolocation (which he called obstacle sensing) correlated very highly with the participants' ability to establish and maintain their orientation. This finding suggests that participants were able to use echoes from the walls of the test site to assist them in their orientation tasks.

Another study (Mickunas and sheridan, 1963) examined the application of echolocation to the negotiation of an obstacle course. It was found that the blind participants encountered much greater difficulty negotiating the course when their hearing was fully blocked than when their ears were free. No such difference was found in a group of sighted-blindfolded controls, indicating that echo information was being utilized by the blind participants to facilitate their travel. "... once the problem is squarely faced, and once the possible benefits to the blind are considered in full perspective, who can deny that the potentialities of human echolocation deserve full and rigorous exploration." (Griffin, 1986, p. 322)

Vision and audition are close cousins in that both can process reflected waves of energy. Vision processes photons (waves of light) as they travel from their source, bounce off surfaces throughout the environment, and enter the eyes. Similarly, the auditory system can process phonons (waves of sound) as they travel from their source, bounce off surfaces, and enter the ears. Both systems can extract a great deal of information about the environment by interpreting the complex patterns of reflected energy that they receive. In the case of sound, these waves of reflected energy are called echoes. Echo information can be perceived and processed by the auditory system to enable a great many determinations about surrounding space and one's physical relationship to it. With echoes a blind traveler can perceive complex, detailed, and specific information from distances far beyond the reach of the longest cane or arm.

To get these echoes, specialized sounds called echo signals are sent out. These signals travel forth, strike every surface in the surrounding environment and return. The process is much like using a flashlight. The sender can interpret the information about surrounding surfaces that the returning sounds carry, much as a sighted creature interprets patterns of returning light. The echoes can provide real, concrete images of space that we call "auditory" images that bare many of the same characteristics as visual images.

Collective studies of hundreds of humans strongly suggest that all hearing persons can learn to perceive and interpret echoes to some degree. It is not, as once believed (Hayes, 1938), a special endowment that may be appreciated by only a fortunate few. In fact, though it is commonly found that the ability to perceive and interpret echoes is highly variable among blind people, it has nevertheless been shown to manifest to some degree in the majority, and to a high degree in many. In a study of 52 blind participants in Helsinki Finland, for instance, Juurmaa (1965) found 873people able to demonstrate some ability to sense the presence or absence of panels of various sizes at various distances, and six of these showed perfect performances at a distance of 2.5 meters. Studies have shown that blind people can sense the presence of small objects, such as narrow strips of cardboard and coin sized disks from 2 to 3 meters away under controlled conditions (Jones and Myers, 1954; Myers

and Jones, 1958; Rice, Feinstein, and Schusterman, 1965), judge the distance of a single object to an accuracy of scarce inches at close range (Juurmaa and Jaervilehto, 1969, Juurmaa, 1970b; Kellogg, 1962staifd), ascertain the lateral location of a single object to within a few degrees (Rice, 1969; 1970), judge size variations to mere fractions of an inch at close distances (Juurmaa and Jaervilehto, 1969; Juurmaa, 1970b; Kellogg, 1962staifd; Rice and Feinstein, 1965), determine distinct shapes of objects (Hausfeld, Power, Gorta, and Harris, 1982; Rice, 1967a, 1967b, 1967c), and identify textures of surfaces (Hausfeld, Power, Gorta, and Harris, 1982; Juurmaa and Jaervilehto, 1969; Juurmaa, 1970b; Kellogg, 1962staifd). Mills (1961, 1963) demonstrated one participants' ability to detect a one meter by half a meter cardboard target as far away as 100 feet, and Rice (1969, 1970) found one blind man who could reliably detect the presence of a 1 inch disk 3 feet away. McCarty and Worchel (1954), for instance, studied an 11 year old, totally blind boy who could avoid obstacles placed in his path while riding his bicycle at top speed, with almost perfect accuracy. Wide spread news coverage has shown our students are typically able to learn to find the center and point to the corners of a large gymnasium; to distinguish different types of bushes, trees, poles, fences, and other items; to cross several hundred meters of parking lot to reach a building while negotiating moving and stationary cars; to describe the elements in an array of items, such as a landscape or array of street furniture; and to find oneself in an unknown, complex space, such as a college campus or shopping mall without physical contact. A few have learned to ride bicycles at speeds of around 20 kph among an unfamiliar array of obstacles, or along public roads without mishap.

The complex dynamic awareness of surrounding space that flash sonar can give would seem invaluable to the process of movement and navigation. As Ashmead, Hill, and Talor have observed, "... this perceptual ability is manifested in functionally important behavior such as goal directed locomotion, and awareness of the positions of objects in nearby space" (p. 21). These findings call for the need to develop a firm understanding of how human sonar works, and to examine the conditions under which the interpretation of this vital information can be optimized.

Approaches through physics and mathematics to the study of sound and environment, together with many behavioral studies of the use of echoes by animals and humans under varying conditions, lead to a comprehensive and practical understanding of the processes behind sonar and its utility. Three components must be present for the perception of echoes to take place - sound (an incident wave), a surface or surfaces to reflect sound, and an observer with auditory perception (Rice, 1967a, 1967c). The quality at which echoes are perceived depends upon characteristics of each of these three components and the spatial relationship and interactions among them (Wilson, 1967).

All environmental spaces that support human life are pervaded by a diverse array of sound comprised of five basic parameters - directionality (whether the sound occurs in a broad beam like a hand clap or a narrow beam like a tongue click), pitch, timbre (the cluster of pitches or frequencies that make the sound, allowing us to distinguish between a flute and a trumpet, for instance), volume, and envelope. The term envelope essentially refers to the length of a sound, and whether a sound starts and stops quickly like a drum, or slowly like the swell of a gong.

These parameters are determined by the properties of the source of the sound. When a sound is caused, it travels in the form of waves of energy that radiate from the sound's origin according to the directionality of the cause. A trumpet, for instance, tends to focus its energy forward. These waves actually assume physical shape and dimension as they move that represent the five parameters of sound just described. For example, high pitched sounds are carried by short wave lengths, while long waves carry lower frequencies. The parameters embodied in the source sound represent its cause, which is how we can identify something by the unique sound that it makes. These waves move and act much like waves of water. They are most cohesive and carry the most energy near their origin, losing energy as they travel. If the sound waves encounter surfaces, they bounce off, generally returning to the source. The parameters of the reflected energy are systematically altered from those of the original sound by the characteristics of the surfaces that the waves bounce off. One might think of the surface as a "cause" of the reflection or echo. The characteristics of echoes are defined largely by the same five parameters that define source sound. As with source sound,

the shape of the parameters of the echo corresponds to the physical properties of its cause - thus representing the nature of the reflecting surface. This allows determination of the nature of reflecting surfaces by interpreting the variations in the parameters of the echoes that represent these surfaces. It is very much like identifying an event by the sound it makes. Echoes can give detailed information about location (where objects are), dimension (how big they are and their general shape), and density (how solid it is). Location is generally broken down into distance from the observer, and direction (left/right, front/back, high/low). Dimension refers to the object's height (tall or short) and breadth
(wide or narrow). Just by understanding the interrelationships of these qualities much can be perceived about the nature of an object or multiple objects. For example, an object that is tall and narrow may be recognized quickly as a pole. An object that is tall and narrow near the bottom while broad near the top would be a tree. Something that is tall and very broad registers as a wall or building. While something that is broad and tall in the middle, while being shorter at either end may be identified as a parked car. Whereas an object that is low and broad may be a planter, retaining wall, or curb. And finally, something that starts out close and very low, but recedes into the distance as it gets higher is a set of steps. Density refers to the solidity of the object (solid/sparse, hard/soft). For instance, an object that is low and solid may be recognized as a table, while something low and sparse sounds like a bush; but an object that is tall and broad, and very sparse is probably a fence.

In order for flash sonar to be useful, the auditory observer must be capable of integrating the echo information about various characteristics of space and objects within space into a gestalt of spatial awareness. "It is one thing to distinguish among a small set of previously agreed targets, and quite another to make out the features of a totally unknown environment" (Mills, 1963, p. 135). In addition, the integration of this information must allow freedom of motion. It must provide an active gestalt that presents continuous dynamic information about changing relationships between an auditory observer in motion and the complex network of surrounding surfaces. As Rieser puts it (1990), "During locomotion, an observer's network of self to object distances and directions changes, and the accuracy of perceptual/motor coordination depends on the precision with which one keeps up-to-date on the changes" (p. 379).

The degree to which meaningful interpretation of echoes can be made depends on the quality of the echo signal and the echo that is returned. In turn, echoes are only as useful as the observer's ability to perceive the information. We have found active sonar which using a briefly pulsed signal (a flash) to be particularly useful, especially in the learning stages. Echoes are relatively subtle stimuli, and the brain must be able perceive and interpret them in various conditions including high levels of ambient noise. The brain can do this, but it must adapt to the signal being used. A broad synthesis of the literature on this point, together with decades of collective experience among our staff, suggests that the signal should be consistent, under direct control of the user to match environmental requirements, and should occur near the ears. We have found discrete tongue clicks to be most effective, though we have developed and are testing an electronic device called the
SoundFlash to enhance the natural sonar process. Cane taps or footsteps, often argued to be sufficient, are found to be lacking in the areas of consistency and alignment with the ears. Their effectiveness is dependent on characteristics of the surface tapped, and that same surface serves to absorb or deflect energy away from the ears, resulting in a blurred image.

Although few investigations have been reported concerning the specifics of training sonar, most investigations have indicated improvement in the participants studied regarding the given task. Training and practice trials are common and always show improvement. For example, Hausfeld, Power, Gorta, and Harris, (1982) report considerable improvement for all 18 of their sighted-blindfolded participants on both the shape and texture discrimination tasks. Those investigations that do specifically examine the issues behind training echolocation have generally found very positive results. Among the first of these can be attributed to Worchel and Mauney (1950) who studied the effects of practice on the ability of 7 blind children to perceive a masonite board.

Over the course of 210 trials spread over 4 days, all participants showed markedly increased consistency in the perception of target proximity. Final appraisals dropped from as high as 150 cm down to less than 30 cm for all participants, and the frequency of falsely perceiving the target decreased by more than 753people. Frequency of collisions between the pre- and post-test runs decreased from 56 to 19, and the force of collisions decreased very markedly as well. All of the participants showed the majority of their improvement over the first 30 to 60 trials, indicating an asymtotic learning curve.

Clarke, Pick, and Wilson (1975) studied 16 participants in a course of training to improve participants' ability to negotiate a complex obstacle course. Forty minute training sessions took place twice weekly for 8 weeks. Participants were introduced to a variety of object perception tasks involving a diversity of objects including curbs, furniture, pipes, etc. For example, in one task, participants were asked to rotate about a room full of objects and describe any object they sensed around them. Feedback was provided regarding accuracy. All participants improved on all tasks.

The research is clear that anyone without severe hearing loss can learn at least basic echolocation, and many appear to be able to learn more complex skills as well. Moreover, much insight into how echolocation might best be learned can be gleaned from this information. If echolocation can be passively or actively learned under appropriate conditions, then it stands to reason that, given the right conditions, echolocation can be actively taught.

Although there is some call for the inclusion of echolocation into mobility curricula (Amendola, 1991; Carlson-Smith and Wiener, 1996), very few specific techniques for teaching it have been available. We are now making these available. By effective training and experience, blind humans can learn to fill the darkness with dynamic images derived, not from light, but from sound. Sample exercises may include the following: (Kish & Bleier, 2002)

1. Noticing Strong Echo Signals. When the student is moving around the house or other environments help her to notice the presence of strong echoes. For example, many children who are blind love to play sound games in highly reverberate environments such as rest rooms, breeze ways, or stair wells. Encourage the child to sing, repeat words after you, or clap in the bathroom or garage or other large, uncarpeted places without a lot of furniture or other objects that absorb sound. If the child makes noise in places with strong echoes, she can notice that her voice sounds different in these places than in other places. You can also make a noise in the bathroom and then move quickly out into the hallway where there is less echo, and make the same noise there so that the child can compare. Corners in a room also usually emit stronger echoes than other areas of the room.
2. Observation. It is important to know what echolocation skills the student is already using. Stand behind the student at a close enough distance to prevent injury, and observe his existing echolocation skills. For example, instead of requiring him to trail along a hallway, allow him to walk down the hallway in his own way. See if he is able

to control his movements between the two walls. See if he seems to be able to perceive when a wall or door is in front of him. Observe if the student stops independently or hesitates before contacting objects in the environment. How directed are his movements? If the student is able to do these things, he may be demonstrating some basic echolocation skills. Some children demonstrate good skills at an early age with no instruction, but good instruction always helps improve skills.

3. Locating a Building. Being able to locate a building without tactual guidelines is a very functional skill, since tactual guidelines are often not present. A building is a simple object to echolocate because it is large, solid, and free-standing. You will ask the student to move toward a building from approximately 10 feet away while clicking (or clapping) at a regular, moderate interval. The student may stop to listen to her clicks or claps and the echo. As the student gets closer to the building, ask her to notice what is happening to the echo. There will be a source click (from the student) and a reflected click (from the building). When the student is farther away, the source click and reflected click will be spaced farther apart. As the student approaches the building, the two clicks will get closer together, until they are indistinguishable from one another, sounding like one click. Also, the click will sound louder as the student approaches the building. Increase the distance from student to building up to 100 feet as the student's speed and accuracy improve.

4. Locating Parked Cars, Trees, and Poles. Using echolocation to detect and recognize such objects allows students to find them at will, avoid them, or use them as landmarks. This exercise takes place in a parking lot or other open space. Teach in a parking lot that is outdoors, on a single level, and not heavily trafficked. Many blind children are interested in cars and enjoy echolocating parked cars. For a young child, the exercise can double as a counting exercise; the child can count them as she echolocates them. Cars are large and solid, and therefore relatively simple to echolocate. Trees and poles may take longer to learn. Start by positioning the student close to and facing a car that is parked some distance away from other cars. Ask the student to click and to find the car. As the student's skill develops, lead the student around to disorient him somewhat. (Young children who do not disorient easily may be carried, or wheeled around on a chair, or tricycle.) Position the student so that his body is not directly facing the car, but is at an angle to the car. This way, the student will have to make a definite decision about which way to turn his body. Young children may know where the object is, but will not necessarily turn their bodies to move in the correct direction. They may need reminders to turn their bodies so that the object is in front of them. Eventually, turning so that they are facing an object becomes habitual. As the student's skill improves further, increase the distance to the car. A student may learn to detect a small car up to 15 feet away, and a truck or van up to 20 feet away. As skills improve, reduce the size of the objects being located to trees, basketball hoops, and poles. A basketball hoop may be detected as far as 12 feet away, while a tetherball pole may be detected from 8 feet. Large trees may be detected up to 15 or 20 feet away because of their height and size. However, the shorter a tree is, the harder it is to echolocate the trunk because of overhanging branches.

5. Locating a Corner in a Room. Locating a corner in a room is functional for three reasons. First, no matter how large a room is, it almost always has corners, so corners are good landmarks. Second, doors are usually located near a corner, so being able to find the corner makes it easier to find the door. Third, echolocating a corner takes much less time, and is much more convenient, than locating it tactually. Lead the student around a room to disorient him. Then position the student near a corner (about five feet away) with his body at an angle to it. Ask the student to find the

corner by clicking, softly clapping, or making some other noise. (One very young student wanted to pretend to be a car, and made engine noises to locate the corner.) Increase the distance from the corner as skill improves. Corners may be detectable up to 30 feet away.

6. Locating the Nearest Wall When Standing Between Two Walls. This helps the student develop the skill to center her between two objects while traveling. This will help develop her ability to maintain a straight line of travel using echolocation. Position the student so that she is standing between two walls about six feet apart, and so she is closer to one wall than the other. Ask her to click to identify which wall is closest, and then to reach out and touch the closest wall or travel to it. You can also have the student practice centering her between the two walls. Increase the distance between the walls as her skills develop. Eventually, the student may be able to center herself in large rooms, or between two distant buildings.

7. Locating an Opening in a Wall (hallway, open doors, or recesses). Being able to echolocate openings can be more time-effective than trying to do it tactually. Walk with the student parallel to a wall about four feet away while the student clicks. Keep walking until you have passed an opening. Tell the student you have passed a hallway or open door and tell them which side it is on. Then ask the student to take you back into the hallway. Let him lead you while clicking. Increase the distance you walk from the wall as the student's skill develops, until you are walking up to about five to ten feet from the wall, depending on the size of the opening. Wider openings are easiest to detect.

Self Exercises for Stimulating the Perception of Echoes (Although these exercises are meant for professionals to stimulate your own sense of echoes, you can do any of these with your students as beginning exercises.)

1. Procure a large and small wide mouth container. Glass jars are good; seashells are excellent. Speak into the open air, then into each container. Note how the containers sound different from the open air, and from each other. Close your eyes, and have someone hold the containers in front of you as you speak. Try to hear when the container is in front of you, and which one is the smallest or largest. Have someone else speak, and with eyes closed, guess which container is which.
2. Hold the mouths of the containers to your ear. What do you hear from them? Do you recall the "ocean in the seashell" phenomenon? It is only sound reflecting inside the container. Can you hear the difference between small and large containers? Put each container at each ear simultaneously. Can you hear how each one sounds different? With your eyes closed, have someone present the containers randomly to each ear. Can you tell when the container is present or absent? Can you tell which container is which?
3. Position yourself about a foot from a blank wall. Take a deep breath, and, with eyes closed, pivot your body while slowly exhaling in a "shshsh" sound. What happens to the "shshsh" sound as you turn your face away from the wall? How about toward the wall? While pivoting, try to hear when you are facing directly toward the wall.
4. Position yourself about 4 feet from the wall. Take a deep breath, and, with eyes closed, approach the wall while slowly exhaling a "shshsh" sound. Now, step away from the wall while exhaling. See if you can bring yourself to within 6 inches of the wall without touching it. How about 3 inches from the wall?
5. Stand in the middle of a sparsely furnished room with your eyes closed, and turn slowly while exhaling the "shshsh" sound. See if you can locate the corner. Begin walking, and see if you can find the corner.

6. In your car (or someone else's), find a residential street with several vehicles parked along it. (A parking lot will not do for this exercise.) Open the passenger's side window, and as you drive, listen carefully to the sound of your car every time you pass a parked vehicle. The sound fluctuates. If you can get someone else to drive, try this with eyes closed, and listen from the passenger window. The effect is more pronounced here. You may even be able to tell by listening whether the street is heavily lined with parked cars or not.
7. In an area familiar to you, try walking with a blindfold and long-cane. Try perceiving things around you by echoes. Do not try to ascertain exact locations of things, just strive for a sense of things flowing about you as you walk. Try clicking your tongue. Do you hear the shifting directions and distances of things as you move among them? A mobility instructor may find that doing this at least once or twice a week will help them in echo training with students, and to comprehend their own cognitive process struggling to integrate nonvisual information for efficient travel. Your students do this all the time.
8. Try accompanying your better students under a blindfold in an area familiar to you. Practice echo navigation with them. Let them help you. They will love it, and you will both learn.

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54 Music-Therapy with multiply handicapped visually impaired and congenitally deafblind children, juveniles and adults.

Workshop

By: Rummel, Markus
From: Germany
Organisation: Blindeninstitutsstiftung Würzburg,

Abstract

For more information please contact the author: markus.rummel@blindeninstitut.de

In this workshop I want to introduce you into my work with multiply handicapped and visually impaired children, juveniles and adults. Congenitally deafblind partners are a big challenge in this respect.
I will show two different aspects of my work:
Actively creating music together with my partners
Making my partners aware of vibrotactile and auditive aspects of perception, using a special wooden floor with integrated boxes.
All kinds of music are different elements and qualities inherent, which give important impulses to my daily work.
To me there are especially the (sound) ”colours” of each kind of music, which have a big effect to my disabled partners. So is every sequence of music characterised by their overtones:
And by them children are invited to add their own voices!
Many ideas for daily practise are shown by practical exercises and examples by video-recording.

55 Resilience and Visual Impairment: Risks and protection factors in a Child's Development

By: Leonhardt, Mercè
From: Spain
Organisation: ONCE

Children with visual impairment have to grow up, both emotionally and cognitively, facing lots of barriers. What is their mum or dad, or other person like? How to develop internal knowledge and share the world with everybody? How to make real interaction and communication with people they don't know, how he looks, where he is and what he is doing, How can the blind baby discover a world, that frequently appears as incomprehensible and difficult to manage?

Resilience is a concept used in Physics, and means the quality that some objects have showing a great resistance to impacts. Some children have the capability, in very difficult situations of life, to benefit from every positive thing that helps them to become more mature and to leave every negative thing or those that are not a benefit in growing up emotionally. The resilience should be then the capability that a person has to face some adversities even in terrible conditions. All of us realize that there are some children not able to grow up accepting frustrations. Others, on the other hand, even though feeling a physical or a severe sensory loss or living in a very destructive environment, are able to find Solutions or be resourceful to move forward and not be destroyed by such bad conditions.

Sumarising: Resilience is the tendency for a child, adult, or family to rebound from stressful circumstances or events and resume usual activities and family pleasures. RESILIENCE, IS THE POWER OF RECOVERY.

Resilience includes two characteristics: Resistance and a constructive spirit, also called positive.

There are several ways to contribute to the development of resilience. We can discover them asking ourselves why some children can survive and grow up emotionally when they have faced adversity. In every case, the answer is different and deserves careful analysis.

But all of them present "protection factors" or "resilience factors", that represents a protection of the child facing attacks and limitations from the world. We can't consider resiliance like a static capacity, because it can vary through periods of time and circumstances. It's the result of a kind of balance of risk and protector factors and the personality of the human being.

Now I would like to explain the real-life case of John, a resiliant blind child and an example of one of the cases we have worked on. John was born 5 years ago. His eyes were covered with big tumours. His mouth was detached in two ways by leporinus lip. The face was not the face of a typical baby.The mother, 19 years old was overwhelmed with her second "different" child. The father was in prison and the mother decided to abandon her son in a big Children's Hospital. We knew John when he was one month old. We were very surprised about this child that always had some nurses staying or playing with him. He always was smiling. His smile was not physically easy but everyone was capable to understand. He liked to be held and soon began to laugh and was very pleased with the little games that one nurse played with him. He was in hospital for 7 months. He underwent 4 mouth operations and suffered. At first he showed his pain with sadness but he always tried to find a "special" person who took very special care of him. We used to say "he seduces everybody". Later he was transfered to a foster centre. We found two special people in this centre, one providing maternal functions, other paternal functions. He was happy with them and was easy to manage. He has an adapted temper and makes new relationships and discovers new toys or things easily. When he was two years old his eyes were operated on. The tumours were reduced but it was not possible to remove them completely. He recovered some low vision and was very interested to discover the world with his own eyes. Again we were amazed by his visual capabilities. He always showed great effort and soon he could identify a loved person or a very coloured toy he liked to play with. Sometimes he looked like a sad boy but he tried then to find a "special" loved person who helped him in his difficult Situation. Then he showed important resources facing difficult circumstances as well as making funny, little jokes to give pleasure to his loved person.

During this time the carers tried to find a family for John. But the possible parents first looked at his face and then tried to find another child to adopt. He was always refused. They didn't know the friendliness, the adaptation and personal resources of John. One year ago a lady doctor got to know him very well and a love story started between them. John was adopted by her. The beginning was not easy. He remembered the loved people of the centre and shared is feelings with bis new mother. The mother, a very sensitive and intelligent woman was patient with the strong feelings of John and her and we, Professionals of the Early Intervention Centre, helped him to face this Situation. At this moment, John is a very happy and affectionate child, curious with an adequate independence, with a good sense of humour, looking at the world in a healthy way.

In this real story we could identify risks that John had to face and we could identify also protection factors that have contributed to the fact that a child has been able to develop himself in a healthy and well balanced mental way. If we analyse the case of John we can identify some protection factors, as follows

- an adaptation temper,
- a very good social competence that guided him to always find others and specially to attach to a loved person.

Other protection factors were

- the capability to face difficult situations showing emotional, (sadness first) and later positive feelings and many personal resources.
- Developing an adequate independence provided him with a protective space that helps him to develop self-esteem and to propose constructive aims.
- Related with autonomy is to have a kind of sense of control of reality and of bis ambiance.
- And, a sense of humour despite dramatic situations was always showed

by John first with smiles, later laughing and making funny, little jokes. Professionals working with blind or low vision children can help to develop resilience as well as competences in very early ages. If we know protective factors that reinforce personal competences of a child we can help better to build a very positive future for a child with a visual impairment.

How to promote resuience in the first ages of life of a child with a visual impairment

- Give to the Child unconditional love
- To establish a relationship based on communication, truth, honesty and good mood
- To value his progress
- The accomplishement of small rules
- To favour the child in order to do activities with a little help from adults
- Help the child to identify his feelings and name them

- To prepare him to cope with negative or disagreable situations
- To use language for reinforcing characteristics of resilience which help the child to cope with the adversity

56 Computer System for Training English Pronunciation for the Blind (Inform. computer technology)

By: Losik, George; Sizonov, Oleg
From: Belarus
Organisation: United Institute of Informatics Problems of Belarusian National Academy of Sciences

Introduction

There is the Center "Speech computer for the Blind" in Minsk. During the last 2 years Center participated in the project "Speech Synthesizer Capabilities in Russian Language". Thanks to this project we distributed Russian Speech Synthesize in Belarus. There are about 10,000 people in Belarus who are visually impaired. At the same time during the work in Stanford University some years ago we started new project together with colleagues from USA. The title of this project is "Computer for Training English Pronunciation for the Blind". Why have we selected just this Project?

1. We see a very strong interest to English language among blind in Belarus. They want to study foreign computer technology, learn the foreign culture.
2. Many computer systems have been developed for the Blind' needs: for reading and writing texts, for navigation, for scanning. Nevertheless we haven't enough computer systems for training the Blind.

We know many kinds of software for training fully-sighted people.

We was studied the prototypes of our systems. "Doctor Higgins" is system for training the Russian sighted, but not blind people. This system hasn't got an automatic recognition of the learner's articulation errors. We was studied the "Auralog" system for teaching English to French, German and Italian.

We know hardware "Ectaco System" type pocketbook "Franklin". There is a regimen of pronunciation errors recognition of words in pocket dictionaries "Ectaco System".

Nevertheless we haven't got enough computer systems which don't require a display for training the blind. Interface of most software such as Windows, Word, and Outlook is not easy for the blind to use through the "screen reader" such as JAWS.

Our conclusion

There are three computer problems for the Belarusian Blind who study English:

- The several computer programs for training English pronunciation the full sighted people use display screen.
- One language speech synthesizer for learning English is not enough, we need two speech synthesizers (Russian and English), working simultaneously.
- There are some typical pronunciation mistakes of Belarusian learners (wrong pronunciation of the consonants *p t k, m n l, ð θ*, short/long vowels). It is difficult to recognize these mistakes by computer automatically: type of mistake and its position in the phrase, in the word and syllable.

Our Results

We are creating computer software for training pronunciation of the English sounds, non-typical of the Belarusian pronunciation, for automatic recognition of students' mistakes. Our speech system informs the blind about one of his pronunciation mistakes of some English sounds.

Know-how of our System

- The system used database on typical mistakes for person living in Belarus;
- The system presents to the student only one most important mistake for the further training, not many mistakes.
- It does contain phrase segmentation into syllables and recognition of mistakes in every syllable;
- It doesn't necessary a display for training. The type, amplitude and place of a mistake in phrase is given by the speech;

Blind students in Minsk who testing our system:

- Students of Special School number 188 of Minsk
- Students of Belarussian State Pedagogical University of Minsk:

Remark

The project "Computer for Training English Pronunciation for the Blind" is supported by Foundation "Belarussian Round Table" concerning workshop for testing our system and by Sorros Foundation concerning computer technology.

57 Software in Zicht - Making educational software accesible: a pilot.

By: in 't Veld, Dorine
From: The Netherlands
Organisation: Bartiméus Education

Introduction

The project Software In Zicht (briefly SIZ) started in 2000. Bartiméus onderwijs, Sensis, Visio (the 3 institutes offering education for VI children) and FOVIG (the national parent's association) working together.

In the first phase we developed an instrument to test existing software on accessibility and guidelines for programmers. The results were put in a database on www.softwareinzicht.nl (Dutch only…), together with much related information.

In the second phase we try to make a selection of existing software accessible, together with the editor. The output shall be:

- Accessible programs
- Guidelines for other editors
- Insight in the feasibility of 'D4A' (Design for All).

The reason is obvious: in The Netherlands more than 70 % of the visually impaired students attend mainstream schools. In mainstream schools it is very common that students practice skills like maths, grammar or spelling with educational software. Very often however, this software is not accessible for visually impaired students.

So they are excluded from an activity. This has social as well as educational consequences; much research points out that children benefit from practicing with the ever patient computer.

I run SIZ – and other projects – together with my colleague Dick Lunenborg. Henk Snetselaar who will speak after me, often is a sparring partner.

In this abstract I'll briefly discuss:

1. guidelines: when is software 'accessible'?
2. adapting existing software and what we learnt from doing this.

I - Guidelines: when is software 'accessible'?

At the start of SIZ we surely found guidelines for accessible programming, but there is not something like the W3-consortium for software. And there are many programming languages! Moreover the guidelines were not very differentiating as to what is important for whom. So we had to be creative and pragmatic.

We defined our guidelines in terms of how the program should perform. That also was what we could test: We tested if the software provides the following options:

1. a (keyboard) alternative for each mouse action
2. preferred color and contrast
3. clear mouse pointers
4. preferred font and size
5. possibility to make program screen filling (not a cadre)
6. alternative for essential visual information (written text or spoken)
7. effective and consistent lay-out and controls
8. no movement or time pressure; nothing leaves the screen before it is perceived by the user
9. accessibility options of Windows are maintained in the program
10. accessibility options are clearly documented

11. is accessible with assistive technology (screenreaders, magnification)

Each option has an extensive checklist.

Categories

In fact the question 'when is software accessible?' should be refined. 'What software is accessible for whom?' Surely many more programs would be usable for students with less severe visual impairment, than for Braille Students.

Lost in all the different ways of measuring and registering, we distinguished, again very pragmatically, 4 categories of VI children:

1. use the computer without assistive technology (maybe a larger screen)
2. need slight magnification (up to 1,5 or 2 times) (maybe also a larger screen)
3. need magnification (> 2 x) and/or speech
4. need Braille and/or speech

Accessibility per category

We trained teachers of the VI to test and we installed a 'kids jury', to ensure that our testing would be as valid as possible.

Surely much work has to be done before we can call our tests 'scientifically valid'. But this project was not a scientific one, but a practical one, aiming at providing teachers a tool to find apt software for his(/her) VI student. The teacher who has an insight in what a student can see, can also use our criteria to judge if a (specific part or exercise in the) program will be fit for the student in question.

Way to test 'accessibility' or 'usability'.

For example: how can we explain that a (practically) blind child sometimes performs at a very high level of a very visual software program, like Nintendo? Strictly spoken inaccessible software sometimes proves very usable for a specific student. Apparently other factors play a role, like motivation.

- Intrinsic motivation, like: the content or the sounds and other features that make the software very attractive.
- Extrinsic motivation like: (sighted) siblings and friends who like the program in question.

If you are interested to do research on this subject, please call! Our goal was to give practical advise to teachers and parents: "What is on the market, and what (parts of programs) might be usable for your student?' And this information was to be up-to-date and recent.

Results

In the spring of 2001 we set out to test the 1600 educational programs that were available for primary and secondary education. At the evaluation in November 2003 we had tested 200 programs. That was 10 % of the 2000 educative software titles available at that point. If you're a quick calculator: indeed, by that time another 400 titles had been issued since we started…

We had been testing mainly the programs that we new by research that were in use at school for VI students. Many of them were a bit old…. (and are by now unusable with the modern Windows operating systems).

We had found that only 17 programs were fully accessible; less than 1 %... All of these 17 programs except one were either designed for the target group (like Drive), or adapted by editors because of our efforts.

For our category 1 and 2 the situation was much better. We could inform the editors that with slight modifications new upgrades of their software would be accessible for many more people. Like: options to enlarge letters, to set contrasts, to choose a quiet background, to enlarge a picture, to make the program screenfilling, to choose a clear mousepointer, to have an option to stop movement or allow more time for certain actions.

Often we recommended to improve navigation and controls. In some programs it is a puzzle to find where you have to click next. Or you are disturbed by pop ups. Or you get distracting, patience testing and in the end really annoying 'rewards' (animations, sounds) you would rather skip…

Also adding short descriptions of pictures or alt tags to buttons without text and options to have certain texts spoken would improve many programs. Not only our category 1 and 2 (and 3) would benefit, but also students with dyslexia (large numbers!), second language students (large numbers!) and many students in the autistic spectrum. Many students profit much from clearly structured programs and screens and not more than the amount of stress they can handle. Finally there seem to be many more students having trouble to interpret images correctly than was thought until now.

Conclusion

Especially for blind and low vision (category 3 and 4) students there is hardly any accessible software. The improvements that we recommended to editors to make the programs more accessible for category 1 and 2 were beneficial for many more children.

We showed our findings to our Ministery of Education. They agreed that this was an urgent problem. We convinced them that we could adapt a series of programs, together with OWG, an important non profit organization that is editing software for primary and secondary education, for VI students.

II Adapting existing software

The Ministry granted us another subsidy after phase 1 in order to fill this gap, on the condition that also students with the following impediments should profit:

- Motor disabled (use of mouse or keyboard is a problem)
- Dyslexia (since there are large numbers)
- Autistic Spectrum

We can put all these very different student into the following matrix:

	Can see the screen	Cannot see the screen
Can use a mouse	Category 1 and 2, dyslexia, autistic spectrum	(Some blind and low vision students)
Cannot use a mouse	Many motor disabled	Blind

This matrix requires some explanation:

- 'can see the screen' : though often with difficulties and with reading problems; so here we need the adaptions just mentioned.
- 'some blind and low vision students'. There are many severely visually impaired students who can, with great trouble, identify screen items and even drag the mouse to a certain area. This may be very helpful in situations where a part of a program that is largely accessible for screenreaders. They are mentioned between

brackets however, since in fact they rely on programs that are fully accessible for screenreaders. So in fact we should blank this area.

For those who cannot use a mouse our guideline that their must be a keyboard alternative for every action is vital. And one may say that also children who can use a mouse will profit from this feature:
- You are quicker with hot keys
- It prevents RSI
- Programs have to be programmed neater ('tidier', less bugs).

Reasoning so far was clear. When we started we believed it would be possible to make the software accessible for everyone. To our regret however we found out that we could not, due to the following:

Communication and knowledge/skills:
- The people who lead the project (we) have not much programming-knowledge.
- The programmers in our project were not familiar with MSAA and other 'rules of accessible programming'.
- Nor were they familiar with screenreaders and the way blind and low vision people work with a computer.
- They had no Braille experience.
- Initially the editor had underestimated the job and had not enough capacity.

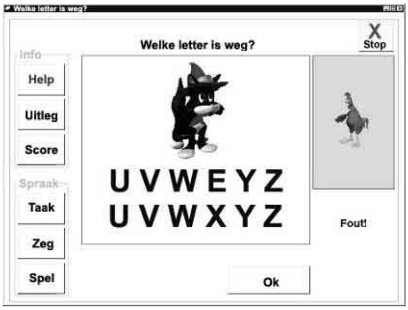
Screenreader requirements
We had done it before: making a program fully accessible. But we didn't realize that in that case all exercises could be reduced to 'question and answer', whereas in the programs we were adapting now contained much more complex work forms. It is possible to replace drag and drop with keyboard alternatives, but in order to make the screenreader speak (the right things) and be silent when required, proved to be possible only if we would make a configuration-specific application for a certain screenreader. But we wanted a program that can be used by everybody.

Didactical requirements
We could solve the above problem by switching off screenreader speech and let the program do all the speaking. But the program would have a huge verbosity. It would have to tell the blind student where he was and what he could do next. In fact we would have to simulate a screenreader. Not only did that cost a lot of time to program, it would also lead to a program that was speaking too much for the average user. We thought of solving that with an option to 'speak all' or 'speak text in exercises only', but it was impossible to implement all this in the time available.

The solution
The solution that we are now implementing is an identical interface for 12 programs where you can enter the program, select or enter your name, and choose an exercise. Each cd-rom contains a theme and several exercises. There are cd-roms offering exercises for practicing spelling, reading and different forms of calculating, all at several levels. The program will be fully accessible for everyone who can see the screen (see the explanation above).
Since I do not want to cover a whole book, I'll finish by illustrating what we did with just one example. Here you see a screenshot of one of the original versions:

Welke letter is weg?

‘Which letter is gone?’ The original exercise is a real picture puzzle. For students who have trouble seeing well, all the energy will be taken to find the question mark, whereas the energy should be used for learning the alphabet. We changed this screen as follows:



Welke letter is weg?

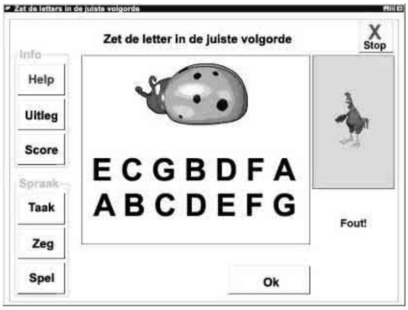
UVWEYZ
UVWXYZ

Fout!

Here you see the screen after a wrong answer was given. The right answer is shown underneath. The program says: “Wrong! Listen to the right answer: …”.
As you see to the left there is a row of buttons; they have alternative hotkeys:
Help = F1 = leads to the helpscreen, telling what help-hotkeys there are.
Uitleg = F2 tells what to do and how to do it in a screen.
Score = F3 tells you how you performed and how many exercises will follow
Taak = F4 repeat the task (if you hadn’t heard or understood)
Zeg = F5 reads, Spel = F6 spells your answer

For children who want other letter sizes or fonts there is a secret hot key. If they are allowed to alter whenever they want, this key is revealed to them. There is a cadre around the cat, that becomes visible if you pick another background colour. This cadre stays white, which is particularly helpful if you want white letters on a black background (without the cadre the cat would largely disappear).
In the teachers part a teacher has more options. If the teacher has a student that gets upset by moving pictures, he can choose a picture instead of the rewarding animation in the right corner, or he can choose ‘no picture at all’.
Instead of hearing spoken verbal feedback, the teacher can also select a sounds for feedback (happy sound if OK, sad sound if wrong). Here too he can select: ‘no sound at all’ (in that case the student can read on the screen if the answer was right or wrong).
The final version will look slightly different and will soon be available. But here you get a very good ‘picture’ of our basic ideas, that are leading in all 12 programs. Every

other screen has the same row of buttons on the left, a central exercise screen, feedback on the right. Lay out is very consistent. Spoken help is always available.
Basically the adapted programs are accessible for our category 3 and 4 as well. That is: the first few times children will need a little guidance as to how to get to the exercise and it will be helpful if the teacher prepares things so, that the student gets to the right exercise right away. The exercises themselves are accessible, because everything can be spoken: the exercise itself, explanation on the exercise (what to do and how to do it), the answer you typed, and whatever else is needed.
But some exercises require a very good imagination of what is going on the screen and a very good memory. The exercises where you have to type one letter are simple and will not pose many difficulties. But there are exercises where the task changes. For example each time you select a letter, it jumps to the next position on the answering line. See the screenshot below. Again you see the correction screen (a wrong answer was given by the student, the right answer is shown.


Zet de letters in de juiste volgorde

Zet de letter in de juiste volgorde

ECGBDFA
ABCDEFG

Fout!

If the child does it right from the beginning and starts with a, then b and so on, it's a piece of cake, even without seeing the screen. But once you make a mistake, it's difficult. At this point it is not possible to read only the letters that are still there in the task line; you get all the letters that were originally there. Hopefully we can solve this. If not, this exercise will be very difficult for children who cannot see the screen.
So the 'clever' kids that cannot see the screen, will be able to do some of the exercises. But not all of them. And the 'weaker' students will have trouble with most of the exercises. That is why we decided to make an extra cd-rom with one to three exercise forms, that are fully accessible with screenreaders only. These programs will not contain speech; the screenreader will do the job. How many exercise forms we will realize is depending on the feasibility and how much programming time it will take. We think of:

1. question – type an answer (we already have a good basis)
2. multiple choice
3. word or som -> select with cursor routing the letter that comes first, then next, etcetera, or select with cursor routing where you will put the comma; and so on.

If possible this screenreader version will give access to all the corresponding exercises in the 12 adapted programs. That will be possible only, if the original exercise basicially consists of the same exercise form. The question is: can we make the program use the same content? (It that proves impossible, we will put content on a website. Teachers can select this and/or add content they made).
One way or the other, this project will fill in part of the gap that now exists: there will be practicing software for screenreader users. It will be possible for them to practice

and get direct feedback from the computer on whether they did the exercise right or wrong.

It is a start. An important start. After this project we seek continuation, hopefully in European or other international context. So if you are interested, or if you want to know more about how we did it: please mail: d.i-veld@bartimeus.nl.

58 'GET THE PICTURE' of the ICT education of the visually impaired

By: Snetselaar, Henk
From: The Netherlands
Organisation: Bartiméus Education

Summary

Success stories, problems, research and development. An overview of the ICT education issues of visually impaired pupils at Bartiméus in the Netherlands.
www.bartimeus.nl

Introduction

In a technology-based society, it is important for people to learn to use technology in order to (continue to) play a full part in that society. This also applies to Information and Communication Technology (ICT). The ability to participate in the 'cyber community' gives an individual the skills to enter the world of digital information supply, on-line shopping, Internet banking, on-line voting, 'cyber entertainment' and much more.

For people with a visual impairment, however, ICT skills are even more important, since the digital revolution has made some of these information exchange applications available to them for the first time. For example, it is now much easier for them to study at regular education institutes, to read the latest newspapers and magazines, to cast their votes and to communicate with the rest of the world without the other person knowing that they are visually handicapped.

Educational institutes for people with a visual impairment have a key role to play in this process. They must organize the education they provide in such a way that integration into society, regular education opportunities and meaningful activity in the form of work or other occupations is possible. Vocational training in Information and Communication Technology and the use of ICT in education must be geared to integrating visually impaired pupils into society.

In this presentation we will stress the many aspects of the ICT education of visually impaired pupils and students. From the ICT lesson in the special school until scientific research and development projects to know whether a new tool or assistive technology device is a real improvement and can be a benefit to the education of the blind. As being the actual situation or praxis at the Bartiméus Educational institute for the blind and visaully impaired in the Netherlands. www.bartimeus.nl

The aspects covered in this paper are the following:
The competent pupil or student

1. ICT training in (special) education
2. Competent (Special) school teachers
3. Coaching itinerant teachers
4. Accessible educational software
5. Accessible educational school methods and web sites
6. Entertainment
7. Research and development
8. International Computer and Communication skills

1. ICT training in (special) education

Special education must be special if this assists the personal development of the pupil, and should encourage integration wherever possible. This certainly applies to Information and Communication Technology (ICT). In recent years, ICT has done a great deal to integrate pupils into regular education and people with a visual impairment into society. When planning education and the use of ICT in special education, it is crucial to ensure that computers and ancillary equipment are not only used at the special school itself, but also at home, in clubs, at friends' houses, in follow-on education and in the individual's subsequent job.

The choice between "special if this assists development" and "encourage integration where possible" is not always an easy one to make, since it is also important to take into account the development capacities and age of the pupils or rather, their prospects for integration.

Four facets of ICT policy

When developing an ICT policy in education, it is important to coordinate the following:

- The education strategy (vision)
- Teachers' skills (expertise)
- The available software programs (software and content)
- The available equipment (infrastructure)

These four elements must be properly balanced if ICT is to be successfully integrated into education. This means that all four elements must be given equal attention. If this balance is absent, the least developed aspect will determine the level attained.

There are various stages at which a decision can be taken on the use of ICT in special education for people with a visual impairment, and various factors on which such decisions should be based. These factors are:

- The strategy governing the education of pupils with a visual impairment;
- The financial resources available;
- The deployment of ICT in other forms of education;
- Opportunities for using ICT at home;
- The form in which services are provided to visually handicapped people in a country.

a. Starting out at school: age six

Don't skip the traditional route; learning to read and write on paper in the traditional way is also crucial for blind and partially-sighted pupils.

The form of the characters, both in Braille and in ordinary print, and the ability to form them is best learned if the pupil creates them for himself on paper.

The structure of a text in lines and sentences, paragraphs and pages must be experienced through the pupil forming them himself. This is even more important to gain a good understanding of the structure of texts if the pupil's field of vision is limited to just one or two sentences.

We must not forget that in the use of digital processing methods, software developers try to apply concepts and structures that are familiar to the sighted user, in order to provide him with a user-friendly programme. The recycling bin, the desktop and the storage of frequently used documents on a desktop are all examples of this. To teach the blind to work with equipment designed for sighted people, it is often necessary to teach them to think like sighted people. It is therefore important for people with a visual impairment to become familiar with 'sighted' concepts.

b. Starting to work with the computer

'Teach them young' is a familiar proverb. People don't tend to forget the things they've learned when they are young. As soon as pupils have acquired the necessary skills to read and write, they can start to learn how to use a computer. Exceptions can be made for sight-impaired pupils if writing causes them great difficulty due to their visual and/or physical limitations. If computers are to be used for processing texts and other information and as a means of communication, pupils can start learning how to use them from the age of six to eight.

c. tandard or special computer equipment

A choice must be made as to whether to use standard computer equipment or computer equipment that has been specially developed for people with a visual handicap. The special equipment is often better matched to the needs and abilities of pupils with a visual impairment, but because these are special products, they are designed to provide far less support for the concept of integration. One disadvantage of regular equipment for young pupils with a visual impairment can sometimes be the complexity of such equipment and the fact that they present pupils with an 'overkill' of possibilities in the early years of computer use. A full computer keyboard and a complex word processor can also be daunting and off-putting for a young pupil.

The development capacity and age of the pupil will need to be considered when such choices are being made. During a limited initial period, rather than use a full keyboard, it may be better to work with a keyboard that has a smaller number of keys and a special keyboard control programme. These days, pupils with a visual impairment come into contact with a wide range of electronic equipment at an increasingly early age, and are often helped early on by having family members who use a computer. These children are therefore already more familiar with complex equipment than they used to be and the many options this equipment affords them at a young age will not tend to 'phase' them.

Pupils with multiple handicaps may need specially developed equipment for other reasons. As a result, integration may have to be given a lower priority. However, this is not the target group we are considering at present.

d. The choice of the type of computer for pupils with a visual impairment

The desire to promote integration will also play a role in the choice of equipment that the educational institution acquires for special education. For example, should it form part of a network, should it be a laptop or a desktop, etc?

In making these choices, it must be borne in mind that pupils may at some stage move into regular education. What equipment will they be expected to use when they leave their current school? In the Netherlands, blind pupils will generally use a laptop and partially sighted pupils will use either a laptop or a desktop, depending on their field of vision. At the Bartiméus Institution, blind pupils use laptops and partially-sighted pupils use desktops.

The blind pupils need a computer for almost all subjects. A laptop enables them to be in a sighted group without the monitor screen obstructing the view of their fellow students or their teachers. Moreover, this avoids the far from ideal situation in which pupils can hide behind their large computer monitors.

Because blind pupils need a computer far more often and in different places due to its prosthetic function, a laptop is also preferable due to its ease of mobility. In such cases, special equipment, in the form of, say, an electronic note-taker, can also prove invaluable, although there are very few pupils who have access to both a computer and a note-taker.

In a school where pupils frequently have to change classrooms, a cordless network is one way of avoiding having to constantly log on and off the network.

e. The availability of infrastructure
The objectives of ICT education and the use of ICT in educational establishments defines the degree to which ICT equipment must be available for pupils. Integrated computer use, in which pupils use digital workbooks instead of traditional textbooks and where a high degree of integration is being pursued, requires good ICT skills on the part of pupils and a high deploy ability of the available infrastructure.

The following aspects are important in realizing a digital school for pupils with a visual impairment:
- One or two ICT lessons a week are not enough to teach the skills required; these skills must be applied for many hours each week.
- If all the textbooks are supplied in digital form, this means that the computers must be available for every lesson.
- If information has to be exchanged digitally between teachers and pupils, e.g. via internal e-mail, access to the network must always be available.
- The concept of the digital school assumes that this infrastructure is also available at other locations, e.g. at home or in school-based residential units, so that the pupil can carry on working in the same way out of the classroom.

f. Use of 'own' computer
Where possible, it is also a good idea, especially for blind pupils, to have a personal computer in the school. This makes it easier for personal settings, such as in the screen reader, to be permanently adjusted to the pupil’s own requirements. Although good modern network facilities are making it increasingly possible to set up a personal profile via the network, this is more difficult and it means that the pupil always has to have access to a network, wherever he is working and whatever he is doing. This reduces his mobility. Pupils in any case have to learn how to use, manage and care for a personal computer.

g. What services are available to assist integration?
People with a visual impairment have always been at a disadvantage in terms of information and communication, because information has not been available in an accessible form and because blind people in particular have their own written alphabet. Digitization has made great strides forward in both these areas, which means that the services provided will now have a duty to remove this disadvantage. The services must also dovetail with other facilities that are set up for the target group. For example, pupils can download the textbooks they need for their studies from the Internet. This gives Internet use a higher priority in education. Examples of information include digital books, the Internet, encyclopedias, dictionaries, newspapers and magazines.
Examples of communication include e-mail, the exchange of same-format texts and chat-boxes.

Opportunities for integration through ICT
- The ability to read the same newspapers as other people at the same time
- The ability to attend the same courses as other people, in the same way and at the same time. For many years, people with a visual impairment who had laptop

computers were a rare sight within regular education; now, however, there are schools and universities where all the pupils use a laptop
- The ability to be considered for the same jobs as other people and to be afforded the same opportunities for promotion; although certain opportunities and restrictions will remain, the 'paperless office' can increase the opportunities
- The ability to make use of the same opportunities for communication as sighted people, such as e-mail, chat-rooms, ICQ, etc., gives visually impaired people the same opportunities to pursue the same hobbies

The use of ICT in special schools can make the difference between a pupil being able or unable to integrate.

2. Competent (Special) school teachers

Using ICT throughout the education means also that all teachers should be skilled in using this and guiding the pupils in using the ICT in their lessons. They are the key factor of the successful implementation of ICT in the education. Beside the mainstream computer skills and the knowledge of the use of mainstream computer programs they need to know the special assistive technology devices and special assistive software programs.

For the special assistive technology devices and software there are not many possibilities to take classes, actually only the ICT-teachers of the special school are able to teach this special equipment.

The ICT retraining for teachers consisted of 6 modules: Braille & Speech, Enlargement & Speech, Educational software usage, new technologies, Internet for visually impaired and Digital text books.

3. Coaching itinerant teachers

Even more than the teachers at the Special Schools, the itinerant teachers should be able guide students and advice mainstream schools concerning even more different types of assistive technologies in also all different school grades and situations. For the reference and communication we are setting up a WebCT e-learning course to support them and coach them in an electronic way. On this WebCT server Special teachers, mainstream teacher and students will find all necessary information to study in mainstream education, find special courses and communication possibilities.
www.aobonline.nl

4. Accessible educational software

Schools are using more and more the computer as an educational aid and resource to achieve educational coals. Educational publishers are willing to follow that trend and develop educational software and courseware in all kinds and for all subjects. The sad thing is that not many software designers are aware of the special requests of disabled pupils, using assistive technology to access the computers. Not much mainstream developed educational software is therefore usable in special education.

‘Software in Zicht’ is our project that aims to evaluate the mainstream developed educational software, describe the possibilities to use it with assistive technologies and disclose this information on a web site. A second aim is to negotiate with publishers and designers to make their products accessible and usable for disabled pupils.
www.softwareinzicht.nl

5. Accessible educational school methods and web sites

Blind pupils and students, but also in many cases partially sighted pupils and students do need digitalized school and study textbooks to be able to study. A special service is converting the paper textbooks of the full scale of education in the Netherlands in digital format on request of any visually impaired pupil or student. This is a lot of work, because in many cases they have to scan the texts or even type it over and correct it. They have to correct the lay-out and describe pictures etc. This work has some problems like in delivering in time and in serving the visually impaired upon their needs and desires.

The educational publishers have started to produce Mixed Media Methods. That means that an educational method consists of a textbook, a CD with additional content in one or another electronic format and a web site with additional assignments on the subject. This could be an ideal move since blind and visually impaired are able to manage electronic material. The praxis is different because to use this material it should be accessible letting students with e.g. Screenreaders or enlargement accessing all parts of the education content. Research and development is necessary to find out what is accessible and what not and what is necessary to develop it in an accessible way inclusive accessible multi media. The project in full extend do include the development of these ‘code snippets’ for the programmers of educational publishers.

6. Entertainment, Audio games

Yes, blind pupils do like to play computer games! But how to get an excited computer game accessible for blind? The European Media Master of Arts-program of the Utrecht School of the Arts (Arts, Media & Technology) and the Bartiméus Accessibility Foundation in Zeist have developed a curriculum for accessible game and program development together. Within this curriculum already many spectacular games have been developed like Drive, The Curb Game, Hall of Sound, Powerchords, Wow, Demor and others.

These games are all examples of the valuable collaboration between the Utrecht School of the Arts (HKU) and the Accessibility Foundation. The HKU-students have the technological skills while the Accessibility Foundation offers the necessary expertise in the field of accessibility and forms a direct link to the target group. With the availability of the right resources and the right knowledge there is the possibility of producing high-quality prototypes in a very short amount of time. Together with the pupils of the Bartiméus School the prototypes can be adjusted to fit their wishes and needs. These prototypes are not only proof of concepts but many of them can be further developed into high-quality products. At the moment the curriculum is being exported to other institutes like the University of Twente and involve stakeholders like disability organizations, web design companies, government agencies, publishers etc.
www.soundsupport.net

7. Research and development

To be updated with the benefits of the latest technology and teaching methods it is good to follow research and developments in other countries, but there is also a private interest and responsibility of the school in doing (scientific) research and development activities, most of the time together with universities. At this moment we are involved in the next research and developments projects:

A - Spatial coordination of the blind in two-dimensional, interactive environments, with the use of tactile interaction. The research consist in other words of the question in what way blind people disclose geographic oriented information (e.g. a map, plan or virtual playfield) in an interactive system. The target device of interactive tactile interaction is the VTPlayer.

B - The influence of electronic or computer based assistive technologies in learning to read Braille and gaining good Braille reading skills. For decades blind people learned to read Braille using paper sheets and Braille books. Nowadays several computer based devices are available to use for the education of Braille like the Braille display, the VTPlayer etc. Is learning to read Braille different since the use of computer based educational aids?

Results expected not earlier that March/April 2005.

8. International Computer and Communication skills

The international association ICC organizes every year a summer computer- and communication camp in another European country. Around 20 countries are participating in the ICC camps taking part with a national group. Each group consists of up to 6 students as participants and 2 or 3 staff members. The staff members, most of the time ICT teachers and trainers guide the group, but in the same time acts as tutors leading workshops with various computer or communication topics.

ICC intends to teach students modern information technology. Like the wheelchair enhances the mobility of the physically disabled person, the computer enhances the mobility of the blind in our information society. Much more than their sighted peers blind and visually disabled people benefit from modern IT which is made accessible with special devices and software. The ICT possibilities and equipment is not the same in the different countries of the European Union. Therefore it is interesting to them to present them the cross European ICT affairs.

ICC intends to give students information on (international) studying possibilities; earlier than their sighted peers they should make up their mind to find a proper decision on what and where to study and how to prepare themselves, how to manage support resources available to be successful from the beginning. ICC is an ideal place to start this process, to get information and to discuss with other colleagues and with experts.

ICC offers a relaxing international and intercultural environment. Blind and visually impaired young pupils and students, should get an opportunity to meet other blind and visually impaired young people from other countries and other cultural backgrounds. This will give them a broader view concerning their individual situation and the possibilities they have.

And last, but not least, ICC is an ideal meeting place for teachers, researchers and other experts to get to know each other, to exchange their knowledge by working "hands on" with students and to start more extensive co-operation.

Therefore ICC must not be seen as a pure technical event. ICC is a unique social, intercultural and technical event for a group of people, which are put at a disadvantage.

www.icc-camp.info

59 Accessible Web Design

By: Snetselaar, Henk
From: The Netherlands
Organisation: Bartiméus Accessibility

Online is trendy!

The (local) governments, companies, educational institutes and everybody who wants to sell or offer a product or a service is increasingly using the Internet to reach their target group. Some examples:

- Finding a suitable job? Best place is searching the Internet, most jobs in one place and best search options;
- Medical consultancy needed? See the online doctor, no stressful waiting room, just send an e-mail;Doing your home financial affairs? Online banking is direct and you will get the highest interest;
- Instantly having a glance at the latest news? See the online versions of most broadcasting companies;
- Buying a book? See the online bookstore, next day delivery!
- No time to go to school, training? Consider E-learning as a chance;
- Extending the lending period of library books on a rainy day? See library services online;

The Internet gives a good opportunity for **information**, **communication** and **transaction** with customers, citizens, employers etc. But is everybody able to use the Internet? Is the Internet accessible for everyone?

What is web accessibility

"The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect." Tim Berners-Lee, W3C Director and inventor of the World Wide Web.

Web accessibility means that everyone can use the functions of a web site, regardless of disability and the use of assistive technology, regardless of the operating system and the user agent (browser, PDA, WAP, TV) that is used. Web accessibility includes the content of a web site, the authoring tools of web design and the user agents to explore the web.

Why is Web accessibility an issue?

- Use of the Web is spreading rapidly into all areas of society;
- There are barriers on the Web for many types of disabilities;
- Web accessibility has carry-over benefits for other users;
- Some Web sites are required to be accessible;
- Web sites that are accessible for disabled people are also more accessible for everyone;
- 10% of the population has a disability that affects the use of the Internet.

An inaccessible web will affect several groups of disabled people like sensory disabled, cognitive disabled and physical disabled. Furthermore there are groups not recognized as disabled who will benefit from an accessible web like elderly people, or people in not ideal situations like in a noisy environment, working with monochrome monitors, low bandwidth etc.

Impact of the Web on people with disabilities

The Web is becoming a key, but sometimes inaccessible, resource for:

- News, information, commerce, entertainment,
- Classroom education, distance learning,
- Job searching, and workplace interaction
- Civic participation -- laws, voting, government information, services

An accessible Web will mean unrestricted access to information for people with disabilities.

Web accessibility is a cross-disability Issue. The Web can present barriers to people with different kinds of disabilities.

Visual disabilities

Poor colour contrast, fixed (small) font size,
Unlabeled graphics, undescribed video,
Poorly marked-up tables or frames,
Lack of keyboard support or screen reader compatibility

Hearing disabilities

Lack of captioning for audio,
Too much complex language

Physical disabilities

Lack of keyboard or single-switch support for menu commands

Cognitive or Neurological disabilities

Lack of consistent navigation structure,
Complex presentation or language,
Lack of illustrative non-text materials,
Flickering or strobing designs on pages

Accessibility contributes to universal design

A website that is accessible for the disabled is a better web for everyone:

Redundant text/audio/video can support: different learning styles, low literacy levels, second-language access. Style sheets can support: efficient page transmission and site maintenance.

Captioning of audio files supports: better machine indexing of content, faster searching of content.

Guidelines for accessible design

The WAI (Web Accessibility Initiative) has issued several guidelines concerning the Internet.

The WAI is an initiative of the W3C (World Wide Web Consortium). Many organisations from around the world participate in some part of WAI work, including: industry, disability organizations, access research centres and Governments. The WAI has five complementary strategies of work:

- Ensuring that Web technologies support accessibility;
- Developing guidelines for accessibility;
- Developing tools to evaluate & facilitate accessibility;
- Conducting education and outreach;
- Coordinating with research and development.

Developing guidelines for accessibility

WAI has four different guidelines

1. Web Content Accessibility Guidelines
2. Authoring Tool Accessibility Guidelines
3. User Agent Accessibility Guidelines
4. XML Accessibility guidelines

Web Content Accessibility Guidelines

The web content accessibility guidelines explains accessible use of Web technologies for page authors, site developers. There are 14 guidelines with 65 checkpoints, divided in three priority levels. The WAI has also supporting documents and resources for each guideline like checklists, techniques documents, with implementation details and training material to learn about web accessibility.

Each checkpoint has a priority level based on the checkpoint's impact on the web accessibility.

Priority 1

A Web content developer **must** satisfy this checkpoint. Otherwise, one or more groups will find it impossible to access information in the document.

Priority 2

A Web content developer **should** satisfy this checkpoint. Otherwise, one or more groups will find it difficult to access information in the document.

Priority 3

A Web content developer **may** address this checkpoint. Otherwise, one or more groups will find it somewhat difficult to access information in the document.

Reaching the goal

How can we reach our goal in making the Internet more accessible for people with disabilities? The web developers have to do the job, but how will they be motivated to work on it. Should this be done by social responsibility, procurement conditions or legislation? Many countries are in a different position. Some countries have already legislation; some are in a process leading to legislation, but others do not have legislation at all. There are also different grounds on which legislation is based. There are governments that have established that individuals with disabilities have a (civil) right to certain kinds of information or governments that require that products or services sold within a country must meet certain criteria for accessibility and there are governments that require that information technologies and information services procured by entities such as government agencies must be accessible.

In the European Union is not yet European legislation on web site accessibility. Some member states however do have some legislation based accessibility enforcement. United States, Canada and Australia have already legislation in conjunction with web accessibility.

For more information see:
www.w3.org/wai
www.accessibility.nl

60 WebQuests - an Example for New Learning with New Media

By: Drolshagen, Birgit; Klein, Ralph
From: Germany
Organisation: Univ. of Dortmund, Fac. of Rehabilitation Sciences, Dortmund Center Handicap and Study

Content

As an initial basis for our contribution, we wish to stress that we consider both learning and teaching by means of new media an important task of school lessons. The use of modern technology, however, poses a challenge to teaching in general as well as to teaching blind or visually impaired students in particular, since new media by themselves do not signify good teaching. In this contribution we will as a first step outline the necessity of using new media in teaching blind or visually impaired students by means of a small selection of statements. Subsequently, we will give an illustrating example of how the challenge related to the use of modern media in teaching visually impaired children and adolescents can be met on the basis of a critical discussion on the didactic surplus value of modern technologies. Despite the special significance which the use of electronic aids hold in the joined teaching of visually impaired and full-sighted children and adolescents, we in this paper do not consider it necessary to draw a distinction between teaching at special schools and regular schools. We instead assume our considerations to be valid regardless of school form.

Following Aufenanger (1998) in this contribution the term new media or modern technologies will be applied first and foremost to digital media characterized by multi-mediality, multi-modality, and interactivity, which, due to their integration in network structures and their availibility to various forms of creative working, offer methods of cooperation and communication beyond those commonly known. In our contribution we would like to provide a few options of the ways in which the didactic potential of the new media could be taken advantage of in teaching blind and visually impaired students.

On the necessity of using modern technologies in teaching blind and visually impaired children and adolescents

Following Mandl / Reinmann-Rothmeier (1997) the first question should be, how information is dealt with in todays' society. According to their statement society nowadays is marked by quick and easy access to information due to processing independantly from time and location and by numerous options for its presentation. In this contexts, the authors outline the idea of a society based on knowledge rather than on information. This knowledge-based society does not sustain its essential foundation from information gathered, but from reflecting and evaluating knowledge. Thus knowledge may be implemented into responsible acting. New media this way turn out to be a major tool for obtaining and processing information as well as for communication. In terms of an information-based society, applying the tool of new media is to be considered a means to an end, but not an end in itself. Following Schumacher (2001), we call the capacity of handling, applying, and interpreting knowledge in responsible way elements of media competence. Offering and modifying an environment of learning which enables students to acquire media competence will be an important task of school. This means as a consequence that visually impaired students also need to be offered an environment holding the capacity to acquire media competence from early on. Only under this condition, the socio-political aim of participation with equal rights and chances can be reached. Walthes (2003, p. 93) stated this aim for the education of persons with blindness and low vision.

As becomes obvious by an overlook on current German recommendations and guidelines, the use of new media is stressed on as significant tasks and goals in education and teaching of both disabled and non-disabled children and adolescents (e.g. Sekretariat der Ständigen Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland 1995 / 1998, xy fehlt Richtlinienkommission NRW 2001). While general recommendations point out the use of modern technology as teaching media, or object and means of teaching, those guidelines and recommendations referring exclusively to the target group of visually impaired students focus on the aspect of aids. They may not, however, be understood to paying attention to modern technologies in teaching visually impaired children and adolescents only in terms of aids. Degenhardt et al. in 1996 already explained (p. 24 ff.) that distinguishing between new media as a subject and method of teaching on one hand and special aids on the other hand doesn't make sense. In combination with the general recommendations, the additional emphasis of new media as aids rather shows the special importance which new media should hold in teaching visually impaired students. Used as aids, new media may compensate disadvantages, eliminate barriers and establish equal chances. This way their use as media tools, and objects of teaching will be established. These remarks on the value of modern technologies in living and teaching visually impaired students may suffice in the context of this paper. What is the essence of good teaching with new media, and what didactic surplus value may modern technologies provide?

On the Didactic Surplus Value of Modern Technologies

Neither the availability of information or knowledge, nor the mere use of modern technologies is to be considered crucial factors for the quality of learning. New media by themselves don't signify new learning and good teaching (Schulmeister 2004). New media do not provide didactic surplus value, they do, however, provide the option to modify teaching in an unconventional way and thus gain didactic value. This is derived from the attractive manner in which information on the World Wide Web (WWW) is frequently displayed, and from the chance of organizing an exchange with experts by means of e-mail, chat. Moreover, it is possible to arrange close content-based cooperation with different learning groups. As such cooperation bears the potential of eliminating spacial boundaries; specific views on certain issues in one country may have an impact on the process of learning (Moser 2001).

Therefore, Aufenanger (2002) points out that not learning with new media but new learning with media should be in the focus of interest. New media in this context are not to be regarded as a substitute for conventional media, but rather as their complement. The use of media as a consequence is not to be placed outside the basic concept of learning. New learning by means of new media is based on an constructionist approach to learning. Constructionist teaching methods focus on self-activity as well as on the social context related to the acquisition and construction of knowledge. They form the contrast to an instructionist philosophy of learning which assumes a passive learner to whom didactively well-prepared learning material to be offered. Teachers on the other hand are presumed to be active and regulating the access to knowledge (Aufenanger 1999).

Contrary to this concept, the significance of construction knowledge is placed in the centre of the constructionist philosophy of learning. Knowledge according to this idea is not conveyed by an external source, it rather emerges in an active and self-directed process, in which learners construct their world based on external information.

In this process "the learners construct their individual world by using information from the outside". The learners aren't taught knowledge but they get the opportunity to develop their own ideas and strategies how to solve problems. The process of developing strategies is "more important than the product of learning" (Aufenanger 2003, p. 3 / translated by B.D.).

"Learning according to this understanding should be situative, which means tied into a specific context" (ebd.). The teachers' role hereby is of a consultive and supportive character. It is their task to create an environment of learning which facilitates and promotes self-directed and autonomous learning. Learning environments in which the individual learning prerequisites, the didactical method and the new media are regarded as an integral whole are needed (Aufenanger 2003, p. 4). Such learning environments for example are practised in anchored or situated learning methods. Problem-oriented learning as described by Hense/Mandl/Gräsel (2001) strives to combine the advantages of either paradigm by means of integrating instructive elements into the constructivist approach. This is mainly to the benefit for students who have difficulty in structuring information or who perform in a better way when facing given structures (Aufenanger 1999).

New media as a part of learning environment can be an important tool of self-directed and self-active learning. When teachers eventually succeed in appropriately applying their own fantasy to fully exploit the options thus provided, their should be no doubt about the didactic use of learning with new media. A large number of changes with regards to the organization of schools and to educational policy will be necessary in order to face the challenges involved. For instance, the division of teaching into 45-minutes lessons is profoundly opposed to autonomous, self-directed learning in an open learning environment. Numerous modifications are also necessary in the basic and advanced teacher training. Teachers need to be provided the chance to cope with their supposed role as creators of learning environment and as advisors in the learning process. In addition, they need to be placed in a position to acquire the competence required. At this point we do not intend to go into detail about the required modifications and changes (see Rodney 2001, Aufenanger 1998).

These general considerations about new learning with new media are of special relevance for students with blindness or low vision. First, in respect to new learning school as an open living and learning environment with self-active and self-directed education meets the needs of visually handicapped persons as well as the needs of the not handicapped (Walthes 1998, p. 59). Second, constructionist learning methods define "handicap" not as a strict category but as a relation; they aim at accepting difference and at learning to deal with diversity (Walthes 2003, p. 94). Constructionistic methods help to create equal opportunities, for the world of those, who are sighted, stops to be the universal reference, because it is impossible to decide which of the individually constructed worlds might be better or more realistic (Walthes 1998, p. 58; Walthes 2003, p. 20). Exemplifying the potential of new media by means of joined teaching of students with and without visual impairment Rodney (1999) emphasizes that „(a)ccess technology, when made use of by a visually impaired pupil in the classroom, can bring positive consequences for the whole educational situation within the classroom. It was agreed that the use of access technology makes the classroom better for all the pupils, not merely for the visually impaired one, and while making the work more challenging for the classroom teachers, at the same time this gives them more resources to draw upon."

New Learning with New Media - The Example of WebQuests

As an example of new learning with new media we want to present so called WebQuests. If designed without barriers, they also provide students with blindness or low vision with the opportunity to learn in a self-active, self-directed and problem-oriented way. WebQuests can be designed for individual learning as well as for learning as part of a group. They may be planned for a specific subject or interdisciplinary and they are suitable for different levels of education or grades.

"Quest" means to search for or to capture something. The prototype of a quest is the search of the mediaevil knights for the Holy Grail - with the distinction that the Holy Grail could only be found by the one, whose destiny it was to actually find it. WebQuests, understood as a didactical method which helps to integrate the World Wide Web into teaching at school, were developed ten years ago by Bernie Dodge, professor for Educational Technology at the San Diego State University. Dodge defined his method as follows: "A WebQuest is an inquiry-oriented activity in which some or all of the information that learners interact with come from resources on the internet, optionally supplemented with videoconferencing." (Dodge 1995) Using a metaphor, a WebQuest could be called an expedition into the virtual space of the internet, which should be prepared and accompanied by the teacher in an inspiringly and adventurous way.

Dodge's definition shows that he understands learning as an active process which is characterised by the fact that learners do not simply consume the informations from which they construct their knowledge, but that they construct knowledge by interacting with learning objects. This means that the offered learning objects have to provide a degree of interactivity as high as possible to allow a manipulative and constructive use of the learning material. The achieved degree of interactivity is a decisive factor for the success of the learning process. (Schulmeister 2004) To click with the mouse on an element of a web site or just navigating around the WWW or receiving a simple feedback from the software are not forms of interactivity but of interaction. Because of the same reason multiple choice-tests, many learning software and so on are not suited as learning objects. Instead mind maps, simulations and other cognitive tools should be used. Conventional media like CD-ROM, encyclopedias or books are seen by Dodge as mere supplements. According to his definition WebQuests belong to the methods of problem-oriented learning. The involved teachers role is tutor, scout, guide, advisor or the like. (Moser 2001) WebQuests are eclectic: they don't generate new learning objects, but they rearrange existing learning objects about a certain subject in special learning environments.

At least in the United States WebQuests are widely used and deeply evaluated. (Lermen/Wieckenberg 2003) In Germany schools experiment with this method since about three or four years. Neither in the US nor in Germany this method is used for teaching students with blindness or low vision, as a recent analysis of literature and a web research showed, WebQuests are, however, used for training the teachers for visually impaired students.

A WebQuest possesses a certain structure, which on the one hand functions as a scaffold for structuring the offered learning object and which on the other hand supports the learners' research for information and the process of constructing their knowledge. This scaffold is not as narrow as to regulate or confine them in the sense of the instructionistic paradigm. The elements of a WebQuest are the following: (Dodge 1995, Moser 2001, Feldner 2001, Lermen/Wieckenberg 2003):

Introduction	According to the principle of anchored learning a subject is presented in an authentic and appealing way. Any media may be used, like web-sites, computer games, video-clips and so on, but conventional narrative forms are possible, too.
Task	From the subject presented a precise task is derived which exactly says, what is to be done and what aim has to be achieved. If the WebQuest is done by a group, a role is specified for every member of this group as well as the task sharing within the group and between several groups.
Resources	Resources needed to complete the task like URLs, literature, CD-ROMs, databases, e-mail-addresses of supporting teachers or experts, chat rooms etc. are described und annotated. It is not the learners' task to find still more web sites, but to collect facts within the given resources, process, analyse, interprete and valuate them.
Learning Process	A description of the process the learners should go through in accomplishing the task is suggested. Selective hints of the counselling teacher will help the learners not to lose their way within the internet. All results of the learning process are collected in a suited manner.
Evaluation	This element provides learners with the criteria by which it will be judged how successful the task was done. Learners know these criteria from the beginning.
Presentation	Suggests how the results of the WebQuest may be presented by the learners, e.g. as web site, as theatre play, in the school's magazine, as PowerPoint Presentation or radio drama and so on.
Finish	The learners are given further motivations for dealing with the subject beyond the frame of the WebQuest.

This scaffold combined with all necessary informations is offered as a web site. The WebQuest structure should be understood as obliging, because it possesses essential advantages: First, it enables even teachers, who are not experts in HTML-programming, to generate WebQuests by themselves or to adapt existing WebQuests. Second, it enables an individual and flexible adaptation to the needs of the learners. (Feldner 2001) This facility makes WebQuests especially useful for lessons with students with blindness or low vision. In particular the preselection and prestructuring of the basic materials fits their special needs. For example web sites may be specified, which are clearly laid out, neatly structured and good readable with magnifier software or screen readers. In addition the preselection of accessible web sites helps computer users with blindness or low vision to avoid the use of usually complex and unfit search engines. Learners with less internet experience draw espicially high profits from this method.

Besides working in a self-directed manner on the special subject of a certain WebQuest, WebQuests generally provide students with blindness and low vision with a learning environment which facilitates them to experience the internet and acquire knowledge about it just according to their individual needs. WebQuests thus achieve a further implicit and essential aim which is of great future relevance as well for students with as without blindness and low vision: They inevitably force students to acquire the competences needed for using information from the internet in a sensible and reflected way, i.e. media competence.

We think that we could show that new media are an important contribution to new learning in lessons for students with blindness and low vision. They furthermore are a valuable supplement in respect to traditional media of learning, if five conditions are given: adequate technical equipment, institutional changes of school organisation, adapted teacher training, sufficient technical aids for the students und last but not least the development of didactical methods, which help to fully exploit the potential of new media. If these conditions are given, then we can say with Hense/Mandl/Gräsel (2001): lessons with new media are more than simply using new media in teaching.

Some Information about WebQuests

The following URLs provide comprehensive informations; they are apt as an introduction into WebQuests:

- German Webquest-Server http://www.web-quest.ch
- American Webquest-Server, http://webquest.sdsu.edu/webquest.html
- German WebQuest-site with references, examples, templates, tools http://www.webquests.de
- German web site for teachers about WebQuests http://www.lehrerfortbildung-bw.de/faecher/gkg/gymgk/ib/webquest/

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61 ICT

By: Jones, Robert
From: Great Britain
Organisation: The Royal Blind School

An Accessible ICT Curriculum for Students with Visual Impairment in Early Secondary

Introduction

Until early to mid-1990s, school was the place where most students were able to gain the majority of their access to computer technology. At that time, computers were limited to, perhaps, one department and taught by a small cohort of specialist teachers. Today, in Scotland and many other countries, ICT has proliferated across the curriculum.

In fact, young people have a bewildering array of technology available to them. Many students live in households which have access to computers with ADSL Internet connection to support their learning and leisure. They may also have interactive televisions, games consoles, mobile phones which can text, take photographs and play video messages and so on.

Students with severe visual impairments have not been left behind in this revolution. Many play games on their PCs, watch DVDs with additional audio-description, research and shop on the Internet as well as communicate with their friends and family via email, instant messaging and, of course, SMS text using mobile phones with built-in screen readers.

With the multimedia-rich environment, the challenge for the teacher seeking to provide new and interesting learning experiences using ICT is increasing. Governments and school inspectorates have recognised the importance of producing an ICT literate population and investment has been made in computer technology for schools. However, too often, particularly in the case of students with a visual impairment, modern computers are limited to meeting compensatory communication needs.

For example, the Royal Blind School has made, and is making, sizeable investments in ICT for teaching and learning. All classrooms are equipped with modern computers running Windows XP and Microsoft Office. Access technology is provided by JAWS and Supernova. Additional software for students with additional support needs is readily available. Yet a quick survey in 2003 of how technology was employed by teachers revealed some subjects used only Microsoft Word to enable students to produce written work. Others did use the Internet/CD ROMs to develop research and investigation skills whilst a few subjects, such as Music, employed specialist software. Some subjects used little, if no, technology.

Comparing this to the multi-screen environment that many young people live in, it was clear that this situation had to be addressed. As Hatlen (1996) [12] says: "Technology is a tool to unlock learning and expand the horizons of students". However, whatever developments could take place had to be inline with Scotland's curriculum guidelines for ICT. The Scottish National 5-14 Guidelines for ICT

Scotland's schools have clear guidelines for what students aged 5-14 are expected to know, understand and be able to do in the area of ICT.

Table 1: Summary of Scotland's National Guidelines for ICT for Students Aged 5-14

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[12] Hatlen, P: The Core Curriculum for Blind and Visually Impaired Students, Including Those With Additional Disabilities (1996). Available at www.tsvbi.edu/education/corecurric.htm

Strand	Exemplification
Using The Technology	Computer Interface; Responsible Use; Networks and Communications; Peripherals; Storing Work and File Management
Creating and Presenting	Text Handling; Graphic Manipulation; Multimedia Manipulation
Collecting and Analysing	Database Skills; Spreadsheet Skills; Problem Solving
Searching and Researching	Where to Search; How to Search; How to Extract Information; How to Evaluate the Results
Communicating and Collaborating	Phone; Fax; E-mail; Videoconference
Controlling and Modelling	Control/Simulation Software; Control Hardware; Control and Design Process; Input and Output Sensor/Devices
Developing Informed Attitudes	Know Where and How ICT is Used; How Why ICT is Used; Implications of ICT

Review of Existing Provision

Prior to developing and extending the use of ICT for students aged 5-14 at the Royal Blind School, existing teaching and learning in the subject area had to be reviewed in more depth. Formal skill development was, and continues to be, delivered for the most part in Business Education classes. This commences in the later years of primary when students attend lessons in touch-typing. Once students have learned to touch-type, they go on to extend their text production skills to include: formatting of documents; insertion and deletion of text; use of text enhancement; cut and paste as so on. Students learn to layout documentation correctly and, where possible, acquire additional skills such as use of ClipArt and WordArt. Students then advance to creating and amending simple spreadsheets and databases, usually by the time they are in the early secondary school.

It was clear that important elements of the strands in Using The Technology, Creating and Presenting and Collecting and Analysing were being formally addressed through Business Education classes. Students had skills which could enhance their work in other curriculum areas, beyond using Word to produce documents. However, it was also clear that needs did exist and that had to be addressed, namely:

1. Key areas of 5-14 ICT curriculum were not fully implemented
2. Need to improve use of ICT across the curriculum
3. Need to provide parity for residential students
4. Maintain student motivation with ICT in a multimedia-rich world

Addressing the Needs

Implement Teaching and Learning Programmes to Implement More Key Areas of National 5-14 Guidelines in ICT

1. Searching and Researching: The most obvious need was to attend to the lack of formal tuition in the use of the Internet for searching and researching to support learning and teaching. This was quickly addressed through writing and publishing support information for students and teachers on how to use JAWS with the Internet, supported by formal tuition in class. Importantly, the information was made available to the librarian as this is the area where significant use of the Internet is made.

2. Creating and Presenting: Students were extremely proficient in the use of Word to produce text. However, a great deal of information today is presented through Internet Websites. Accordingly, it was felt the students must have the opportunity to produce a Website which would address the Multimedia Manipulation exemplification of this particular strand. Fortunately, a Dutch/Danish foundation called Sonokids has developed an online tool to help children and young people create Websites. This tool is called Max. Max provides students with a visual impairment with a template on which a fully accessible Website can be built. Three students used Max to develop a Website called 'Looking At You'. This Website was inspired to show to the world what young people with a visual impairment can achieve. The Website was later entered into an international competition and was one of 11 winning entries. One student attended a workshop held in Jamaica in Easter 2005 whilst the other students involved were rewarded with laptop computers. (More information about Max and the work of Sonokids can be found at www.sonokids.com.)
3. Communicating and Collaborating: A key area of this part of the guidelines is the ability to use E-mail effectively. Whilst Microsoft Outlook and Outlook Express are very accessible, it was felt that students should be able to use web based email systems as this provides increased independence. Popular Web based systems such as Yahoo and Hotmail were tried, but none provided the real ease of use desired. Accordingly, this problem was discussed with Sonokids and a new, fully accessible Web based email system has been developed called Maxmail for children and young people with little or no vision.

Improve the Use of ICT Through Cross Curricular Work.

As many teachers are too aware, students can compartmentalise their learning. Skills which are mastered in one area of the curriculum are not necessarily applied in other areas. Breaking down this compartmentalisation was essential to improve the application of ICT skills across the school. Accordingly, opportunities for cross curriculum work were discussed and developed:

1. Use of PowerPoint: It is quite possible for students using screen readers to produce useful PowerPoint presentations. Collaborative project with teachers of Home Economics and Personal and Social Development provided ways in which students could use their PowerPoint skills in subjects other than Business Education.
2. DTP and Website Building Skills: A second collaborative area of work was linked with the Music Department. Students were challenged to produce a website using Microsoft Publisher based on a popular song being studied in Music lessons. This was undertaken by students using screen enlargement software.

Provide Parity for Residential Students

It is important for students who attend schools on a residential basis to have access to many different forms of communication with their friends and family at home. Such communication is encouraged. It can prevent a feeling of isolation from the home environment and maintain existing friendships. In addition to telephone conversations, sending SMS texts, students can also send emails home. However, one of the more popular ways for young students to communicate with one another is through instant messaging such as MSN Messenger. It has been noted that students with screen readers are able to use this technology, without any formal teaching input. Given that many students who attend schools on a day basis are likely to have use of instant messaging, moves have been made to provide facilities for the use of these programs in a supervised and safe environment in the evening for the students who request it.

Maintain Student Motivation with ICT in a Multimedia-rich World

The secret of maintaining student motivation in terms of ICT in schools is always to be aware of new opportunities. In the next year, the school will be broadcasting radio programmes over the Internet. Once again, this is in association with Sonokids who have developed an accessible format. This project will enable the students to develop technical skills including recording and editing MP3 files for broadcast. The future will also see the school participating in a cross curricular EU funded project involving school for the visually impaired from 5 other European nations. Part of this project will involve the students producing a DVD which will demonstrate what young people with a visual impairment can achieve in one of six different areas.

The Accessible ICT Curriculum

Many young people today, regardless of visual impairment, live surrounded by a multitude of devices which provide them with ready access to information and ways of communicating. Schools are no longer the sole source of technology for many students. Consequently, teachers must constantly evolve their courses if their students are to remain motivated and stimulated in their class. Students with a visual impairment are as keen, if not keener, to embrace opportunities provided by new technology as their sighted peers. Teachers must be aware of the potential provided by the computer systems and the ever improving access technologies to provide accessible and exciting programmes of study. This means looking beyond using ICT to assist the student with producing text. With the continuous development of screen reader technology, the possibilities to expand the horizons of the student with severe visual impairment are endless.

Table 2: An Accessible ICT Curriculum for Students with Little or No Vision.

Competence	Technology	Example Learning Activity
To be able to create and present information using ICT	Word Processing	Create and edit a report
	Internet Website	Create a Website using Max from Sonokids.com
	PowerPoint	Create and edit a simple PowerPoint presentation for use in a Personal and Social Education class
	Audio Files	Create and edit an audio file for use in an English class
To be able to collect and analyse information using ICT	Spreadsheets	Create and edit a spreadsheet with labels, data and formulae
	Databases	Create and edit a simple database. Search and sort
To be able to search and research using ICT	Internet	Use a search engine to locate specific information
	CD ROMs	Use a CD ROM encyclopaedia to access information
To be able to communicate and collaborate using ICT	Word Processing	Create and edit a letter
	Internet Website	Create a Website using Max from Sonokids.com
	Internet Broadcasting	Participate in a radio broadcast using Sonokids Radio
	Email	Create, send, reply, forward and delete an email using Maxmail
	Instant Messaging	Develop competence in use of MSN Messenger for independent living

Resources Required

PC with Screen Reader (e.g. JAWS). ADSL Internet Connection. Microsoft Windows XP and Office. MP3 Recorder. Max Website, Maxmail and Sonokids Radio Agreement (all available from www.sonokids.com). CD ROM Encyclopaedia (e.g. Encarta). Audio-transcriber with foot pedal controls.

62 Assistive Technology is more than screen reader.

By: Wiazowski, Jaroslaw
From: Poland
Organisation: Laski School for the Blind (leave of absence); temporary Milwaukee Public Schools, WI USA

Assistive Technology is a term widely used in reference to tools, devices and services required by people with disabilities. Unlike tools that non-disabled people use, AT makes things possible, rather than merely easier. Remote control, intelligent vacuum cleaners GPS systems in cars, and the like significantly facilitate in our every day life but without them people would still be able to participate in the activities. Perhaps it would require a bit more physical activity because we would have to stand up from a coach to flip the TV channels, or we would need to learn to read a map to find our way around but with some afford those things could be accomplished.
In case of people with disabilities specialized devices can be the only way of being active participant in a variety of activities. Therefore, assistive technology is more than just a gadget. It is a helping hand that opens new areas of life to this group of people.
That is why it is essential to expose young learners to devices that will assist them in their education but that may also be necessary to succeed in life after they finish their schools. Regardless of setting and services provided students with visual impairments rely on assistive technology to complete their school assignments. Before I will discuss the continuum of tools meant for this group of students, let's first look at the definition of assistive technology. At the beginning of my presentation I mentioned that AT are tools, devices and services. When we look up information about assistive technology for students with visual impairments we end up finding computer and electronic devices. The first that comes to people's minds are computers with screen readers and electronic Braille note-takers. The word technology may imply that the system needs to be complex and require thorough knowledge about hardware and/or software. When go on the American Printing House Website to browse the Product categories, Assistive Technology refers to software and electronic hardware. American Foundation for the Blind when discussing assistive technology refers to:

- *Assistive technology programs that run on off-the-shelf computers can speak the text on the screen or magnify the text in a word processor, web browser, e-mail program or other application*
- *Stand-alone products designed specifically for people who are blind or visually impaired, including personal digital assistants (PDAs) and electronic book players provide portable access to books, phone numbers, appointment calendars, and more.*
- *Optical character recognition systems scan printed material and speak the text. Braille embossers turn text files into hard-copy braille.*

These two examples alone show what is usually meant by special technology that assists people with visual impairments. However, over last two-three years assistive technology has altered its face. It is not so visible in the area of visual impairments but in the fields of other disabilities a new trend is much clearer. Today I am going to discuss in particular two aspects of technology when working with students with visual impairments: low tech devices and supplemental tools.

When I joined the Assistive Technology Core Team with Milwaukee Public Schools I had already had 8 years of experience in using computer technology in teaching students with visual impairments. I worked for the residential School for the Blind in

Laski, Poland. I knew a lot about screen readers, refreshable Braille displays, embossers, and the like. It seemed that this type of electronics was all students with VI would need. If they needed different set of colors or enlarged screens they would use usually built-in features available in Windows computers to accommodate their needs. My students were required to master basic computer literacy skills in order to fully participate in the classes. They needed to know how to use the keyboard, how to run needed software programs. They were required to research information on the internet, send e-mails within school and to overseas students. They needed to show both technological, language and communication skills. So my intention was to use the technology not only to give access to information but also bring various aspects of communication and social interactions. I was not concerned about their computer skills and whether they had any interest in it. I understood that some of them may not have been into technology but since it is a skill they are very likely to need in their life I required the use of computers when preparing some of their assignments.

Now I am working for MPS in an entirely different setting. Not only am I in a different cultural reality but also in a different school environment. My clientele is also different from the students I worked with in Poland. Being an itinerant teacher I am working with students from kindergarten age to 21. The scope of needs and abilities is significantly greater than that at Laski. Students with visual impairments in our district have oftentimes additional disabilities or issues that are not necessarily qualified as a disability but that affect their education. Another factor that influences their educational development is the mainstream setting. Those students live with their families and spend only a fraction of their days in the school environment. The teachers see them more in the academic situations than daily life ones. That is why the teachers need to find ways to instruct visually impaired students in social aspects like personal grooming, interacting with other people, communication strategies, etc.

My experience shows that it cannot be assumed that the above skills are taught by the parents. It is not unusual that the parents themselves do not present sufficient social skills to give a proper example to their children. Because students with visual impairments cannot so easily copy the behaviors of people they interact with on more occasional basis, the only patterns they are exposed to come from their parents. The parents might also mean well in instructing their children but do not have the knowledge or skills to do it. Mainstreaming therefore causes additional challenges in teaching students with visual impairments. Their needs do not confine to the provision of learning material in the appropriate format or equipment that will give them access to information. Similarly to students without disabilities, students with VI require training to develop proper behavior and skills, yet unlike the former group they find it much harder to copy in a natural and involuntary way.

For those two main reasons, environmental settings and inherent abilities of individual students, assistive technology for students with visual impairments should be considered in a much broader way.

A good example of what areas can be covered by assistive technology is the WATI's AT checklist. The general section informs about the continuum of AT from low to high tech that can be considered for students with different disabilities. The section for students with visual impairments starts with the most basic equipment like eyeglasses and goes down to electronic braille note-takers. Other tools relate to a variety of magnifying or Braille equipment. An average person would think this scope of tools would be sufficient for the students to succeed in the classroom. We should not forget that students with visual impairment are a heterogeneous group not only because of the variety of vision conditions but also because they are different people with different abilities, learning modes, and interests.

Assistive technology can be understood in two different ways. When we think of the word "assistive" we can comprehend it as a tool that helps user access information. In case of users with visual impairments it may mean auditory, tactile or enlarged formats. Users who have no functional vision would rely on the first two formats, while people with low vision would select appropriate magnification and color schemes. Access technology increases opportunities to collect mainly written information to people who have problems with standard print. It is assumed however that such people have no significant difficulties with comprehending and processing such information. All they need to successfully meet their needs is an alternative format. They have sufficient knowledge and abilities to find, understand, analyze, and report back textual or auditory information. They find it natural to access a variety of text sources. They will expect to gather specific information and will know they have reached their goal by reading a chosen text. Moreover, textual information is the source of knowledge that is needed to fully function in society. They are internally motivated to use those sources as data banks containing required knowledge. They will understand that text is the compensatory source of information that seeing people gather through the visual channels. Therefore, their technological requirements might be confined to access technology such as screen readers, refreshable braille displays, or magnifiers (both software and hardware).

It may seem that the above type of assistive technology is sufficient to meet the needs of people with visual impairments. My most recent experience is showing that for some students with visual impairment mere access to information will not mean that they understand the content of the information source. It is because of a number of reasons: experience, cognition, maturity (emotional development).

It is not highly unusual that children with visual impairments fall behind their sighed peers in experiencing the world. They spend less time outside, they don't watch as many movies, they don't hang out in malls or parks, they don't play or watch sports, they don't drive, etc. I could mention many more "dont's" that young people with VI do not do just like the groups of sighted youngsters. It obviously limits their life experiences and ability to understand conceptually textual information. Although they might comprehend words and phrases, they will struggle with referencing them to reality.

Lack of experience as well as other issues may affect the process of cognition. The ability to analyze or synthesize information, critical thinking or problem solving skills are not rare in students with visual impairments. Eventually, emotional development that is necessary to independently and consciously access and utilize information for various purposes also affects the process of comprehending.

These are the areas where assistive technology may kick in to mitigate the experiential gap between visually impaired and sighted people. Some of it already exists though it is not primarily meant for learners with visual impairments. I however have used some of the software and hardware with my visually impaired students to provide them with additional knowledge necessary to succeed in school.

I took an individual approach tailoring the syllabus according to each student's needs yet I based my learning targets on the National Agenda. The National Agenda is a guideline for teachers of students with visual impairments that covers both curricular (academic) and extra-curricular areas. The National Agenda, a federal document consisting of eductional goal statements, includes Assistive Technology as one of the major components of the education of students with visual impairments. The state of Wisconsin Department of Public Instructions lists core curricular and expanded core curricular services that are supposed to be provided for the visually impaired. The latter section is particularly interesting because it defines the areas that go beyond school subjects. Assistive Technology is one of the eight areas. However, again the focus of AT is put on access to information.

Inclusive settings that I have been working at have seemed to provide sufficient academic support but have lacked in such areas as daily living skills, social and communication skills, and every day interaction skills. Regardless of the type of services (itinerant or resource) the above skills need special attention. Albeit it was presumed that visually impaired students would have more opportunities to interact and socialize, it has turned out that they are more isolated. So, natural way of acquiring such skills has been ruled out. It is debatable to decide who is more responsible for this situation, whether the visually impaired or their sighted peers yet it is certain that VI students require additional training to be more involved in social activities.

Having said so much about the issues to tackle it is a good moment to propose various tools that might be used in work with visually impaired students. One disclaimer needs to be made. The tools I am going to mention are only suggestions and can be replaced by others that have similar functions.

I have had students who rely on auditory output when accessing digital text. They however were not savvy computer users. I kept pushing them to master their screen reader skills hoping that I was doing them a favor. Perhaps I was but as I know now there are alternative ways of presenting textual information. Talking word processors might be a good substitute of full-fledged screen readers. Some of them, like Kurzweil 1000 are designed for totally blind users. Their advantage over Micrsoft Word combined with a screen reader is their simplicity. Kurzweil has its own speech engine embedded into it so that it is fully auditory. It offers a variety of formats that a file can be saved as so there should be no problems with compatibility. What is more, text can be scanned in directly to the system and read out. Another example of similar piece of software is Open Book by FreedomScientific.

As far as access is concerned we may need to forget about Braille because the student has no either physical or cognitive abilities to learn it. Computer might be inaccessible as well. Premier Suite by Premier Inc. includes a program that converts text to audio. Any digital text, without images, can be saved in either of the two audio formats: wav or mp3. But how can a student use it if computer is not an option. The iPod by Macintosh is not particularly useful for students with severe visual impairments. There is a tool that has been designed to function similarly to iPod but is fully accessible for people with visual impairments. I am talking about Book Port. A user has easy access to text, can scroll it, skip parts of it, move to the next one, etc. When writing in Braille or on the keyboard do not work we can allow the student to record the answers in the mp3 format. Another option, though not too perfect could be IBM ViaVoice or Dragon Naturally Speaking, two voice recognition systems. Either system converts voice into text. They have been improved since their early editions yet still can produce distorted output. They might be however used for note-taking.

Less functional for some students but not entirely useless for others are word-prediction programs. I am familiar with the English ones but they might be available in other languages. Spelling, word retrieval, or sentence structure might be problematic even for higher functioning students. Word prediction programs assist students in writing by suggesting words to complete a sentence. In some cases, the suggestions are read by the system so they are accessible even for students without any functional vision. Co: Writer by Don Johnston can be named as a good example. The latest version is packaged into the Solo system in combination with Write: Outloud, Read: Outloud and Draftbuilder. This type of software could also be a great tool for students of English as a Foreign or Second language. Premier Suite also has a word prediction component but the suggestions are mute, therefore completely useless for non-sighted users.

Word prediction programs can be perceived as access tools but also as media that assist in the process of writing and learning.

One of the biggest issues in teaching students with visual impairments is the explanation of social and communication aspects. I have worked with students who despite being mainstreamed fell behind their sighted peers in the above-mentioned areas. Due to their vision condition and the upbringing resulting from it their interaction with other students is very limited. Our task as teachers of the visually impaired is to train the students how to communicate and behave in miscellaneous social situations. One of the tools that I have been using is a serious of programs by the Attainment company geared primarily at cognitively delayed students. This program will require a lot of modifications to serve completely blind students but is accessible for low vision students. Simple graphics and large print captions with audio output provide sufficient information about different social situations. Undoubtedly, nothing will replace real life experience but AT might be used as a supplement or an introduction to social and communal experiences. Nonetheless, an adventurous teacher will know how to utilize this kind of software. Last summer, during the summer program, I decided to combine one of the units about public transportation before a field trip to a store. The students first learned the steps of how to catch a bus, how to behave, and how to ask directions. The lesson followed with a simulation of a bus ride during which the students were supposed to act out the steps learned from the program. The real life experience showed that the simulation indeed helped them in their trip.

One of my low vision students whose parent is oversolicitious lacks seemingly basic awareness of everyday experiences like weather, or time management. As her vision teacher I am required to instruct her in these areas. The Attainment serious proved to be very helpful. Although, she still appears not to understand what a timely manner means, she is much more aware of the weather and how to dress up when it is cold or hot.

Assisitve technology is also helping me and my students in other aspects of everyday life. One of my other student's diet is limited very much to peanut butter and jelly sandwiches and some liquid food. Therefore, speaking of other types of food was difficult because he could not describe them. When asked what carrot is he could not answer. Because it was inconvenient to bring all different types of food to school, artificial models and computer presentations worked best in introducing him to the food. One of the programs that I used is English PLUS???? Designed for students of English as a Second Language. I decided to combine high tech (computer software) with low tech (bingo grid) and braille to teach food. In addition I found some Websites for students of English with food vocabulary. I realize all these activities are only artificial substitutes of real situations but since the student is not exposed to such food at home, school might be the only place where he will learn about them.

The same student is being taught braille as requested by his parent. I combine high technology with braille. Another tool that I have begun using recently is the IntelliTools system. Despite being relatively complicated to design, this system is one of the best I have ever used. This paper is not aimed at describing it in detail but I would recommend it to any special education teacher including teachers of students with visual impairments. IntelliTools Classroom Suite consists of a suite of software programs like IntelliPics, IntelliMathics, or IntelliTalk and a a piece of hardware touch-sensitive board. The third element is a series of ready-made and custom made overlays. In addition to the overlay keyboard called IntelliKeys, switches can be plugged in to give access to students who cannot use other input devices.

I have used IntelliTools to teach concepts. The system can be utilized with high and low functioning students depending on their needs and abilities. Tactile input causes visual and audio output. Both braille and non-braille readers can benefit from the system. The IntelliTools Inc. offers blind students a package called IntelliBraille. This package consists of a CD with numerous braille lessons both in contracted and uncontracted formats, and overlays. There are also hardcopies of brailled and print overlays. The lessons are great complements for any braille teaching methods. There are also thematic overlays but these require the addition of braille labels or other tactile ways of presentation. Yet, IntelliTools allows custom designing that is limited by the author's imagination. I have designed several overlays to teach such notions as colors, means of transportation, or spatial awareness.

I have also mentioned the Internet that is probably the largest assistive technology tool in the world. Given accessible computer equipment one can find numerous resources geared towards people with visual impairments. APH BrailleBug is an example of entertainment linked to education. The Website www.soundsupport.net is a great collection of programs and information about programs designed for users with visual impairments. Leisure and entertainment is a huge issue and as such is part of the National Agenda in the United States. I am convinced that European documents also consider pastime as an important part of human development. The games and other programs presented at the Sound Support Website can be used for fun and education. A social aspect like dating, for example, is a theme of the Blind Date program.

The Internet however is also a venue where raw resources can be found. I have found it a great place where sounds can be retrieved from. A Website worth mentioning is www.findsound.com. It is a type of search engine finding sound files in the internet by keywords. If we need a sound of a train we would enter the word train in the edit box, click on Go and receive a list of sound files in a variety of formats. Both Windows and Mac users can enjoy the sounds that an inventive teacher will incorporate into their lessons.

Majority of assistive technology tools presented here are computer based. However, it needs to be remembered that low end of technology offers the whole slew of devices that will positively affect the educational process. It is impossible to cover every aspect of low technology but I believe that whenever possible complex computer or electronic systems should be combined with simple “toys”. I advocate that students with visual impairments be exposed to as varied and rich experiences as possible to compensate for the poor visual input.

Assistive technology serves various educational and social areas. Thanks to specially adapted equipment they can participate in arts classes, sport activities, and entertainment. The low end of the technology continuum may include equipment that is used on everyday basis by many people. A radio, for example, could be used as an adaptive tool for following a sport event. Adapted running tracks allow blind athletes to compete in sports. Activities like cutting shapes might also be possible thanks to a variety of adapted scissors. It means that simple adapted or slightly modified devices can be included in the assistive technology continuum. It is how they are used and what their purpose is that makes them useful and effective. That is why the complexity or price of assistive tools for the visually impaired should not discourage anyone from using technology. There are other solutions that are easily available and that do not require specific training. In the ideal world we would wish that anything a visually impaired person would need would be available. The reality however shows that it is not the case. Therefore alternative ways need to be sought to equip the trainee with tools required for the independent living. Perhaps paradoxically it is a positive situation that not everything is so easily available because we all need to use our creativity to substitute and supplement those expensive or complex devices with something else. The students with visual impairments should appreciate and benefit from any working solutions that professionals can offer to them. Everyone involved in the process should notice that thinking outside the box can be both entertaining and effective.

63 Blind persons in Call Center

By: Donath, Ulrike
From: Germany
Organisation: SFZ BBW für Blinde und Sehbehinderte Chemnitz gGmbH

Man's development has always been closely linked to technological progress. Despite many attempts in early years, blind and visually impaired people remained excluded from the world of literacy and numeric skills, of reading and writing. For a long time this meant they could not participate in economic and cultural life.

Louis Braille went blind at a young age and was constantly on the look out for a form of writing that could be read with the fingers. Based on a night-time script used for sending secret messages, in 1822, at the age of 13, he developed a writing system for the blind which is still used today and which we all know of – Braille. Braille is one of the groundbreaking developments for blind people. It was a first important step towards integrating blind people. In its basic form, the writing system that Louis Braille developed consists of 6 dots in two rows of three dots. There are 63 different combination possibilities for letters, numbers and punctuation characters. Other codes were developed for music, chemistry and maths over the years. Braille's writing system gave blind people access to education, information and independence. When Braille was first invented it was written on a tablet with a stylus. In 1899 Oskar Picht developed the first German mechanical Braille writer. Similar forms of this machine are still used for writing today. The first mechanical typewriters – and later electronic typewriters – enabled blind people to write in scriptoriums and later in offices.

However, these machines did not yet offer blind or visually impaired people the possibility of reading or correcting what they had written. Blind people merely had to rely on their composition and spelling abilities. A breakthrough was achieved in 1972 with the construction of an electronic refreshable Braille display. Thanks to the invention of the computer, the programming of software and its constant development, more and more ways for blind people to access information are emerging which would not have been possible without computers. Blind people and computers – many people cannot imagine blind people working at the computer, yet this has become possible thanks to technology. Blind people cannot visually read the contents of the computer monitor so they have to use other aids. They can use special technical aids like screen readers, refreshable Braille displays and speech synthesisers for working at the computer. The screen reader is a very complex "programme that reads the information on the screen". The various different pieces of information on the screen, like texts, graphics or the screen layout, are interpreted by this software and transferred to an output device connected to the computer. These output devices can be refreshable Braille displays and voice synthesisers. Refreshable Braille displays are important hardware components of a blind person's computer work station. They take in the information provided by the screen reader and reproduce it in Braille. In the meantime Braille has also been increased to eight dots. You particularly need these eight dots in order to show all letters including capital letters, numbers, and punctuation characters on a refreshable Braille display. Speech synthesisers generally work with headphones or a loudspeaker connected to the computer's soundcard. Speech synthesisers are used especially for reading out documents. Used together with a screen reader they provide many other functions necessary for navigating through texts and programmes. With these two aids blind people can use the Microsoft Office programmes, Word, Excel and Outlook, without limitation.

One of the most innovative inventions of the 20th century is the telephone. In 1876 Alexander Graham Bell invented the first useable telephone. Many blind people used to work at manual telephone exchanges. Meanwhile, the telephone has developed at an incredible pace into a global communication medium which we can barely conceive living without in today's society. Manual switchboards were replaced by telephone systems that are served by exchanges in computers. The occupation of a switchboard operator has almost died out in recent years. The simple job of being an intermediary, whose main task is to connect incoming calls to a telephone switchboard to the right department, has been transformed into a member of a call centre, who provides a service, and conducts a telephone dialogue between the customer and the interested party. The person at the other end of the telephone line does not notice when the call centre employee is blind or visually severely impaired. These days more and more companies are using the telephone to maintain a continuous dialogue with their target groups. The better the dialogue is organised, the bigger the competitive advantage. There are two things companies are trying to achieve with a continuous dialogue: firstly, they want to expand their services, secondly, they want to realise their marketing concept in order to make new contacts and acquire new customers or keep existing ones.

Call centres can be inbound or outbound. When they work in the inbound sector it is the customer that is initiating the contact, i.e. the customer calls the company. These centres have the following activities:

- Customer service / regular customer care
- Taking customer orders
- Information hotline
- Advice hotline
- Advertising (promotions)
- Complaints management
- Helpdesk and support service
- Direct response TV (measuring the volume of calls e.g. viewer calls)
- Reservation systems

With outbound call centres it is the company that contacts the customer. Their operations include:

- Market research
- Address verification
- Welcome calls
- Sales support
- New customer acquisition
- Determining the requirements of possible new customers
- Follow-up action to reactivate old customer accounts
- Invitation to workshops and information events
- Complaints management
- Telesales
- Making appointments
- User observations
- Subscriber acquisition and care (e. g. newspaper, lottery)
- Bill collection

"Call centre agent" is a rehabilitative, educational, further training qualification offered by the SFZ vocational training centre, Chemnitz. Students are given in-depth training on how to make calls, conduct calls, close and evaluate calls as well as any follow-up work required. To qualify for this training course, students must have completed a vocational training programme. Great emphasis is placed on flexibility, customer-oriented thinking and a competent manner. At a meeting to determine a candidate's suitability for the training course, the candidate's interests and goals are discussed and the contents, tasks and how the course works are presented in detail. Then there are practical exercises. There are written tests, with and without time constraints, and a test in writing numbers to test the candidate's touch typing skills and the number of words per minute. Oral communication is also tested: the participants have to give presentations. We check the ability to gather and process information by making telephone calls which are then reproduced by the student in the form of telephone notes.

Our call centre in the vocational training centre was equipped with 6 workstations suitable for blind and visually impaired people by the firm Baum Retec AG. Each PC is installed with the programme Virgo, which is used for refreshable Braille displays and the screen magnification programme Galileo. There is also a telephone extension at every work station which can be used as normal with the handset or with a headset. The calls can be dialled via the telephone keypad, via the telephone programme PIMphony or via the call centre software. There are about 3500 different call centre software solutions: Mykene, Theseus, Siebel and SAP to name but a few. We work with the programmes Theseus, PIMphony, the Telefon-CD KlickTel and the Microsoft Office programmes Word, Excel and Outlook. So that blind and visually impaired people can use Theseus, PIMphony and the Telefon-CD KlickTel without limitation, they were adapted with the help of special key combinations. The Theseus call centre software is used to store all the customer and project data relevant for the call centre. All the relevant data for each customer are entered during the conversation. The software automatically logs the conversation with the date and time. If a customer cannot be reached, a reminder to call again will be issued. PIMphony is a telephony programme. It gives an overview of all the extensions available in the call centre and can determine who is on the telephone at any one time. You can also dial and transfer calls with this programme.
The main areas of our additional qualification as a call centre agent are:

- Information processing

The students learn how to use and manage the refreshable Braille display with Virgo NT, the speech synthesiser or the screen magnification programme Galileo. They also become proficient in using Microsoft Office programmes. Furthermore they learn about the telephone system and work with the Theseus call centre software.
Other areas include

- Providing a service – the basics

This includes customer care activities, selling on the telephone – the outbound sector, telephone inquiries and taking orders - inbound and telephone services for several companies - outsourcing.
Another very important part of this training as a call centre agent is dedicated to:

- Service and customer-oriented communication in call centres

This section focuses on how to deal with customers and professional conduct on the telephone. The cornerstones of communication are presented and the students receive practical training in this area using live conversations. How are inbound and outbound calls conducted? Which question techniques are applied? What does customer-orientation mean for the way you work? What do you need to be aware of during a complaint call?

Another focus of the training is

- The essentials of commerce and an insight into data protection and law

Payment transactions in call centres, data protection and contract law, organisation at the workplace and self-management are also important areas included in the training.
Important means of communicating in business dealings, oral and written communication for business and telephoning in English are also part of the training.
In addition to the theory, the students actively take part in various projects. These include satisfaction surveys regarding the delivery of advertising leaflets, making appointments on behalf of an insurance company, customer surveys for a car dealership. The course includes a six-week placement in a call centre and finishes with a written and oral examination by the chamber of industry and commerce. After our intensive schooling and thorough instruction, our blind and visually impaired students are able to operate a modern telecommunications work station based on Windows including mail and the Internet. One aim of our training is to produce highly motivated and qualified employees for the call centre sector, another is to give severely disabled people prospects for the future and offer them the possibility of integrating themselves into the working population.

Call Centre of the Hanseatic City of Hamburg, Infokomm Stuttgart, Callmedia Karlsruhe, CQM Halle, to name just a few, are all call centres in Germany that work successfully with blind and visually impaired people. The employers get financial support from the Federal Labour Agency and the Immigration Offices to equip the work stations with the extra technology required.

Friedrich Nietzsche once said: “An occupation is the backbone of life.“Everyone needs a strong backbone – one possibility is working in a call centre.

64 Assitive Technology for School and Employment Purpose for Blind and Visually Impaired Individuals

By: Nurit Neustadt; Imbar Leah
From: Israel

The issue of employment of people who are blind was first discussed as a result of a law enacted in the year 1935 by the USA Social Security Administration. The foundation for it was the assumption that visually impaired individuals were unable to be employed in the productive market, at least not to the extend that they may produce a descent income to live on.

Blind and visually impaired people were conceptualized as unemployable. A year later the administration changed its attitude and suggested that not only that blind people were able to be productive. They admitted that blind people may like anyone else carry managerial skills suiting the open market and beyond the requirements of sheltered workshops.

They suggested that what impended employment was the public negative attitude toward blind people. As a result the Randolph-Sheppard Act was adopted reinforcing the rights of blind people's employment in; running kiosks, fast food counters, food machines and souvenir shops at all federal buildings.

The majority of the states adopted the regulation of this law and established running committees at the business licensing departments, in which blind people were represented to assure their share in business licenses. This initiative was named Business Enterprise Program and it is known to this date the most successful intervention by a governmental administration in supporting the employment of blind individuals.

The literature dealing with employment of blind individuals categorizes the obstacles to employment related to:

1. Attitudes of the rehabilitation service providers
2. Attitudes of employers
3. Socio-demographic
4. Employment policies and
5. Technology issues (McBroom L, Crudden A, Skinne A, Moore E ,1998).

Other barriers to employment described as:

1. The lack of opportunities to specific or specialized vocational training.
2. The lack of motivation and interest by blind people to be employed due to social benefits and pensions.
3. The lack of choice of housing for independent living.
4. Inaccessible transit and transportation.
5. Inaccessible to Information.

The American Foundation for the Blind (Link, 1975) described six impediments to the employment of blind people relating to:

1. he high numbers of clients the rehabilitation counselors are simultaneously responsible for.
2. The growing number of multi disabled visually impaired people at working age.
3. Over emphasis of referral of blind and visually impaired persons to sheltered workshops.
4. The lack of training visually impaired persons in social and vocational skills.

5. The lack of understanding by blind individuals the issue of employment opportunities and the requirements.
6. Negative motivation to employment due to federal and state social benefits and pensions.

These views brought up to life governments apply the social security special financial benefits. The statistical data suggests that more than half of the blind people are unemployed, supports the misconception that blind people are unemployable. In order to convert these prejudices, it is important to illustrate opposite evidence.

The rehabilitation and employment preparation of young blind individuals (just like sighted individuals) starts at early age, when concept development are introduced by parents and specialists, in addition to pre orientation and mobility skills as well as daily living skills are adapted.

An integral aspect of education and rehabilitation of visually impaired persons is the exposure to the "state of the art" updated technology, age suiting to the special needs individuals from young age. The training in the use of technology is followed in some courtiers with advanced programs, distributing high tech devices as part of the training programs to assure their future competence in employment.

The transition of youth from education to employment is of a great interest to social services providing technology to blind individuals.

For over 10 years Israel's Social Security Institute along with Aleh, university support center for visually impaired students providing the state of the art technology to all individuals who are students and/or employed. They followed an unstudied concept that technology significantly improves the independence and employment opportunities of visually impaired people in the work force and community life. They believed that the type of technology a visually impaired person is offered, is heavily relates to the level of visual impairment, style of life and special needs.

Technology is looked at as:

1. Accessibility tool to achieve daily needs and or as
2. A tool to achieve employment tasks and assignments

Further more; in order to fit the specialized technology to an individual, it is important to assess his abilities, needs, skills and tasks to be fulfilled. Thus, it is very possible to meet two individual with the same visual level, using different technologies.

Many among professionals in the field of visual impairment make the assumption that visually impaired persons are experts in the technologies available for blind users, which is of course a false impression.

When discussing technologies for blind individuals it is important to be aware of the fact that in many cases it is the simple technology that improves the accessibility of blind individuals to independence and not necessary the highest level technology.

We can categorize the assistive devices available to blind people as:

1. No technology - characteristic such as color, contrast, light and reduced glair, size, fonts, magnification, sitting position etc,. are the facts that make the difference.
2. Low tech devices - such as recording machines, Braille and talking clocks, hand held magnifiers etc,.
3. High tech devices - electronic magnifiers, computers accessories, hardware, software and infra red outputs.

Assistive technology is part of the wide range of advanced technologies for persons with disabilities, particularly those with visual disabilities, whom these technologies help function more independently and according to accepted norms of those in higher education and employment. The Social Security Institute initiated the study in order to better understand successful use of technology provided free of charge to young people in Israel.

The research examined the use of assistive technology on the part of blind and visually impaired persons, for purpose of work and academic studies.

Interviews were conducted with 252 visually impaired individuals who used assistive technology financed by the National Insurance Institute of Israel at cost of NIS 10,000 or more each between the years 1998 - 2003.

The study's goals were:

- To examine the use of assistive devices by students
- To analyze the effectiveness of assistive technology use
- To examine skills needed in the process of fulfilling studying tasks
- To assess the service provided to the subjects
- To characterize the studied subjects

The research examined various aspects of the use of the assistive technology, and analyzed the effectiveness of its use and included variables.

The following were the highlight of study questions:

- Was the technology used for the purpose of employment?
- Did the users believe that the use of this technology indeed helped them?
- Following the use of the technology, were the users less in need for tutors/readers?
- Did the users believe that they were more independent in performing tasks at work?

In addition the research examined the skills of the visually impaired individuals performing tasks of academics demands.

Findings were that the vast majority of those interviewed (94%) used mainly computers and printers but to a lesser degree when comparing with the general population. They depended in using computers with magnifying software, scanners, voice screens, Braille key and printers.

The use of technology was effective, since 80% of those who were employed used the technology at work. They generally worked at jobs that required academic background. A strong correlation was found between the professions studied and employment. About half of the people interviewed reported that they were competently, or at large extend independent in their ability to perform tasks in their studies. The most common service used by those interviewed was a non-formal service provided by friends and studying with them. This was in additional to the use of technology and to the special tutoring services provided.

It was found that assistive technology did not replace the need for tutors and readers as the interviewed reported that human reader’s service could not be replaced by technology.

Conclusions

1. Among of the visually impaired studied 60% employed in comparing to 40% employed in other disabilities and among graduates of academic programs 48%.
2. The majority of employed used assistive technology for fulfilling their tasks. This fact seems to justify the high invest made by SS Administration for a small selective group. This investment was effective in increasing level of independence and in enabling to be potentially and actually be employed.

3. It was found that assistive technology did not change habits of using reading services by tutors as 2/3 of the subjects continued using these services despite having assistive technology devices.
4. The most difficult task reported by students was in finding needed information.
5. The discrepancy between the reporting that they knew to manipulate assistive technology and the fact that the majority claimed that they face difficulties in locating material may suggest that an observational study in addition to an interview based study.

65 Employment through advisory services.

By: van der Eijk, Henk and de Jong, Henk
From: The Netherlands
Organisation: Sonneheerdt the Netherlands

“What is a new and innovative role of organisations in supporting employment for visually impaired? This speech will elaborate on this question by taking a phrase from the novel “The Invisibles” by Karel Glastra van Loon a Dutch novellist.

Come, take my arm and lead me from here, out of the dusk of my hut, into the pale morning light out there and I will show you a world I’ve never seen with my own eyes, but which nevertheless is as familiar to me as the town I grew up in. Downstream the river stretches before us in north-western direction, a coiling ribbon of calmly flowing water in a bed of round pebbles. On the right bank are the vegetable gardens that are tended to by the children of the orphanage. They fill big plastic watering cans with water from the river and empty them over the rich clay, on which yellow beans, corn and banana trees are growing. They go about their work quietly and with great dedication. The watering cans have bright colours, red and yellow and blue.
I known what you are seeing, for though I do not see it, I had it told to me a hundred times. And, what is more, I hear, I smell, I feel. I have learned to see in the dark.
(from: ‘the invisibles, author: Glastra van Loon,2003)

Mr. Ho is blind and lives in a camp of Burmese refugees in Thailand. He has never seen the world around him, but he knows. He can describe colours, sounds, smells, movements and he can find his way and show visitors around in the camp. Although he lives in an undesirable situation, he is able to find his way and contribute to the family he lives with. He shows his power, and he makes use of it, not only to survive, but also to enjoy his being in this world.

Fortunately most of us live in better circumstances; we enjoy education, pensions, housing and assistive devices and organisations supporting the visually impaired in living their lives are available in most countries.
However, disability care programs are relatively new in the Netherlands. Taken up as charity by industrials and wealthy families in the beginning of the 20th Century, programs for disabled became a full government responsibility only 50 years ago. Today we experience a government that involves private partners and local communities in social care and integration programs for disabled persons. Looking ahead, it is envisaged that 40% of the population in Western Europe will be over 65 years and that two third of them will experience mobility problems, including sight problems. The issue is how Sonneheerdt will respond to a government that no longer takes an exclusive role in a society requiring increased attention for those who need assistance.

Perception

The first question that arises is how we perceive visually impaired persons? How do we see them? Do we see them as weak, vulnerable in need of assistance 24 hours a day, or do we regard visually impaired as autonomous individuals able to live their lives, while using their social, intellectual and professional capabilities? How do we act and: will we be successful in materialising our intentions?

Sonneheerdt recognises and accepts differences in people's abilities and perspectives. We always did, but our approach has changed. Till five years ago we offered a service package that was well described and organised. We knew what was needed by the visually impaired and we delivered the best we could, from our perspective. Today we adopt working principles underlining the drive of all living entities to grow and develop themselves, using whatever they can use to accomplish their assignments in their lives on earth. An optimistic view indeed, but also a one that creates space for our clients to work with their own ambitions, for people to be proud of who they are and what they do.

Competencies

This view implicates a tailor made approach in our services. Sometimes we provide care for elder VIP's or multi handicapped. We do assist them in living well, offering daily activities and a job that fits them at the level of their capacities. Most times however we offer our expertise and knowledge in the field of employment and living to our clients, knowing and realizing that we do not have the answers and solutions to all questions and problems and that we have to work together in a mutual and shared responsibility to get ahead.

Our working model is based on competencies, which is recognizing a persons' ability to steer its own processes and results. This position is different from what we were used to when we acted as a helper, a teacher or instructor. In other words we changed from a supply driven orga-nisation in a demand driven service provider.

This morning, Mrs. Truda Kruijer elaborated on her work as director Employment and Vocational Training at Sonneheerdt. She informed the audience about our approach towards students and individual clients. Using their competencies and capacities to find a way in society, to get a job, to be fully integrated in society and paying a contribution to it. Yesterday, Mr. Henk de Jong, head of our department of international affairs discussed how we practice our working principles while working at institutional level with blind organisations in Eastern Europe.

What do we need to be successful in our approach?

Vision

It requires first of all a clear vision on people and society. Who is responsible for growth. We do believe that governments are to play a supportive and sometimes corrective role, but the responsibility for growth and living a decent life lies with the individual and the institutions itself. We also believe in a caring community, which means that people care for others, have compassion with other beings and know that human beings are interdependent, that we do need each other to live and to grow.

Staff

We do need experienced, dedicated and motivated staff. We require people who care about their work and the impact they may get, which is: serving others. We stimulate our staff to learn, to share and to optimise their own competencies. We cater for sharing experiences and knowledge in special sessions, publications, networks and congresses like ICEVI. Our staffs reflects on their attitude, skills, motivation and results with colleagues and managers

Organisational design

Sonneheerdt is developing itself as a knowledge institute. Knowledge and expertise in our fields of operation are our main assets. We search for excellence and for that we need our people. Our staffs are our human capital. Our staff cares for you, we care for our staff. A knowledge institute requires a flexible design, with delegated responsibilities at all levels. It also requires team orientation; two persons know more than a single one. Knowledge has no borders. Our expertise is shared and delivered to national and international clients. To individuals and increasingly to institutions that operate in the same areas as Sonneheerdt.

Means

Sonneheerdt receives funding from the government, the European Commission, our own trust fund and increasingly from services rendered to our clients. We do rely on our work, our efforts, motivation and of course on our results.

Case story: Moldova

Allow me to share an example of our work in Moldova.

Together with the Moldavian Blind Union we started collaboration a few years ago. Sonneheerdt started off with delivering services and knowledge in the area of vocational training and Braille printing. Sonneheerdt financed the equipment of an upholstery training centre cum wood workshop and we equipped a Braille press unit at the Moldavian Blind Union. We assisted in the training of upholstery teachers and Braille printing managers. Both units are working well, but gradually we noticed that the issues the Moldavian Blind Union deals with are much more complicated and massive than we expected at the beginning. As a matter of fact the Blind Union requires funds for investment in new technologies; cash to pay the workers at the factories at a regular base. The organisational set up was inherited from the former socialist regime and not fit for an open market economy. Market instruments are hardly available and the access to international networks and funds is highly insufficient. Our assistance thus required a much larger and more comprehensive approach as well as long term commitment and extensive funding.

On the request of the Moldavian Blind Union we formed a mission assessing the nature and magnitude of the current issues and possible perspective that could help the Blind Union to generate its own funds, to employ visually impaired and to become a modern and future oriented institution. Now, the Blind union in Moldova will soon start a reorganisation process. It will invest in new technologies, marketing and lobbying and it will expand it business networks and linkages both nationally and internationally.

Our role in this was to act a partner and to react upon the demands and requests of the Moldavian Blind Union. We delivered some of our expertise and networks and for the future we will take a part in network development, lobbying and institutional development. In this example, Sonneheerdt acts in a blend of partner, facilitator and knowledge provider at institutional level. We will continue to do so, at institutional level, at individual level with our clients and our students, nationally and internationally.

66 Vocational education for visually impaired students with (severe) learning difficulties I and II

By: Schuman, Johannes
From: The Netherlands
Organisation: Bartiméus Education

Introduction

During the late 1990s parents and teenage students started to challenge our educational provision for the academically less able students. The parents in particular were very sceptical of the potential of our educational programme to prepare their child effectively for transition to adult life and living in the community. They brought forward that for most of the students with a visual impairment and learning difficulties their education at Bartiméus, despite the need for life-long-learning, will be their final experience with formal schooling. Therefore they demanded this experience to be of high quality.

The teachers and support staff involved in the education of these teenage students agreed with the parents and the students and decided to do something about their justified complaints. Based on interviews with parents and students we identified four problems:
The current curriculum for these students had no clear structure. The content did not appeal to them and it did not support them to prepare effectively for adult life.
Much of the teaching content was regarded as not really relevant for teenage students. Making use of textbooks from years 4 and 5 of the primary school made the students feel insecure, stupid and deficient.
As a consequence the students did not feel responsible for their own learning and became disaffected and disinterested.
The parents found they had little say in decisions regarding the choice of provisions for their child.
The teachers shared with the students the experience of lack of ownership. They acknowledged that the curriculum and the learning experiences they were able to offer were not good enough to help prepare these students for adult life. It made teachers feel uncertain, insecure and often unprofessional.

"Praktijkonderwijs" is a new type of secondary education in the Netherlands for students with learning difficulties (implemented in September 2002, but it started off in 1995 at some experimental schools in Amsterdam (Samenwerkend Praktijkonderwijs Amsterdam, 1998; Samenwerkingsverband VSO-MLK /KPC Onderwijs Adviseurs, 1997).
From 1998 to 2002 the schools for students with learning difficulties were expected to gradually evolve from primary schools into secondary schools preparing the students for the labour market.
The students who are the target group of "Praktijkonderwijs" have an IQ between 60 and 75/80 (measured with the WISC) and they have a developmental lag of three years or more (compared to students in the final year of primary education) in at least two of the following areas of learning: numeracy, spelling, reading comprehension and reading proficiency (OC&W, WVO, 1998). "Praktijkonderwijs" does not lead to a formal qualification and does not subject the students to national examinations. Its main focus is to support the students to transit successfully into employment (ibid).

However special schools for students with a visual, hearing or physical impairment and special schools for students with severe learning difficulties (an IQ below 60) or behavioural difficulties remained under the primary education act (OC&W, WPO, 1998). This meant that these schools did not receive an additional budget or additional facilities to develop a kind of "Praktijkonderwijs" for their students.

For us at Bartiméus this meant that we had no budget to, for example, develop a challenging curriculum, organise vocational training and work experience placements or transition to employment programmes. Therefore Bartiméus decided to use private money from its charity to finance the development of "Praktijkonderwijs" at their special school. Bartiméus appointed me as project leader and I wrote a project plan (Schuman, Project plan "Praktijkonderwijs", 2001). The project spanned a period of five years (September 2000 – June 2005).

Getting started

We visited regular schools for "Praktijkonderwijs"; we informed ourselves about new developments nationally and internationally and we started to critically discuss and reflect on our current practices.

In July 2000 we presented a report to the management. We wanted to link the unit of students with learning difficulties, aged 12 to 20, to our department of pre-vocational secondary education. In September 2000 the management of Bartiméus Education agreed. The first thing we did was to change the name of the unit into "Praktijkschool", school for "Praktijkonderwijs", the same name the Dutch government introduced for regular schools for students with learning difficulties (OC&W, WVO, 1998).

The first phase was to take care of organisational and staff issues. The teachers and classroom assistants for example were offered the choice to stay in primary education or to be part of this new adventure to develop "Praktijkonderwijs" as a specific form of secondary education which obviously called for commitment, but even more for changes of views, values, attitudes and teaching styles. After organisational matters and staffing of the new unit were adequately taken care of, we began to discuss the curriculum we wanted to develop.

We needed answers to the following questions:

- What is "Praktijkonderwijs"?
- What are our colleagues doing in the other two institutes for students with a visual impairment in the Netherlands?
- What is going on in regular schools for "Praktijkonderwijs"?
- What is the impact of the visual impairment on the way we are going to develop "Praktijkonderwijs"?
- The next set of questions was:
- How are **we** going to do it?
- And what are **we** exactly going to do?
- Where do **we** start?
- How is **our** version of "Praktijkonderwijs" going to look like?
- We only had a small team of 12 practitioners, some of them working only part-time, and although we had just 35 students, the differences among them were huge and their age ranged from 12 to 20.
- For the years to come we agreed to aim at:
- The development of a coherent view on Bartiméus "Praktijkonderwijs".
- The development of a new and empowering curriculum for our students with learning difficulties.
- The active participation of these students at all stages of this process.

- The involvement of parents at critical stages of this process.
- The participation of teachers and support staff and the use of their unique experiences, knowledge and skills.
- Informing our own research, developments and practices through critical analysis of and reflection on current research and on existing and newly developed practices nationally and internationally and to undertake practice-based research by ourselves.
- The organisation of our in-service training in such ways that it would support these developments maximally.

A new vision

Our first challenge was to develop collaboratively a coherent and shared view on "Praktijkonderwijs" to underpin our future actions for improvement and change, and to stimulate and support all the teachers involved individually and as a team. To make all threads meet and to develop, manage, facilitate and implement new practices and curricula it is important that these are *informed by critical educational theorising and research* and *guided by a general commitment to the well-being of clients, a commitment completely embodied in participatory processes of curriculum decision-making, which involve students, parents, employers and other community members* (Carr and Kemmis, 1986, p 223).

The curriculum we wanted to develop should not only support our students to prepare for employment.

Living as independently as possible and interdependently as needed in a more inclusive community was equally important for them and us. We knew this would not be an easy effort, because of the many pitfalls and the *dehumanising effects of tying education too strictly to the supposed needs of employment* (Edwards, 1998, p 5).

We needed to think about whether it is possible at all to develop an empowering curriculum within tightly defined parameters, where students have little opportunity to participate in determining the content of learning (Bates, 1998). Training for a vocation, for example, may subject our students to a poor quality of training and learning, because the emphasis might be upon *developing deferential attitudes and punctual, reliable attendance, rather than upon acquiring skills* (Corbett and Barton, 1992, p 18). A necessary condition for developing an empowering curriculum therefore was the involvement of the students at all stages of the process. At Bartiméus "Praktijkonderwijs" we wanted to develop a curriculum which would increase the school's role in nurturing its students' self esteem (Bruner, 1996).

We decided on the following features as fundamental for our vision:

- Support, participation and empowerment are the key words. The programme should support our students optimally to gain a place of their choice in Dutch society. Therefore the programme should focus on: preparation for transition to further education or to employment; housing and home economics; leisure activities; living in the community and being part of the community.
- Teachers and support staff are challenged to support the development of the students into competent, autonomous and social adults. Therefore students are challenged to participate in the decision making process at all stages of their educational career. The aim is to support them to become directors of their own lives and to take over the tasks, duties and responsibilities which belong to this new role. The student is expected to bridge the gap between empowerment and self-empowerment. This is a learning process for the student. Therefore Bartiméus is offering a support system and not a care system: each student is challenged to become actively involved, to exercise choice and to give his /her very best for an

educational programme which fits his /her preferences and abilities and Bartiméus Education is providing maximum support.

- The student participates in meetings where important decisions are taken with regard to his /her educational programme and the extra support which may be needed. The conversation is with the student rather than about the student.

We realised that this vision would require a new role of the teachers. They were expected to become facilitators of learning and thus to support students to exercise choice and to gain ownership of their own learning. They had to get rid of a one size fits all programme. Instead they needed to find out what the individual student needed to develop his /her full potential. We acknowledged however that this was going to be a learning process both for teachers and students.

From individual education plan to individual education profiles and contracts

To discuss with a student and his /her parents the progress the student made and to decide what the programme should be to best fit the needs and abilities of the student we decided to develop an alternative for our individual education plans and the meetings we had with the parents. After some discussion we decided to try out a new procedure with new formats. All students (from 12 – 20) were expected to participate. The class teacher would make a provisional Individual Education Profile of the student based on his /her observations, assessments and discussions with the student. The class teacher would also get information from colleagues and support staff. I third source would be the files we keep of the student. The provisional profile is discussed with the student and his /her parent and suggestions for change or afterthoughts are written down. When the different stakeholders disagree on an issue they discuss the matter until an agreement or compromise is reached. The student's opinion is of overriding importance. The class teacher prepares the final profile and incorporates it into the Individual Education Contract with all the engagements. When parents and student agree with the contract they are expected to sign it.

The main idea behind the new procedure was that the students should be in the centre at the meeting. We expected the students to speak for themselves. To express their personal opinions about their educational programme, their preferences and the skills they wanted to develop. The parents or the class teacher were invited to ask questions, to clarify or support or to bring in new subjects. This approach entails that the interviewer (head of department or the Senco) needs good interview skills to make the student feel at ease and to get the necessary information from the student. When discussing the provisional Individual Education Profile with the student asking open questions proved to be the most important technique to learn more about the student's opinions on his /her education programme.

Experiences after a three year try-out

Our main finding is that students have to learn to speak for themselves. The first time they participated in the discussion of their Individual Education Profile many of them were nervous and insecure; some were almost terrified. Therefore it is important to involve the students right from their start in "Praktijkonderwijs" in these discussions. Students who participated for the third time were quite confident and were very capable of speaking for themselves.

Many students surprised their parents and their class teachers with regard to their level of self-confidence and self-determination during the interviews and with their ability to choose for educational options, e.g. with regard to work experience places, they thought was in their best interest, for now and for their future life.

Many parents clearly needed time to adjust to their new roles. They had to hand over the initiative to their child and had to settle for a more facilitating and supportive role. For many of them this proved to be quite difficult. Some parents did not want their child to be present at the meeting. We did not accept this, but we offered these parents the opportunity to discuss the education of their child without the child at a later date if they still find this necessary after our Individual Education Profile meeting.

The class teachers also needed to adjust to a new role. They were not in charge during the meeting and had no leading role. Their main contribution was to develop the provisional Individual Education Profile and to clarify when things were not clear. They had to get used to the idea that other people, and in particular the students, had the opportunity to question their views and to demand adjustments or alterations.

These meetings are key moments in the student's preparation for and transition to employment. The skills students learn when preparing for and engaging in these discussions proof to be important skills for adult life as well.

Self-advocacy, taking charge of and becoming responsible for your own learning, speaking about the difficulties you face because of your disability and how you plan to cope with them and learning to focus on your strengths are the skills these students will need most when entering the labour market and establishing their place in society. From our experiences we learnt that this is a difficult process for the students, but it is also a necessary process.

We witnessed that students changed because of the new roles we expected them to perform. Some of them confronted their new class teacher at the beginning of the school year with the Individual Education Contract because he /she had not taken care of all the arrangements participants agreed upon. Some of them discussed with the subject teachers the relevance of subject content for their personal development or future prospects.

We witnessed that teachers welcomed the new role for the students. They supported these developments because they subscribe to the view that students need to experiment with these roles during their school years to enter the labour market better prepared. But sometimes it wears them off because students are displaying their assertiveness at moments teachers are not able to cope with it well.

The interviews I held with the students and their parents after our three years of experimentation made clear that they all favoured the new procedure. They said it was clear, to the point and very practical. The students in particular found the meetings and their presence quite normal: "Who else would be able to speak for myself the way I do?"

Interviews with students, parents and support staff

To check whether we really had made progress with the development of "Praktijkonderwijs" and had realised more involvement and participation of students and parents, resulting in more empowered students, we decided to interview students, their parents and their teachers and teachers assistants. I interviewed 36 students, 28 parents and 10 teachers and 2 teacher assistants.

I did the interviews between September 2003 and march 2004. The interviews with the students took between 17 minutes and 45 minutes. The interviews with the parents took between 30 minutes and 90 minutes. The numbers of students and parents were quite representative for the Dutch population of visually impaired students who received "Praktijkonderwijs":

• Bartiméus:	34 students in "Praktijkonderwijs"
• Visio:	12 students in "Praktijkonderwijs"
• Sensis:	10 students in "Praktijkonderwijs"

- In mainstream schools: 6 students in “Praktijkonderwijs” approximately

The main findings

Personal accounts of the studentsContacts at home

- Very few or no friendships in the neighbourhood. This finding applies to both residential students and home-staying students.
- The students pass their time behind the computer, watching TV and listening to music.
- Contacts students have with peers usually consist of contacts with class mates and other students from our school, through e-mail, chatting, telephoning and staying with them for the weekend or the holidays.
- At weekends and holidays many students are bored stiff, in particular the elderly students. I frequently heard: “I always am pleased when school starts again, because I will be able to see my friends.
- Students who make use of the residential facilities report as most positive outcome of living with their peers in a residential home “having friends” and talking to peers who “have the same disability and the same experiences”.
- Use of supporting aids
- In Zeist the students do use the cane. If they want to go into town most of them are obliged to take their cane with them.
- At home they prefer to not use their cane. They are ashamed of it. “People stare at you. I feel completely embarrassed. In Zeist the other people are used to people like us.”
- ICT aids and assistive devices were not seen as disabling devices.
- Coping with their disabilities
- Many of these students seem to cope rather well with their visual impairment. Many find it more difficult to cope with their other difficulties. Learning difficulties, epilepsies and severe motor difficulties in particular cause anxiety, grief and defiance.
- Many students use words as “embarrassment”, “shame”, “feeling different”, “being stared at” when we discussed their presence in public life.
- Some of the more able students (IQ approximately 80 according to the WISC) report that they feel very embarrassed by their more disabled peers when they leave the school, e.g. to visit a museum: “I am very anxious that the more ordinary people identify myself with my more handicapped classmates and think that I am like them”.
- “Understanding is what you get from your “peers in adversity”. Discussing disability and exchanging views with others how to cope with disability occur during regular lessons but in particular during the social and emotional competence lessons.
- “When you participate in work experience placements it is necessary to be able to communicate effectively with others about your disability because you must be clear about what you are able to do but also where you may come across difficulties.” We practice this during the SEC lessons.”
- Understanding by other people
- Students are very clear about people who do not themselves have a visual impairment (e.g. parents, teachers and caretakers in the residential homes): “They are not really able to understand what it involves to be visually impaired. They say that they understand, but really they cannot. We do not have the same experiences and they do not face the difficulties I have to face.”
- The significance of school
- Students know very well why they are in school. They are quite able to distinct between subjects they see as important and subjects they just like. Sometimes, but

not very often these two overlap. The students in general regard Dutch language and communication, maths, social and emotional competence, preparation for employment and work experience placements as most important.

- The students find it difficult to explain what “Praktijkonderwijs” exactly is; Students do not have a clear view of what “Praktijkonderwijs” is and why they are in “Praktijkonderwijs”. Most of them think that they are in “Praktijkonderwijs” because of their visual impairment and not because of their learning difficulties. Hence the development of the student information brochure.
- Students are able to clearly indicate what a good teacher is. He /she is

Able to listen well.
Just a kind person.
Patient.
Strict and clear when necessar
Not yelling when he /she is angry. Surprisingly often students (24 times) mentioned this aspect. Predictable.
Able to teach well, in particular to explain things well.

- The students highly value the quality of assistive devices: CCT reading magnifiers, computers, speech output and print magnifying soft ware, Braille display attached to the computer, etc. They praise the way the school is organising these supportive provisions and they are positive of the teachers’ support when they get stuck or their computer fails.

IEP meetings

- All students highly value them! The feel taken seriously. They describe the meetings as a process of true collaboration which gives them the opportunity to exercise choice.
- They think it is very important that they are present at the meetings. “I want to hear in person what is said, and when I disagree, I want to stand up for myself.” We also experienced quite some times that parents and the student disagreed on issues and on the choices to be made, e.g. stopping with certain parts of the curriculum.
- All students reported that it took time to get used to the procedure. “The first time it thought it was extremely scary. Now I start to get used to it.” We had students who left the meeting crying. The second time they started crying, but they stayed. The third time they were okay, although they were still tensed. We experience that the elderly students in particular are very pro-active and able to effectively manage their own affairs.

Personal accounts of the parents

Impact of the visual impairment

- Huge. One father said about his 13 year old daughter: “I estimate that 80% or maybe even 90% of my leisure time goes to my daughter. I have to accompany her everywhere. Drive her to horse riding, friends, etc. One mother: “Since our son is at Bartiméus my husband is grieving. He started to re-decorate the kitchen before the summer holidays, but had not been able to do anything for the past six months.”
- It affects family life and relationships with relatives. One mother said: “Because of rows with my mother about our daughter P and how she behaves, I have not seen my mother for years. My mother just did not understand the impact of the visual impairment. She expected Pauline to behave as her other grandchildren.” And a father said: The problems increased when our daughter M grew older and lost more of her sight. When we were visiting relatives we brought our own reading lamp for Marianne and dinnerware with a good contrast for her. But people just feel

offended. We nowadays tend to keep more to ourselves. In the end you get fed-up with things."

- The visual impairment also has consequences for how people spend holidays and weekends. "It is sometimes difficult to explain things to our other kids and to expect them to understand and to reconcile them with the situation." We often split up the family, which we as parents do not feel comfortable with. But we do it for the sake of the other children."
- Living with your disabled child is labour-intense and time-consuming. "As a parent you need to take the initiative over and over again to arrange for her playing with other kids." "The natural process of coming of age and becoming more independent from the parents is much more complicated with such a child. It is different. Normally you would expect that your teenage daughter will need you less and less, but she needs me around most of the time because of hygienic demands. I am glad that she has chosen to live in one of the residential homes of Bartiméus. But this also makes me feel guilty."

The learning of the parents

- Several parents pointed out that they had undergone quite an intense learning process of trial and error. It took years to try to understand the impact of the visual impairment and the added complexities of the learning disability of their child. It is an ongoing search for opportunities and finding the right track to support the child as much as needed. Sometimes support is available among acquaintances but often parents feel they have to put up with quite some ignorance and misunderstanding. Many parents report that they learned much from their child and the courses Bartiméus has on offer were highly favoured.

The future

- Parents find it very difficult to get a clear view of the prospects of their child, particularly when thinking of work and housing. Many of them expressed their need for guidance and support on these issues.
- Several parents said that they are really worried about the future of their child. They fear that due to cut backs on social benefits and individualisation and its focus on taking care of yourself their child, because of their disability, will become more marginalised, vulnerable and isolated.

Contacts with teachers

- Parents in general consider the school and the teachers as easily accessible.
- Information exchange by e-mail with class and subject teachers seems to become more and more customary. This service is highly valued by parents: it is easy and very prompt.

Quality of education and provisions

- Parents are satisfied with the quality of education.
- The opportunities we developed to create tailor-made programmes, e.g. providing some students with the opportunity to gain formal qualifications, are highly valued.
- In general they are satisfied with the quality of teaching. Some of the parents questioned the teaching and classroom management competences of one teacher, but parents who have a child who needs a lot of social and emotional support were very happy with her caring attitude.
- Provisions are of high quality, in particular the ICT facilities.

- For some of the students with very specific educational needs we have not yet found or developed appropriate curricula and teaching and learning materials.

Role of student

- Parents clearly acknowledge that we are seriously striving to stimulate the student to take more control. And many times they think we are successful and succeed.
- IEP meetings are well received. They are relevant, focused and directed at the student.
- Point of interest: position of the blind students in the school.

Personal accounts of the teachers; Teachers' perception of Praktijkonderwijs

- The teachers are clearly committed to the vision we laid down in the document *Bartiméus Praktijkonderwijs*. They stand for Praktijkonderwijs as we developed it, they value the changing roles for parents and students and they are quite happy with the model of IEP meetings.
- They think the ratio between practical and academic subjects which is 50-50 is all right and they strongly support the emphasis on preparation for employment and on work experience from year three onwards. We do share a coherent view on Praktijkonderwijs and I was very pleased to learn that the teachers and class assistants were quite good at making clear what Praktijkonderwijs at Bartiméus was about.

Coping with differences

- Teachers say that on a daily base they are challenged to meet the different needs of their students. Differences are huge. Good classroom management is difficult and demanding in particular when you try to alternate individual work and group work. Trying to get the most out of every student and at the same time providing enough care and support when needed without becoming patronising, often feel like balancing on the tight-rope.
- The huge differences in pace of work challenge their organisational skills and call for alternative ways of grouping during certain lessons.
- The teachers find it very difficult to provide the student on a day to day basis with relevant, stimulating and challenging teaching materials. They admit that they do not always succeed in realising this.
- Individual programmes (e.g. the students who are doing 2 subjects with their peers in pre-vocational secondary education to gain formal qualifications; students who need extra lessons in Dutch as a second language or Braille or using the cane) cause much work stress and demand high levels of flexibility of teachers.

Role of students

- The teachers highly value the enhanced opportunities for students to exercise choice and to have a real say in the decision-making process. But they also express that sometimes they get weary and tired of always taking into account students' views and opinions: students do challenge their teachers and hold them accountable for what was agreed upon in the IEP meetings "and sometimes you just are not in the mood to explain and to be accountable for what you are doing".

The change process

- To start a process of change in education is quite easy.
- Sustained change and implementation of innovations however are rather complex, difficult and challenging.

- Change demands teachers to adapt to new roles.
- Fundamental are: a clear vision, extra facilities, commitment, in-service training which supports the change process, flexible project management and accredited leadership.

Role of parents

- Teachers welcome the greater involvement and participation of parents. It is more beneficial for the student when school and family are operating more closely. Nevertheless teachers find it difficult to cope with criticism of parents. They think that sometimes the parents take their frustrations about their child's difficulties out on them.

The achievements

- Improved relationships with parents and students.
- A new perspective and new practices on support in education, e.g. the implementation of Individual Education Profiles and Individual Education Contracts and the central role of the students during the IEP meetings.
- Importance of assessment of student's performance, thus testing.
- More knowledge on the impact of a visual impairment and learning difficulties on family relationships and student self-perception, hence better equipped professionals.
- New learning and teaching materials.
- The incorporation of current expertise, knowledge and skills of subject teachers in teachers' and students' manuals.
- More emphasis on the strengths of the students, instead of emphasising their weaknesses resulting in better opportunities for the students.
- Improved preparation for employment programmes providing students more choice and increased participation.
- Better information on Praktijkonderwijs for prospective students, e.g. a brochure for prospective students developed by the eldest students.
- Experimentation with formal certification of students:
  1 female student got a formal certification for math and home economics in 2004
  1 female student got a formal certification for business administration in 2005
  2 female students made the switch-over from "Praktijkonderwijs" to pre-vocational secondary education in 2004
  1 female student did the same in 2005
  1 male student joins in with a class in pre-vocational secondary education for the subjects German and French, because he has a keen ear for foreign languages.

Although he is not good at grammar or writing and will not get a formal qualification, he will be able to understand and speak the languages very well.

The challenges for the future; Free hours

Students brought up this subject very frequently during the interviews. They demand equal rights: their peers who are in the unit for pre-vocational secondary education have no class teacher. When lessons are cancelled they have a free hour and are able to do something for themselves. The students of Praktijkonderwijs are expected to go to their class teacher when other lessons are cancelled. They consider this an injustice and demand "equal treatment".

Keep experimenting

Teachers acknowledge that now the project to develop “Praktijkonderwijs” has finished there is a danger of sitting back and considering the work as completed. They see as their challenge to go on with innovation and experimentation, because tailored programmes, designed to meet the individual competences and preferences of the student will prove to be more rule than exception in such small and very specialised schools as Bartiméus “Praktijkonderwijs”. “This is the only reason for schools like these to exist, at least for the moment.”

Securing the achievements of Praktijkonderwijs

Teachers clearly committed themselves to secure the achievements of Praktijkonderwijs this year. Many new practices, curricula and newly developed procedures have been implemented these past years. The challenge is to realise sustained improvements with the focus on:

- Further implementation of the five core curricula and the new textbooks that go with them.
- Accessible and challenging teaching materials for every student.
- Strengthening of the practical subjects.
- Securing the achieved high level of our career guidance and support programme and the diversity of our work experience placements.
- The development of a curriculum for teaching the English language to students with learning difficulties.

Strengthening the triangle

Parents of boarded students say they consider it very important for the school and the residential services of Bartiméus to cooperate more closely and to better fine-tune their services, particularly when students are starting to think about leaving school and decisions should be made with regard to housing and work. At the moment parents feel more at ease working and co-operating with the staff of the residential services than with staff from the school. To realise more co-operation they plea for clear procedures and systematic planning.

Availability and accessibility of teaching materials

Parents, particularly those who have a blind child or a child with very specific educational needs, say that they do understand the difficulties we have in providing accessible teaching materials. They also understand that adjusting existing materials is time-consuming and often costly. But these parents also indicate that they have heard this excuse as long as their child is at Bartiméus Education, which for some of them expands to more than 5 years.

Decorating the buildings

Parents think that the school needs to rethink the design of its facilities and buildings to better suit the needs of blind students with regard to orientation and mobility, feeling themselves at home and being able to participate in all activities. They think that a challenging and inspiring decoration and design of the school should spread the message “this school is your school. Welcome, we think it is great to have you here”.

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Appendix 1: Models of provision and support

	Medical model	Social model
View on the individual.	Patient.	Citizen.
	Person with an impairment or disorder.	Person who asks for support. Focus on self-advocacy.
	Disability is the problem of the individual.	Inclusion and participation are challenges to a disabling society.
	The individual is dependant on professionals, is passive and has few options.	The individual is an actor, is self-directive and makes choices.
View on care and support.	Professional has the knowledge, knows what is best and is in charge.	The individual and his her social network are responsible. Professionals organise support when advocated for.
	Treatment and care form the basis of the provisions.	Support for self-advocacy and making personal choices: empowerment.
	Treatment of the individual.	Social action directed at the social network.
	Treatment and care focus on adaptations for individuals.	Support focuses on the individual as part of a social network and is dedicated to social change.
Relationship between professional and client.	Top down.	Bottom up with support of the social system.
	Professional is the expert, client is ignorant.	Client is an expert in his /her own way and may ask for specialist support and advice in certain matters.
	Focus of professionals is to control the relationship.	Starting point is a relationship based on equity and respect.
	Responsibility is handed over to a professional.	Client stays in charge.
Structures /facilities of care and support .	Specialised institutes. Often large scale.	Integrated (inclusive) facilities, based on social networks with the support of a safety net. Preferably small scale.
Policy base.	Segregation and exclusion.	Integration and inclusion.

67 An eye for signals

Video
By: van den Broek E.G.C.; Wallroth, M.
From: The Netherlands
Organisation: VISIO

Abstract

For more information please contact the author: nathaliewienneke@visio.nu

This is a film about signals of visual impairment in children with a mental disability.
The visual functioning of children with developmental problems is often not assessed. This is usually because it is either difficult to diagnose or because we are not aware of the problem. And the children themselves are unable to express the fact that their vision is impaired.
The film is intended to help parent and carers refine observational skills and learn how to watch for signals in children's behaviour which might indicate visual impairment. Four children are shown in different situations and accompanying explanation is provided.
For more information: www.visioweb.nl

68 Creation of Early Help (Support) centre for children with vision problems

Video
By: Sumarokova, Irina
From: Russia
Organisation: Member of ALL-Russian Society of Blind

For more information please contact the author: irasu@sandy.ru

69 SCIVIS: Space Camp for Interested Visually Impaired Students.

Video
By: in 't Veld, Dorine
From: The Netherlands
Organisation: Bartiméus Education

Abstract
For more information please contact the author: d.i-veld@bartimeus.nl

Each year 10.000 students graduate from a week of Space Camp in Huntsville Alabama. One week a year ca. 170 visually impaired students do so. In 2004 Bartimeus had one student who attended this event. We followed him and like to share with you our findings.

The week means much more than gaining knowledge and skills astronauts and pilots need and having challenging experiences in simulators and Scuba Diving. It is about teambuilding, getting to know yourself and your strong points, positive and creative thinking, social and leadership skills, motivating yourself and others. It shows how much fun learning can be and it empowers the students.

In a ca 15 minutes video presentation an impression is given of the activities in Space Camp. Hopefully it inspires people to make it possible for some of their students to attend this Camp, or, if that is not possible:

- to implement some of the principles of Space Camp into their educational approach
- to organize alike events in Europe.

Keynote speech

70 Orientation and Mobility – Aiming for Excellence

By: Dr. Tzvetkova-Arsova, Mira
From: Bulgary
Organisation: Sofia University "St. Kliment Ohridsky", Faculty for Primary and Preschool Education, Department of Special Education,

Dear Ladies and Gentlemen, dear colleagues and friends,
It is my honor and privilege to be here with you, at the ICEVI European conference in Chemnitz, Germany. I am especially delighted of the fact I was invited to present a paper on a plenary session and to talk to you about one of my very favorite areas in the education of Visually Impaired – **Orientation and Mobility.**
I would like to focus in my presentation on two basic topics:

1. What is Orientation and Mobility? What are some of the factors important for the instruction?
2. In the second part I would like to take you on a little journey to discover together how the profession of Orientation and Mobility was developed and how individuals involved in the historical process have searched for excellence in Orientation and Mobility throughout history.

What is Orientation and Mobility?

There is no doubt that vision plays important and even dominant role in one's ability to find and traverse desired clear pathways as well as to anticipate and avoid obstacles in locomotion, said Pick in 1980.
Orientation and Mobility is one of the special programs or a unique area of the expanded core curriculums taught to Visually Impaired in special and regular schools and in other services for individuals with any degree of Visual Impairment – either totally blind or with low vision. The main goal of this special program is to compensate for the visual loss and to offer through systematic and carefully planned instruction knowledge and abilities to understand one's position in the environment and to move around. In the same time as Stone (1997) noted Orientation and Mobility have to be considered as integral part of the total development and learning process of the blind child, not only as a short process of acquiring some new skills.
In 1948 Lowenfeld stated that the visual loss can be associated with three major limitations:

- in the control of the environment and the self in relation to it;
- in the ability to get about;
- in the range and variety of concepts.

All three limitations and especially the first and second one can be directly addressed to Orientation and Mobility. Many authors stated that: "The loss of Mobility is perhaps the greatest of all the reality losses of blindness" (Carroll, 1961, p. 34). Or: "The loss of power to move about freely and safely is arguably the greatest deprivation inflicted by blindness" (Koestler, 1976). In this regard one can easily imagine what significant role the special program in Orientation and Mobility plays in finding ways to compensate for the visual deficit.
What are the popular definitions of Orientation and Mobility? It is common to think of it as consisting of two main parts: Orientation, and Mobility.
<u>Orientation</u> is the ability to use the senses to establish one's position and relationship to all important objects in the environment.

Mobility is the capacity to move around freely, independently, safely, purposefully, with ease and in a socially acceptable manner.

According to Hill (1986) these two parts – Orientation, and Mobility, are interdependent parts. If a person is mobile but not oriented, there is no purpose to the movements, he says. Likewise, if someone is oriented but not mobile, that person can not reach the desired destination, he continues.

In 1986 Hill again defined the need for instruction in Orientation and Mobility. He underlined Orientation and Mobility was essential due to various reasons, among them:

- psychological;
- physical;
- social;
- economic;
- everyday aspects.

According to Welsh (2000) the success of the Orientation and Mobility instruction depends upon:

1. Personal abilities or factors.
2. Environmental demands or accessibility.
3. Individual behaviors.

The personal abilities or factors include (Blash, LaGrow & Peterson, 2000):

- sensory;
- cognitive;
- motor;
- psychological.

The environmental demands require (Blash, LaGrow & Peterson, 2000):

- social awareness that in turn includes:
  - public education;
  - environmental modifications;
  - advocacy.
- physical accessibility;
- climatic factors.

The 70-s of the last century was the decade of huge activism for creating standards for accessible environment to all individuals with disabilities. This was a period of time that encouraged environmental adaptations and modifications in many European countries.

The individual behaviors depend on the interactions the Visually Impaired would have with the public and also on factors as:

- motivation;
- desire for independence;
- lack of fear;
- willingness etc.

Historical aspects and the road from "foot travel" towards excellence in the instruction of Orientation and Mobility

It is well known in Special Education that there are five periods of care of society for individuals with disabilities incl. Visually Impaired. They are reviewed by Lindqvist (1994) and others. These are:

- period of **isolation** (1784 – by the middle of 19th century);
- period of **humanism** (the second half of the 19th century – beginning of 20th century);
- period of **connecting education with rehabilitation** (the first 4 decades of the 20th century);

- period of **integration** (after the Second World War – the 60-s/70-s of the 20th century);
- period of **equal participation in society's life** (the last 3 decades of the 20th century – ongoing).

Let us briefly go together through these periods and see what is known and typical for these five periods from an Orientation and Mobility point of view. What is done in this regard for the Visually Impaired individuals in the different times and how the profession of Orientation and Mobility developed as well as the care and instruction. What have educators and other professionals searched for in developing the special program of Orientation and Mobility. Some kind of independence for the blind? Equal rights and possibilities for Visually Impaired? Normalization? Or maybe excellence?
The first period which puts the starting point in the organized education of Visually Impaired and special society's care for the blind, is characterized with establishment of the first special schools. The birth year was 1784 when Valentin Hauy opened in Paris the first ever known special school for blind. His example was followed by other European countries and by the middle of the 19th century there were special schools for the blind in most of the states in Europe. During the period of isolation, no special attention to instruction in Orientation and Mobility was paid. At that time and until the beginning of the real Orientation and Mobility training, the ability to move around was called "foot travel". The academic education dominated. At that time it was important to prove to society that blind children had the capacity and ability for education, to learn to read and write, to get familiar with the foundations of humanities and science. This is the time when no special programs for the blind existed. In the same time the first attempts for starting instruction in Orientation and Mobility and for getting knowledge in this area, were made. Some important facts from this period:

1. It is known somewhere in the 18th century about John Metcalf from the UK, who was blind and worked as a road builder. He was famous with his abilities to move around with a very long stick or by riding a horse. He acquired these skills of moving freely all by himself.
2. In 18th century a blind citizen of Vienna named Joseph Reisinger trained his dog to serve as his guide. It is documented that he trained three dogs during his life and they all were able to guide him through the city of Vienna without any danger (Whitstock, 1980).
3. In 1819 Father Johann Klein wrote in Vienna his famous book "Textbook for Teaching the Blind" or "Lehrbuch zum Unterrihte der Blinden, um ihnen ihren Zustand zu erleichtern, sie nueztzlich zu beschaeftigen und sie zur buergerlichen Branchbarkeit zu bilden". In this book, among many other matters regarding the education of the blind, he described in details approaches for training and using guide dogs. This may be considered as the first theoretical (and maybe practical) model for one of the well known and widely used currently mobility devices. You can see an illustration from Klein's book, showing a blind man led by a dog, using special rigid harness.

During the second period of humanism society came to the idea that the education of children with disabilities has to be secured by special legislation. The first laws regarding the right of Visually Impaired to have access to education in special schools were passed. This is also the period of time marked by the establishment of organizations for and of Visually Impaired, among the first: the Royal National Institute for the Blind (RNIB) in 1868 in the UK. What was significant for this period in regard of Orientation and Mobility? Again some historical facts:

1. In 1869 the American blind teacher from Perkins school for the blind Francis Campbell arrived in Europe, spent few years in Germany and later settled down in the UK, where he established the Royal Normal College and the Academy of Music for the Blind. While in the USA he created a new discipline for the blind pupils named "bodily training" or "system of physical training", which included many elements of the current Orientation and Mobility. He continued this sort of education in the UK and taught the British students the same skills. He was knighted for his huge contribution for the education of the blind in 1909. There was an interesting story about the visit of the Duke of Westminster in the Royal Normal College in 1909. The Duke was surprised by the many "death traps" in the school ground, but after being blindfolded by Campbell, he was able to follow the way by signs all around the ground and back to the school building. In honor of the excellent work done by Campbell the Dyke left one thousand guineas to the school (quoted after Bledsoe, 2000).
2. Between 1877 and 1894 a few writings dedicated to Orientation were printed out in the German speaking countries, among them those of A. Messner, F. A. Buetner, Al. Mell etc. In the 1900 the Encyclopedia and Manual of the Science for the Blind (Encyplopaedisches Handbuch des Blindenweses) by Alexander Mell was published in Vienna and Leipzig. Few pages were dedicated to special lessons in training in skills for a fluent Orientation in the environment.
3. In 1872 W. Hank Levy wrote in London "Blindness and the Blind or A Treatise on the Science of Tiphlology". He dedicated a special chapter of his book "On the Blind Walking Alone, and of Guides". There he described three main methods accessible for the blind in order to move around: a) with a stick; b) assisted by a guide; c) accompanied by a faithful dog. Levy was considered by many as the author first explaining the exact use of the stick (cane for the blind) and as the father of the techniques of the white cane. In his book he also paid special attention on using the remaining senses by the blind and described some of them: the sense of hearing, smell and the unrecognized according to him sense of "facial perception". Levy's contribution to Orientation and Mobility is crucial and his writing remains even today a source of contemporary information and knowledge.
4. In 1897 the first prototype of an electronic travel aid for Mobility was developed. This was the "Electrophtalm".

The third period is characterized by the idea of incorporating special programs into the academic education to the blind. It was discovered by that time that many blind graduates from the special schools, even highly educated and gifted in many areas, were almost unable to find a job and to live independent and financially secured life. The first special programs were developed at that time for learning independent living skills, for visual rehabilitation and for successful mobility. The period was marked by the First World War and was definitely affected by the tragedy of many blinded soldiers.

1. In the 20-s the first official guide dog school opened its doors in Potsdam, Germany. The German shepherd was the breed successfully selected and used in the school for the blind veterans of the war. For many years the training and using guide dogs remained limited mostly to Germany and was considered typical for Europe and hardly known in other parts of the world. Wide expenditure of the guide dog as a mobility device for the blind became extremely popular after the article written down by the American, living and working in Switzerland, Dorothy Eustis. In 1927 she wrote in the Saturday Evening Post magazine the article "The seeing eye", where she shared interesting facts about dog's abilities to serve as guides for the blind. The consequence was establishment of guide dog schools all around Europe and on other continents.

2. In 1930 the largely used by many blind people stick or cane, got his constant and special color – white. Attempts for making the white coloring of the cane popular among blind and sighted, were made almost a decade earlier, in 1921. The long white cane became the symbol of blindness, but also of courage and independent travel.

The fourth period of integration was highlighted by the events followed by the Second World War. Some of the important facts from this period are:

1. In 1946 the American Richard Hoover, a clinical psychologist working in the Valley Forge Army Hospital with blinded veterans, developed the main technique of the long cane, called the touch technique. It became soon popular among educators and was taught to the blind users of the cane of all ages. Few years later, in 1952 the first training film about the long cane was produced in the USA. It was shown with big success on the festival in Edinburgh.
2. The term "Orientation and Mobility" substituted for the commonly used so far "foot travel".
3. In the 50-s the first tactile maps in Orientation and Mobility were created. Although maps of different kinds existed from the very beginning of the organized education of Visually Impaired, the tactile mobility maps and the cognitive maps were experimented during this period. They were followed by verbal maps, used firstly in the 70-s. Computer design and production became also popular and was introduced at first by John Gill in Covnetry, the UK.
4. In 1961 Thomas Carroll wrote there were four major travel tools accessible and known for the blind;, two of them for dependent and two for independent travel. The dependent travel tools were: the orthopedic cane and the human guide; the independent travel tools – the guide dog and the Hoover cane.
5. During the 50-s and 60-s the first working electronic travel aids were developed, among them the ETA of Lawrence Cranberg in the 50-s, the Lindsey Russell Pathsounder in 1964, the laser canes and the Sonicguide in 1966 etc.
6. In 1966 in Birmingham the first European university training program for instructors in Orientation and Mobility was started. It was probably influenced by the newly opened similar program in the USA (in Boston, Massachusetts, and in Michigan).
7. First conferences in Orientation and Mobility took place, among them the Rotterdam Mobility Research conference in 1969, the first International Mobility conference in Frankfurt in 1979, followed by many others.
8. Until the 70-s no special focus or attention was paid to the low vision persons and the specific instruction they needed in Orientation and Mobility. So far they were trained in the same way, the same techniques, the same length of education as the totally blind. The first Orientation and Mobility programs according to their specific needs were developed.

In the contemporary time of the fifth and last period of equal participation in society's life, the focus in Orientation and Mobility is put on few main aspects:

1. Orientation and Mobility for young Visually Impaired children became popular. It was started only in the early 80-s;
2. Orientation and Mobility for older persons got more attention and focus;
3. Orientation and Mobility for Visually Impaired with additional disabilities or the so called Visually Impaired multihandicapped children was started. This growing population became in the last decades maybe the major group of students receiving Orientation and Mobility instruction;

4. The profession of Orientation and Mobility developed and came to new dimensions. A Code of ethics was originated and currently exists in almost every country;
5. The mobility techniques and devices, however some of them almost the same as the classical ones, developed. Currently all classical mobility devices are applicable and in use – canes, guide dogs, sighted guides. Many modern high technology equipment and devices also evolved – the electronic travel aids. Some untypical mobility devices are also used – a guide horse;
6. A special emphasize is put on the instruction in Orientation, that has been overlooked for many years. Special orientation aids – all sorts of maps, are widely used for instruction and for daily application.
7. The services that offer instruction in Orientation and Mobility either for students or adults, are of new different, modern type and follow strictly the new educational trends as for instance the idea for integrated and inclusive education. Previously Orientation and Mobility was taught dominantly in special schools and settings, now it is available in regular schools, community services etc. for Visually Impaired;
8. The instructors in Orientation and Mobility are highly qualified and prepared to work with heterogeneous groups that vary in age (from very young babies to older persons), in visual status (totally blind or with low vision), in abilities (sensory, motor, cognitive etc.) and number of disabilities (the multidisabled).The instructors are able also to work in varying situations and circumstances (at day or evening/night times) and environments (special or regular settings or at the student's/client's home).
9. The tactile maps and their symbols were unified on a European level by the Euro town kit, developed in Nottingham. The kit was officially approved and adopted on the First and Second European Symposiums on tactile maps held in Brussels in 1983, and in Marburg in 1985.

I am really tempted to share with you a very special for my country fact. A fact that is connected with Chemnitz or the so called at that time Karlmarkstadt. Until 1978 there was no education in Orientation and Mobility in Bulgaria, unless some lessons in Orientation included in other school disciplines. In 1978 the first two Bulgarian teachers of Visually Impaired came to get training in Orientation and Mobility in Chemnitz, German Democratic Republic. After completing the program they came back to Bulgaria and started systematic course of instruction of Visually Impaired students in the special schools for blind in Bulgaria. In this regard I am grateful that the ICEVI European conference is held in the city of Chemnitz, Germany, and that I had the chance to talk to you about Orientation and Mobility especially here, where actually the education and instruction in this special program is having its roots for my country.

In conclusion

What is the contemporary situation in Orientation and Mobility in Europe and probably around the world – do we really look and aim for excellence?

Or have we stroked during the whole history of education of Visually Impaired for excellence? The human kind have always dreamt, searched and desired excellence in every aspect of human life. The education and special education are not exception. Orientation and Mobility as a special program is not exception.

But does the excellence appear in the classical or modern techniques, tools and instruction in Orientation and Mobility?

Is it in the balance of those two?

Is it the aim for perfectionism leading us on the difficult road to excellence? Is it our desire as professionals to find new ways, new dimensions to overcome blindness and to offer our students and clients excellent opportunities to live significant, independent and fruitful lives?

I think the answer can be found a little bit everywhere. And I believe we will continue on our road to excellence – either educational or instructional, through research in Orientation and Mobility, through provision of care, through dedication and expanding the services to those who are Visually Impaired multidisabled.

Meanwhile I reckon we will use the same classical Orientation and Mobility techniques and devices, but we will look for new – improved and more reliable, mostly in the field of the high technologies. And this is according to me the right way – the good balance between the old and the new.

At the very end of my presentation I would like to give you two examples of our aim for excellence. I will tell you two stories. The first one is directly quoted after the original story told by W. Hank Levy in his book of 1872:

"A stranger passing through Godalming on any day save Sunday at about noon, could not fail to be struck with the appearance of a cheery-looking old man, with a number of parcels and bundles hung about him in all sorts of impossible ways, and a small twisted brass horn slung from his neck. On closer inspection, he would perceive that this little hale old man, posting along at a rapid rate with a stout stick in his hand, but making no uncommon use of it, is blind, although an extraordinary intelligence lightens up the features and takes away that painful melancholy look which often accompanies blindness in those who are the subjects of that greatest of privation. That if old George Marden, who for upwards of twenty years has acted as carrier between Humbledon and Godalming. During the whole of that period he has been totally blind. He is considerably over seventy years of age, and yet he daily trudges between these places, which are four miles apart, calling wherever he is required, and discharging the responsible duties of his vocation with unerring accuracy…" (p. 73-74).

The second story is a very recent one. It is a story told by a forty year old blind person, who is an experienced mobility devices' user:

"I am congenitally blind due to retinopathy of prematurely. I was taught Orientation and Mobility at the special school for blind I went to. There I learned mostly the techniques of the long cane and the sighted guide. For many years after graduating from school I used mainly these two techniques. Later I got the chance to get a guide dog. I got a nice German shepherd that I used for over ten years. Then I was introduced to some electronic travel devices. I chose a laser cane to move around. Now I am able to use almost all known and available mobility techniques and devices for blind. Sometimes I wonder how to get around as I feel so experienced in mobility and am able to make use of the sighted guide, the white cane, the dog guide and the electronic travel aids…."

How do these two stories sound to you? Are there any similarities in them? Or many similarities? Or are they totally different? Do you have the feeling that the blind person described in the first story managed less compared to the blind individual in the second one? Is one of these people superior? Are they both searching for meaningful, and in this regard, excellent ways for being independent in the ability to move around? Is one of them excellent, because he mastered more in Orientation and Mobility? I would not say so. These are simply two examples showing excellence in different light, in different ways, in different times. But behind each story there is a visually impaired person, who mastered independence, who was able to walk alone. Well, you will say, in the first story only one mobility technique was achieved, in the second – four!

But it seems to me that both blind people accomplished the same task – the ability to move around independently, with confidence and joy.

This is maybe the perfect prove that excellence has many, many faces. It existed in the past, it exists today. We have simply developed and enlarged our understanding and standards for excellence, and for levels of Orientation and Mobility achievements. Which again brings us to the conclusion that even though we have aimed and searched for excellence throughout time and history, we always had it and were able to succeed excellence to some extend.

I thank you for your attention!

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Keynote speech

71 How to thrive, not just survive - independence in adapted activities of daily living

By: Adamowicz-Hummel, Antonina
From: Poland
Organisation: Academy of Special Education, Warsaw

I would like to thank my two colleagues and friends, experts in the field, Pamela Cory of IRIS, Germany, and Anne Yeadon of AWARE, USA, for providing me with valuable ideas and materials for this presentation.

I borrowed the title of my presentation from a guidebook on activities of daily living edited by Rose-Marie Swallow and Kathleen Huebner, and published by the American Foundation of the Blind in 1987. It seemed perfect for what I would like share with you today, and also very responsive to the motto of the Conference - "aiming for excellence".

'Survival' refers to the rudiments of existence – the word has some desperate aspects to it, there is not much room for enjoying what one is doing. Whereas to **thrive** means 'to prosper', 'to **do** and **be well**' – we add **quality** to mere 'survival', the aspect of personal **satisfaction** and fulfilment is involved.

I would like to address this title statement to persons with visual impairment and to the 'profession' of teachers of activities of daily living.

I will focus on four aspects of the topic issue:

I. The importance of daily living skills with regard to independent living of persons with visual impairment of all ages;
II. Teacher training in activities of daily living;
III. Status of the 'profession';
IV. Challenges for the future.

I. The importance of daily living skills with regard to independent living of persons with visual impairment of all ages

Effective teaching of independent living skills of people with visual impairments has always been a challenge. The basic questions to be asked are:

- When can a person with a visual impairment be considered safe and independent?
- What are the skills that she or he needs or 'wants' to master, and in what sequence should they be learned? (Adamowicz-Hummel, 2001)

I will not engage in convincing the audience about the importance of daily living skills in general. As we know, their major merits are as they increase:

a) independence, which gives a sense of control and, possibly, self-confidence;
b) opportunities for providing an individual with a 'structured' day;
c) opportunities to attain employment, especially in combination with good mobility skills and other prevocational skills;
d) opportunities for participating in family/community activities;
e) opportunities for social acceptance;
f) self-help abilities to transfer skills learned to 'new' situations.

In this presentation I would like to focus on certain, more subtle, aspects of those skills.

There is this image that haunts me as an instructor and teacher trainer in independent living skills for persons with visual impairment: My friend once told me that she interviewed candidates for a job in a big rehabilitation agency for the blind. It happened to be a rainy day and one of the candidates, a congenitally blind man, arrived in her office wearing a shower cap on his head. He had sufficient qualifications for the job but she did not think he would have been seriously considered had he applied for a similar opening elsewhere (she did, however, offer him the position, and he accepted.)

What might have occurred had he applied for a position elsewhere?

Well, the candidate from the story certainly had good problem solving skills – he was efficient in protecting his head from the rain. His motor skills were also probably good enough to put the shower cap on his head. But, evidently, nobody had told him that a shower cap was inappropriate headwear outside of a shower. Others who might have interviewed him, who had no links to issues surrounding vision impairment, may have focused more on the fact that he was wearing a shower cap than on his skills and abilities.

This situation reminds us that the 'definition' of daily living skills should include not only problem-solving and motor skills which we use to manage our every day lives [Cory, 2000] but also the knowledge of socially acceptable appearances and behaviours.

What causes such gaps in ADL and social education, which is more easily associated with a **congenital** visual impairment, to come about? First of all, we will probably all agree that there are gaps in the education of sighted persons, especially when it comes to social acceptability of certain behaviours. But, in relation to the educational/rehabilitation needs of persons with vision impairments, there is:

- a lack of awareness of special services (on the part of consumers,
- family members, general public and related professionals);
- a lack of access to specially trained personnel and specialized services;
- minimal numbers of specially trained personnel;
- low expectations of consumers, the general public, and some professionals;
- overprotection on the part of parents, family members, and the general public;
- lack of motivation on the part of the consumer, family members, and professionals;
- fear and lack of self-confidence on the part of the consumer;
- lack of support to address the special needs of person with vision impairment, including parents, family, the general public and related professionals;
- difficulty, on the part of consumers, to access ADL self-help information;
- minimal funds available to support professional outreach community/home based services, especially to preschoolers and older persons.

So, how do we attempt to bridge these significant gaps? Let's start with the early years:

Sighted children acquire most ADL-related skills spontaneously by observing and imitating others. Children with vision impairments who do not have the same visual abilities should be guided – **verbally and physically** - through various activities. Parents or other care providers require TIME and basic KNOWLEDGE to encourage their child to pursue and practice independent living skills. Lack of knowledge often results in either parental neglect or overprotection, and lack of time can lead to a lowering of expectations. Some parents may feel the need to feed and dress their child, and do most things for her or him. Such parents may not fully appreciate the importance of encouraging the child to learn through exploration, making mistakes, and experiencing the usual bumps and bruises that often accompany a normal part of growing up. It is not unusual for such a child to be overprotected to a point where he or she fails to have sufficient opportunities to learn how to be independent.

In special schools ADL and social rehabilitation services can be overlooked. This is because the emphasis is understandably placed on academic skills. Orientation and mobility and activities of daily living are generally taught, but usually as extra-curricular activities. Invariably insufficient individual attention or adequate time is given to a child in these areas, and lessons taught may fail to build upon previously acquired skills. In the area of O&M, it is not unusual for students to be taught routes instead of problem solving skills. In the area of ADL, although the students may learn the 'proper' techniques, they fail to learn the essential problem solving skills and spontaneous adaptations that are needed to cope with everyday living situations. Last but by no means least, there is insufficient knowledge about what ADL adaptations for persons with multiple impairments.

In the case of persons with **acquired** visual impairment, a strong fear factor or lack of self-confidence may be involved; often activities have been mastered prior to vision loss but in the new situation of reduced or missing vision the person may be paralyzed by fear, or just does not believe something is possible for a blind or low vision person to do. Sometimes it may be listlessness or lack of concern for other people's feelings. One of my students, a nun, asked if I could suggest how she could encourage one of her fellow nuns to switch from eating with her hands to using knife and fork during group meals at the convent. The nun is adventitiously blind and had used a knife and fork before she became blind. She says that now she eats with her hands because it is more convenient for her. However, the other nuns do not feel comfortable with this situation and would like her to start using cutlery. We can see that the nun can accomplish her goal of eating safely and efficiently, but again, the way she does it is not socially accepted, at least in our culture.

ADL rehabilitation of adventitiously VI persons is more a matter of motivation and problem solving skills, including safe, comfortable and effective adaptations, rather than rote-learning and mastering specific skills.

As Pamela Cory writes, ADL instruction for adventitiously blinded adults is geared toward adaptive blindness related skills. In contrast, many of the blind children whom we serve do not even possess the prerequisites in order to learn blindness related skills. Learning basic concepts and the development of motor abilities are the priorities which have to be dealt with before attending to blindness related skills. (Proceedings, Frankfurt 2002)

So, how can we help persons with visual impairments thrive, and not just survive in their day-to-day living?

This is a question of know-how that encompasses assessment, adaptive techniques, training methods, materials, and evaluation. Let us take a closer look at what I refer to as an 'accomplishment ladder'. This 'ladder' approach may prove helpful in assessing student behaviours and can be used both by the teacher *and* the student in evaluating rehabilitation outcomes. The first question is:

Was the given task undertaken at all?

Here we are at level zero - motivation.

If your student/client ventures on the task, the next questions are:

Was the goal accomplished?

Survival level, first 'rung of the ladder' – risk factors may be involved.

Was it done in a safe way?

Also survival level, second 'rung of the ladder' – risk factors are reduced.

Was it done efficiently?

Here we climb to a higher level where quality is added – the result is also evaluated with respect to the expense of effort and time.

Was it done in a socially accepted way? Or, in other words, gracefully?

Again, we climb one step higher, more quality is added – the process and the result are under external scrutiny.
Is the person satisfied with his/her performance and accomplishment?
Here quality and self-satisfaction are added.
However, this last level is a tricky one – as it could easily follow, with the exception of the first, any other level. Let us consider the nun who likes to eat with her fingers – she is probably happy with both the process of eating and the result.
So, in such situations, what do we, service providers and family members, do?

How might we stimulate the learner's self-motivation to make a change? Here are some options:

- by creating a 'safe and confidential' learning environment whereby the reactions of others toward his/her behaviour can be shared;
- by demonstrating high motivation to work with the learner, if he/she so chooses, to effect change;
- by promoting family and peer support;
- by encouraging him/her to set clear, realistic, and measurable goals that, if achieved, will bring her personal satisfaction;
- by being flexible (i.e., client-focused) in selecting appropriate instructional approaches;
- by presenting role models – i.e., showing examples of how other VI persons have successfully conducted ADL tasks;
- by bringing together individuals of similar age groups to stimulate effective experience-sharing and changes.

How do we set realistic goals?

- by asking the consumer how he/she defines his/her own needs;
- by conducting functional evaluations, which provide information on specific needs;
- by involving the student/client and his/her family in the rehabilitation process;
- by conducting consumer need surveys, which gives us a sense of generally unmet needs.

How do we teach problem solving skills, including issues of safety and efficiency?

- by applying a task analysis approach to problem solving – and teaching the student/client and his/her family how to break down a task into smaller steps, and to analyze the skills that are needed to successfully accomplish each component;
- by encouraging the use of the other senses and alternative techniques;
- by encouraging self-confidence and assertiveness, and a 'self-help' mentality;
- by asking for support when needed.

How do we sensitize consumers and family members to the social consequences of inappropriate appearances and behaviours?

- by ongoing discussion of what is and what is not acceptable;
- by encouraging them to ask questions when they are uncertain;
- by encouraging them to assertively seek additional information or assistance.

How many activities of daily living can be learned? Obviously, in the case of a child, there will always be new tasks to master as he or she grows up. During these times an instructor may not be readily available. We therefore need to teach these children how to learn new tasks independently while at the same time considering issues of safety, effectiveness, and social acceptance. The ability to transfer skills learned to relatively unfamiliar situations is the essence of effective problem solving.

The **prerequisites of success** for a visually impaired person in how to thrive, not just survive might therefore be the following;

- task analysis approach;
- training materials – curricula, adaptive equipment;
- forum of exchange.

If we agree that problem solving skills are critical to ADL rehabilitation, the **method of task analysis** should be promoted and taught to enable a visually impaired person to detect and to resolve problems by him/herself, according to his/her mental and physical capacities. Since there is no one single way of doing a given task, we should allow for creativity – let the student/client experiment, analyze, compare, choose and decide for him/herself how to perform it. The factors we should sensitize him/her to are his/her and the environment's safety, efficiency and 'style.' Task analysis approach enables the student/client to be an evaluator of his/her own current abilities, progress and goals.

There is a need for **training materials** – ADL curricula, especially for children, including young children, and for persons with multiple impairments. We also need access to utilize, catalogues of adaptive materials and equipment. We need materials and equipment that are inexpensive and easily accessible in terms of language and format – especially electronic format, including website publication. The ISaR Project homepage, developed and maintained by the University of Dortmund, is a good resource model for German-reading teachers of the visually impaired working in integrated settings.

A **forum for the exchange** of experiences, ideas and materials, both for consumer and professional networking is needed. Later in this presentation I will share information that has been collected to date.

II. Teacher training in activities of daily living

In 2000 Pamela Cory conducted a survey of European ADL personnel preparation programs. Its purpose was to learn about the content and duration of current programs and about the target groups being served in respective countries. (A similar survey was done in the area of O&M by Jurgen Nagel. Both reports can be found in the Proceedings from the Frankfurt Seminar in 2002, http://eu.edu.centres-om-adl-profis.com.

The Cory survey totalled sixty-four questionnaires that were sent to 44 countries in September 2000. Twenty-four institutions from 21 countries responded (48 % of the 44 countries). From these 21 countries 4 do not conduct ADL-personnel-preparation courses. Twenty agencies from 17 countries conduct ADL-personnel-preparation courses. Three countries, however, did not respond to the questionnaire, other than to note that they have ADL-personnel-preparation programs. Thus, **information about content pertains** only **to 17 agencies from 14 responding countries.**

Survey questions included:

- the types of programmes being conducted;
- the students/clients with whom ADL teachers work;
- the students/clients for whom ADL teachers are trained to work;
- the content and duration of ADL training programs;
- the status of the profession.

Types of programmes

Findings revealed that there are a wide range of university-based and agency-based training programs in ADL.

Twelve of the 17 responding institutions stated that they conduct dual qualification programs – 10 offer the qualification as O&M and ADL teacher, two offer dual qualification in ADL and as a teacher of the visually impaired (TVI), and one offers ADL dual qualification in combination with O&M or TVI. (Cory, 2001)

What type of students/clients do European ADL teachers work?

The Cory survey revealed that ADL teachers work with totally blind and low vision persons of

- all age groups,
- with congenital (from birth) and adventitious (acquired) visual impairment,
- without and with additional impairments/ problems.

What type of students/client have ADL teachers NOT been trained to work with?

- children;
- persons with physical impairments;
- persons with learning impairments;
- persons with cognitive disability.

The survey also revealed that '… students training to become ADL teachers were prepared to work with blind and low vision adults with or without additional sensory impairments. 76% were prepared to work with blind and low vision children. Not all of the students were confronted with the topics "physical impairments", "learning impairments" and "mental retardation" in their training, although it would later be expected of them to work with people of all ages, with or without additional disabilities, be they of a physical, mental or learning nature.' …

In her report Cory states: 'As education centres for O&M and ADL Teachers we can not allow this to happen to our students. We have a great responsibility to prepare them to work with all target groups, so that quality rehabilitation services can be given even at the very outset of their professional careers.' (Proceedings, Hamburg 2004)

What is the content and duration of ADL training programs in Europe?

Although all 17 institutions which responded to the Cory Survey teach ADL, **only 10 gave precise information** as to actual content. The **information is often incompatible** because of lack of common definitions. There is **no uniformity** in terms of content and duration of training.

Cooking, eating, clothing care, household skills and personal hygiene are included in the blindfold experience of these institutions. Nine also cover home repair and sewing by hand. Sewing with the sewing machine is included in five programs. Baby care and gardening are each covered in one program.

Examples:

- cooking under the blindfold was most often offered, ranging from 16 to 100 hours;
- 10 of 11 respondents provided low vision experience with simulation goggles, ranging from 4 to 54 hours;
- handwriting skills were included in 8 of 11 courses, keyboard skills in 6 courses, and computer skills in 10 courses;
- 11 of 17 respondents listed ADL theory as part of their course curriculum, ranging from 16 to 100 hours.

There is much discussion among teacher trainers on which content areas should or should not be included in an ADL curriculum. For example, in some countries communication skills are taught separately, especially when it comes to Grade II (contracted) Braille and computer technology. Another issue is whether ADL instructors should teach elements of orientation and mobility skills, and if so, to what extent.
This again brings us back to the issue of ADL professional standards.

III. Status of the profession

The Status of the ADL profession in Europe varies from country to country – in some countries it is not even recognized as a profession. Little is known about instruction in ADL skills in the 25 EU countries, and even less regarding the non-member countries.
According to the Cory Survey, ADL teachers were usually employed by institutions for visually impaired persons and by associations of the visually impaired, state-funded and private.
Only in one of 14 responding countries is ADL teaching a state recognized profession. In some instances the title of 'ADL instructor' is recognized by the national association of the visually impaired and/or the national professional association for education and rehabilitation for the visually impaired.
What GOALS related to 'professional recognition of ADL' should be set?

- joining efforts in Europe;
- establishing a European forum;
- establishing professional standards;
- self regulation;
- state regulation of the profession.

Over the last 6 years efforts have been undertaken to learn about ADL services and teacher preparation in Europe, to integrate professionals, and to develop professional standards in the field, with the ultimate goals of reaching the underserved and improving the quality of ADL services throughout Europe.
The first step was taken in 1999 at the 7th European Seminar "Education of O&M instructors" in Hungary. At that time, it was decided that ADL, in its own right, should be included and represented in any and all discussions and/or seminars related to the 'training of Instructors'. Two years later a working Seminar on cooperation between European education programmes for ADL instructors was held in Copenhagen.
As a result of all these activities, the field of ADL has started to form its own professional identity on a European level.
The self-regulatory process with the goal of attaining European recognition and regulation of the O&M and ADL professions was then continued through two joint Seminars – in Frankfurt in 2002, and in Hamburg in 2004.

What has been accomplished so far?

1) Two working groups have been established to develop a draft of professional standards in ADL and in O&M. The drafts have been developed and are now being reviewed by members of respective groups.
2) A forum of professional exchange and networking has been proposed - but not founded yet. Seminar participants have agreed upon the name of the organization: "European Association of Education Centres for O&M and ADL Professionals". The Association has a non-profit status.
3) A Constitution for the Association has been developed, revised and endorsed by Seminar participants, and an EU consultant.

The Mission and Objectives of the European Association, as stated in the proposed Constitution (Proceedings, Hamburg 2004), are as follows:

1. The European Association sets the standards of quality for the education of rehabilitation teachers, who may teach Orientation and Mobility (O&M) and/or Activities of Daily Living (ADL), and supports the development and maintenance of these standards.
2. The European Association certifies the education centres for these professionals. The certification is based on verification that the centres abide by the guidelines of this constitution. The verification or lack of it can lead to the renewing, interrupting or revoking of the certification.
3. The European Association is the forum for co-operation and professional exchange for the European education centres in the field of O&M and ADL Teaching.
4. The European Association co-operates with self-help organisations of persons who are blind or have low vision.
5. The European Association co-operates with other associations and federations, professional organisations and authorities which are involved in education, training and support of persons who are blind or have low vision.
6. The European Association can become a member of organisations with a similar mission.
7. The European Association also has the goal of promoting public relations for courses in O&M and/or ADL and specifically works to increase public awareness of these areas.
8. The European Association represents its Members on the political level.

Aiming for excellence - European Quality in Rehabilitation Mark (EQRM) as a possible future goal.

EQRM is an initiative supported by key stakeholders in the rehabilitation sector and is meant to encourage and promote best practice in the Rehabilitation sector. The EQRM was launched in December 2, 2003 at the European Parliament in Brussels.

The European Quality in Rehabilitation Mark (EQRM) is a credible and sustainable system that can offer opportunities to organisations for development and innovation. It is based upon sound fundamentals derived from substantial work carried out by the European Platform for Rehabilitation (EPR) over the past 10 years, a widely accepted and approved set of European Principles of Excellence, the perspectives of the most important stakeholders at European level. Organisations, which provide rehabilitation services, will commit themselves to implement the Principles of Excellence by applying for the EQRM.

The European Quality in Rehabilitation Mark is given to companies and organisations reaching the required criteria set in the Principles of Excellence. Critical to the success of the EQRM are the transparency of its criteria, procedures and documentation, its multiple stakeholder perspectives and highly valued training and consultation services.

Recognition by the European Quality in Rehabilitation Mark is based on the nine Principles of Excellence, which offers applicants the benefits of a structured self-evaluation approach to identify organisational strengths and areas for improvement. The organisation will be required to prepare an application document and a self-evaluation document. A team of trained and qualified EQRM assessors will review the application document and the results of the self-evaluation, undertake a two days site visit and provide an assessment report.

Applicants who achieve 500 points out of 900 can be considered as organisations that meet the EQRM principles of Excellence and they will be nominated for the EQRM. An Awarding Committee will appoint the selected applicants.

The recognition by the EQRM provides a route additional to the National Accreditation and recognition in the field of Rehabilitation at European level. The assessment

methodology provides organisations a tool to validate their current level of performance by an experienced team of independent EQRM assessors. The EQRM provides a benchmark for learning and improvement and an analysis of the gap between current state of performance and best practice in the rehabilitation sector. The EQRM gives the opportunity to a successful applicant to distinguish themselves from their competitors. Successful applicants will also be allowed to use the EQRM stamp in their promotional efforts.
(Proceedings, Hamburg 2004)

At this point, I would like to review the above European situation within an international and interdisciplinary context.

Developments of the ADL 'profession' in the USA

In the United States, the teaching of ADL is a self-regulated profession. Our colleagues in the USA have a professional organization, Association for Education and Rehabilitation of the Blind and Visually Impaired (AER), with a Rehabilitation Teaching Division no 11 corresponding to some extent with what we call Activities of Daily Living. One major difference is that in the States Rehabilitation Teaching (RT) services are services provided to adults with visual impairment, whereas in Europe we see ADL services as offered to students/clients of all ages. In the States, the university-educated rehabilitation teacher, recently renamed Vision Rehabilitation Therapist, is trained to teach: Braille, communication systems, computer technology, sensory development, basic orientation and mobility, personal management, and recreation and leisure. AER is a forum of professional exchange and networking, continuing education, and professional advocacy. Initially AER was also a certifying body for professionals in Visual Impairment. In 2000 however, certification responsibilities have been moved to a newly established body, Academy for Certification of Vision Rehabilitation and Education Professionals, ACVREP, which develops and implements certification and recertification regulations and procedures. The field of Rehabilitation Teaching has developed a 'Body of Knowledge' and 'Code of Ethics', there are AER approved 'Rehabilitation teaching university personnel preparation guidelines'.

Developments in related professions – Occupational Therapy (OT)

In the USA today there are an estimated 400 members of AER listed under the Rehabilitation Teacher's Division (many more RT's exist but not all choose to be AER members). In sharp contrast, the field of Occupational Therapy encompasses over 80,000 members. This vast discrepancy in numbers between two related fields can either be seen as a threat to potential professional survival or as a major contribution to the expansion - a very dramatic expansion -of service opportunities for vast numbers of underserved/unserved individuals with vision impairments.

The profession of Occupational Therapy, both worldwide and in Europe, is quite advanced in terms of status building and quality monitoring. Occupational therapists have their professional organisations:
- World Federation of Occupational Therapists (WFOT)
- Council for Occupational Therapists of the European Countries(COTEC)
- European Network of Occupational Therapy in Higher Education (ENOTHE)

They have developed professional documents:
- Code of ethics
- Standards of practice
- 'Summary of the profession' in Europe - updated and published every year.

In terms of professional recognition, they are on the way to state recognition:

- 13 out of the 24 COTEC member countries have the World Federation of Occupational Therapists' (WFOT) Standards accepted by their government
- 22 out of the 24 COTEC member countries have the title Occupational Therapist officially recognized
- 14 out of the 24 COTEC member countries have a government OT registration.

Recent trends in the United States: ADL, O&M, and OT

An interesting trend can be observed in the United States. In 1992 changes in Medicare, which is the US government's health insurance program for "senior citizens", made it financially feasible for occupational therapy practitioners to be reimbursed for the provision of low vision services. OTs, a large and strong professional group in US, have 'infringed' the field of visual impairment for many years and their visibility in the field is increasing. A document, 'Report on Low Vision Intervention as an Area for Specialty Certification', submitted to the American Occupational Therapy Association (AOTA) Specialties Board, February 11, 2004, by AOTASB Low Vision Intervention Panel, includes a well reasoned justification for low vision rehabilitation to fall within the scope of OT practice.

The Report states: *'The focus of occupational therapy intervention in low vision rehabilitation is to enable the person to safely and independently complete the ADLs compromised by his or her vision loss. This is accomplished by 1) teaching the person to use his or her remaining vision as efficiently as possible to complete activities 2) modifying activities so that they can be completed with less vision or without vision, 3) modifying environments to increase visibility and reduce hazards, and 4) training the person in use of adaptive devices such as magnifiers to compensate for vision loss."'* (Report, 2004)

The document also outlines the specific skills, techniques and interventions that should be used by OTs to provide low vision rehabilitation. They do however acknowledge that they would refer VI children and totally blind adults to RT and O&M instructor for 'specialized and traditional services. They view these latter two areas as currently outside their areas of expertise.' (Yeadon, 2005)

At the same time, the American Occupational Therapy Association reached out to the ACVREP, the certifying body in the field of visual impairment, and the ACVREP response concluded with '…we would welcome an opportunity to explore creative ways by which a single certification in low vision for rehabilitation professionals could be promoted…' (Report, 2004).

It seems reasonable that vision and occupational therapists seek common professional grounds for providing services to a certain group of visually impaired persons but I cannot resist a personal comment here: since working with a low vision person requires competence in BOTH visual and non-visual techniques, I question whether OTs can be as efficient working with a person who has low vision, if, as they claim, they do not feel competent in working with a client who is blind?

In view of the trends presented above I would like to raise the following issues for discussion:

- What does the USA situation tell us in terms of those of us who are based in Europe and in the relatively early stages of professional development in the areas of activities of daily living and orientation and mobility?
- Should we view the US situation as a potential threat to European professionals or a new opportunity for reaching far more individuals in need and for improving the services generally?

There are many resemblances between our professions and possible common grounds of cooperation in Europe. Occupational therapists work in hospitals, day units, special units, prisons, schools, in the community and in the consumer's own homes. Frequently they reach our potential clients before we even learn of their existence.

Perhaps we should consider learning from – if not working alongside - OTs in Europe. Perhaps we should look at their accomplishments and learn how to establish a profession – OTs already have their international fora - World Federation of Occupational Therapists (WFOT), Council for Occupational Therapists of the European Countries (COTEC), the European Network of Occupational Therapy in Higher Education (ENOTHE); they have developed the necessary documents: 'Code of ethics' and 'Standards of practice'. A 'Summary of the profession' in Europe is updated and published every year – the type of information presented there corresponds to the information included in the Evaluation of the Cory ADL Questionnaire.

The European OT forum, COTEC, was founded in 1986. It is made up of delegates from 24 European national associations of occupational therapists and aims to develop, harmonise and improve standards of professional practice and education, as well as to advance the theory of occupational therapy throughout Europe. Its goals are very similar to the goals of the proposed European Association of Education Centres for O&M and ADL Professionals.

III. Challenges for the future

As we are still in the process of establishing the ADL profession in Europe, we need to be sensitive to actual and potential vulnerabilities and threats to its future survival and prosperity and, consequently, to the provision of effective rehabilitation services for the visually impaired. Although some of the challenges have been mentioned before, I would like to bring them to your attention again:

1. Our most critical challenge today is the vast and ever-expanding gap between need for services and their current - and projected - levels of supply. Even in the USA, a nation seemingly well-endowed with organizations, both public and private, serving persons who are visually impaired, it is estimated that the vast majority of adults with visual impairment receive little or no services whatsoever.
2. We should demonstrate **creativity** in terms of

a) **where clients receive ADL services** - homes, education and rehab settings, hospitals, senior homes, prisons and

b) **how clients receive ADL services**
   - creating challenging learning situations and new active learning approaches (i.e., 'self-help' strategies, media, tapes, websites, etc.);
   - being able to work with persons who are severely multiply impaired;
   - being able to work with very young children, especially in initiating the prerequisites necessary for later ADL tasks;
   - motivating 'the consumer generation' to make an effort to learn new concepts, skills, and 'life quality' independence.

3. We should demonstrate **creativity in terms of teacher training**, for example the effectiveness of dual certification, e.g., in ADL and O&M, should be evaluated; various formats of training should be practiced – e.g., full-time programs, part-time programs, distance learning.
4. We should be **open to the experiences and accomplishments of other countries and professions**, both in and outside Europe, and to explore possibilities of combining the efforts of related professions, in order to reach far greater numbers of potential clients, improve the range of services offered, and experiment in innovative ways in which they can be delivered.
5. We need to **pursue regulation of the profession** and quality recognition, such as through the European Quality in Rehabilitation Mark which is a commitment to

implement the **Principles of Excellence**. In the opinion of Anne Yeadon, certification, or self-regulation, is no guarantee of securing, on a long term basis, the survival of ADL and O&M professions. Professionals in the field of visual impairment should pursue state-approved licenses that authorize them as the main service providers in vision rehabilitation services - or else they may become extinct species, like dinosaurs. (Yeadon, 2005)

6. We should work on **expanding and diversifying funding sources to support ADL services** - to include national education, health care, social security systems. In Poland, for example, many services are funded by the State Fund for Rehabilitation of Persons with Disabilities which is responsible to the Ministry of Social Policy. EU funds should also be considered as a viable source for supporting services for the visually impaired.

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72 “Barrier free” for visually impaired people

By: Dipl.-Päd. Böhringer, Dietmar
From: Germany
Organisation: VBS

Abstract

For more information please contact the author:
dietmar.boehringer@nikolauspflege.de

We see it again and again: A place, a road, a railway station is designed in a "modern" way. Suddenly some visually impaired people cannot cope with this terrain any longer alone. Often it is not recognized: They also need an environment, which is arranged for their needs. They must feel safe, and they must be able to orient themselves unaided - not only at the place of the school and not only during the school time, but country-wide and lifelong! We as pedagogues are responsible for this as well. We have to cooperate with the federations of the handicapped persons. We must help that the public area is arranged "barrier-free", also for visually impaired people.

The lecture will deal with certain problems - or the places, where you find the problems - or certain trouble shootings: Obstacles, glass walls and glass doors, contrasts, illumination, stairs, elevators, sanitary facilities, doors, corridors and interiors, traffic lights, orientation systems.

It is pointed out, which solutions were already put into practice in the past, how they worked satisfactorily, where changes would be desirable, where better solutions are already recognizable and in which areas better solutions must be found.

73 Seeing without sight

By: Kish, Daniel
From: USA
Organisation: World access for the blind

Abstract

For more information please contact the author: dankish@worldaccessfortheblind.org

A blind Psychologist and Mobility Specialist presents an approach to enhance one's functional image of the environment through human echolocation. Echolocation is briefly defined as the ability to see with sound in a manner comparable to seeing with dim flashes of light. Using echolocation, one can participate in a wider range of activities with more safety and precision, and with less dependence. Improved participation leads to greater freedom and life quality.

Optimizing spatial hearing is considered fundamental to nonvisual spatial perception and interaction. The presenter provides a live demonstration of the efficacy of echolocation.

74 Describing the space by visually impaired children

By: Lobacz, Elzbieta
From: Poland
Organisation: Academy of Special Education

Abstract

For more information please contact the author: lobacze@aps.edu.pl

Children learn the space multi sensory by touching, playing, moving and various activities in their families. It can not be done by mere spoken explanation but should be experienced by oneself and as an effect involved in her/his knowledge.

Lack of vision causes low possibility either of building their ego and body scheme, of gaining space experiences and moving in the environment. Whilst exploring the environment children built their knowledge of the world and themselves as well. Basing on their limited potential ability visually handicapped children create also their own space and space-related imagination. Simultaneously they try to name the relations and of course they face many problems in this process.

Adequate vocabulary and linguistic competences do not only show understanding of space but also present what kind of stimulation the children need to fulfil all holes in their spatial development, to support their development as isolated from their environment and then orientation both in their body scheme and in surrounding.

I would like to present researches on visually handicapped toddlers knowledge of their body scheme and use of prepositions and prepositional phrases while describing their environment and their position in it.

75 New Technology and Daily Life Skills

By: Boix Hernandez, Silvia
From: Spain
Organisation: ONCE

GOAL

Individual autonomy for independent living has been regarded as a major learning field for the visually impaired.

Indeed, lack of vision implies depending from others to get to know what is facing you sometimes. Systematic learning will encourage independence inasmuch as it provides a means to know how to perform activities without someone else's help.

The present document identifies some advantages, solutions and actions for interaction, communication and navigation at the user interface with new technologies, such as the world wide web. It identifies how modern technologies can be used to improve ease of access for people with visual impairments to telecommunications products and services.

ICT AND DAILY-LIFE SKILLS

REASONS TO INCORPORATE ICT INTO DAILY LIFE

Widespread access to the Internet, and the World Wide Web in particular, has meant that many people who are blind or partially sighted are potentially able to access a great wealth of information, which may have previously been unavailable to them. There is enormous potential for the implementation of new technology to revolutionise the way in which children are taught, providing new avenues of access to information and revitalising the way in which students engage in appropriate learning. The ONCE is carrying out a great effort in this field.

In addition to being able to access sources of information, there are many examples of the value of electronic communication both through electronic mail and, more recently, discussion groups and conferences.

As with earlier developments, innovations in information technologies will require users to have access to training and support if they are to be fully exploited. A key message for the future is that visually impaired learners must gain skills in using enabling technologies as early as possible and must gain confidence in using computers and other equipment that will be found in society at large, including the workplace which, in turn, will lead to increased independence and opportunities.

USERS WHO MAY SPECIALLY BENEFIT FROM ICT

Whether a person is born with a visual impairment or loses vision later in life, most visually impaired and blind individuals can benefit from instruction in ICT.

There is a group of persons in need of a more sophisticated rehabilitation process: they are the adventitiously blind or who have lost sight when adults. Having had to adjust to a new lifestyle and to restricted autonomy, new technologies empower these persons by compensating for their visual impairment to a large extent.

Users with low vision utilize screen magnifiers, software which enlarges information on the screen by a user-defined factor (e.g., 2x magnification, 3x magnification, etc.). These applications can magnify parts of the screen, the full screen, or provide a magnifying glass view of an area around the cursor or pointer. Because of this enlarging, users with low vision can read onscreen text and interact with screen elements.

For a child with no useful vision there are more technical considerations to be made when thinking about software or CD titles. Many children who are blind use speech output systems to access software but not all applications are accessible to screen readers. Software that is highly graphical will not be read by a screen reader, as there is a need for 'text' to make sense of a screen's content. When a person without sight wishes to compose text using a computer, there has to be the addition of speech output. The word processor must be able to provide feedback such as speaking the entered text, a read-back facility to check entered text and also provide access to functions such as print and save. Talking word processors have many benefits for the pupil with sight problems as they provide speech feedback as text is entered and offer speech feedback to proof-read text. For pupils with an amount of useful vision the appearance and layout of the screen can be configured to meet their individual needs.

BASIC SKILLS FOR INDIVIDUAL INDEPENDENT LIVING: METHODOLOGY, SPECIFIC CONTRI-BUTIONS OF IT TO EACH

It is important to learn ways to improve the quality of daily living -- to make life safer, easier, more enjoyable and more active. Adaptive devices and techniques can help individuals function more efficiently and independently.

Daily living skills evaluations and training include areas such as grooming; dressing; social graces; money; telephone skills; food preparation; leisure activities, housekeeping and home maintenance. (See annex 1).

PERSONAL CARE

<u>Activity 1</u>: On every page of a good website there is a search facility. Go to the search area and type in a basic word or words of the type of product you are looking to purchase. For example "shampoo" or "mobile phone".

There is always a "What's New" link available and "Special Offers". To access these, you list the links or tab through them.

There are also other permanent features under "Our Services", "More Information" and "Our Company" and if you want to find out an answer to a general question, I search under "Help".

Some accessible websites also have a particularly useful "Where you are" feature. If, for whatever reason, you aren't sure which part of the website you are in, use the search command provided by your screen reader ("Control f" with Jaws) and look for the words "Where you are". This can also be a useful way of skipping to the main content of a page.

IT contribution: Online shopping websites. Many sites take time to negotiate and get to know, some have explanatory homepages, good product descriptions, helpful customer services and are relatively easy, although a few have tricky, very time consuming check out processes.

Sample Website: http://www.elcorteinglés.es (Shopping Centre)

<u>Activity 2</u>: There are 2 ways you are able to shop for products. I will either bring up the list of links on a page and click on the area you are interested in, e.g. "Electrical". This then lists all the areas which sell electrical goods, e.g. Kitchen and Home, Hair, Mobile Phones, etc. Alternatively, you will type the product type, e.g. "shampoo" into the search area and review the product results table.

Sample: http://www.cosmopolitan.com (Fashion magazine)

Sample: http://www.neomoda.com/foro/default.asp (discussion forum on fashion)

HOME MANAGEMENT

<u>Activity 1</u>: Keeping Track of Money

Methodology: Shopping and paying for the things you buy are basic daily activities.
If you have difficulty telling one coin from another or distinguishing between bills, you ask a friend or relative to help you focus on the differences in size, thickness, and edge. By folding denominations of bills in different ways, you can easily locate them in your wallet.
Implications: Learning is always assisted and materials are required.
IT contribution: On line activities allow students (with residual vision) to watch and handle different coins. By interacting with the computer, several exercises allow them to practice independently.
Activity 2: Home Management I: Managing home bills.
Methodology: Low-vision persons can use magnifiers to read their home bills (for general expenses such as electricity, gas, telephone...) depending on their residual sight. Otherwise, they need someone's help.
Implications: Similarly, the visually impaired need help to manage or at least know about their home management.
IT contribution: Gas, electricity and water suppliers as well as telephone companies have websites showing users general information about the company, their services, users' bills and accounts.
Sample: http://www.gasnatural.com (Supplier of natural gas, Spain)
Activity 2: Home Management II: Banking.
Methodology: Similar to the above for managing home bills, with similar implications too.
IT contribution: Nowadays most banks have websites where their clients can log in, access their own accounts online and perform all kind of banking transactions (transfers, debit account charges, etc.). Thanks to e-banking, users don't need to physically reach their branches. Other interesting option is banking through mobile phones.
Sample: http://www.bankinter.es (Bank)
Activity 3: Home Management III: Shopping for food and home items.
Methodology: Locating the nearest market, learning how this local market is arranged.
IT contribution: On line shopping at a large number of supermarkets; by means of websites providing information on food items, their prices, offers, plus online shopping for home delivery. You are given the option to save your address and card details. It's a good idea to do this so that you won't need to put them in again. If you've shopped previously but not saved them, you can do so next time you shop.
Before the order is placed, a screen allows me to confirm my order and my personal details, which I am able to change, if necessary. Then when my order is complete, a confirmation of order screen comes back and an email is also sent confirming the order.
Sample: http://www.condisonline.com (Supermarket)

SOCIAL SKILLS
Activity: Engaging in social conversation.
Methodology: Role playing based on daily life situations, etc.
Implications: However useful this activity may be, it is often difficult to find adequate situations for practice.
IT contribution: Use of e-mail, chat, discussion fora, and blogs encourage writing skills for the purpose of communicating with others. In the absence of other factors supplementing oral and face-to-face communication, writing for these new media requires the user to carefully choose the best terms to be understood, as well as other rhetoric skills to enhance communication.

MOBILITY

Activity 1: To learn about public transport system in their town.
Methodology: Use of relief or highly contrasted maps.
Implications: Information can be obtained in a Braille output or in relief but cannot be updated as quickly as online.
IT contribution: Blind pedestrians will soon be using two emerging technologies: the first technology is computer-based geographical information systems (GIS) which give access to map information via a computer; the second is the Global Positioning System (GPS) of satellites which provide information about the precise latitude and longitude of any position on the earth's surface via a small receiver. These two technologies are already being used together in various navigational situations such as guiding cars and planes.
The task of blind pedestrians in finding their way through the environment can be thought of as involving two kinds of problem solving. First, they need to avoid obstacles (at both ground level and head height) and to find a clear path, say a couple of feet ahead; we will call this task micro-navigation. Secondly, they need to find their way through the more distant environment which may require knowing which street they are on, and in which direction they are heading, orienting themselves in relation to landmarks and knowing how to reach their destination; we will call this task macro-navigation.
Sample: http://www.tmb.es (Metropolitan Transport, Barcelona, Spain.)
Activity 2: Learning about your physical environment: Basic rooms in a house.
Methodology: The visually impaired person is usually accompanied through the itinerary and guided either by trainers or relatives and friends.
Implications: Access is not always available. Physical reality is required.
IT contribution: Pupils with residual vision can play several learning games online. With the command "Click over and compose the scenes", the below quoted website allows composing scenes for each room in a house, including kitchen, garden and bathroom. Each room is provided with a number of characteristic items (labelled) which can be dragged to different positions on the screen, thus allowing the child to create each room in a different way each time, among other creative options.
Sample: http://www.xtec.es/satis/ra/lacasa/lacasa.html(Educational portal, Catalonia's Generalitat, also available in English and Spanish)
Activity 3: Learning about your environment II: Museums, Galleries, etc.
Methodology: As before, accompanied visit or walk. Alternatively, by showing relief plates, etc.
IT contribution: Most national museums and galleries are nowadays designed as to provide exhaustive information on their masterpieces. E.g., by a design based on "Interactive Floor Plans", users can download files in video format to play Thematic Trails and embark on virtual visits of the Louvre museum. Users can explore the range and richness of the Louvre's collections through a selection of works illustrating a period, artistic movement, or theme. This is only one of the many options available.
Sample:http://www.louvre.fr/llv/commun/home_flash.jsp?bmLocale=en (Official Website of the Musée du Louvre, Paris)

LEISURE

These are open information and communications technologies to consumers who might otherwise be excluded.
Activity 1: Search for information on travels, hotels, restaurants, entertainment, car rental, etc. Buying tickets.
Methodology: Information is usually available also by phone.

Implications: Information by phone is not exhaustive.
IT contribution: A large number of commercial websites offer online tickets and access to constantly updated information on holiday bargains, hotel offers, etc. You can read other users' comments and reviews on any show in town and contribute your own. You can also email a friend sending them a link to the same show, hotel, etc., with a map showing how to get there, thus encouraging social relationships.
Sample: http://www.atrapalo.com (A Spanish website offering last-minute bargains for travel, hotels, holidays, car rentals and much more)

WEB SITES AND ACCESSIBILITY

The Web can be accessed using magnification, screen readers or talking Web browsers; with the exception of badly designed pages, most information is available to the student. For students with sight problems, greater difficulties lie in finding material. Blind or partially sighted students obviously take longer to read through or search for information as they are using magnification or speech.

The nature of the visual impairment will obviously have a major effect on the accessibility and suitability of a piece of software. Where a child has functional vision, much can be done to a standard PC to ensure that the child's visual needs can best be met.

Eventually a pupil who has no useful vision will need to use a program known as a screen reader or speech output system, which will give access to all areas of the computer.

Enlargement enhancement technology acts as a beneficial and useful aid for those who are visually impaired. There are many products available, both hardware and software, that greatly help those who need it. All of these products enlarge the text from the screen, so that visually impaired users can read the text that is written. Enlargement software performs another very serviceable aid for blind and visually impaired people. Products like over-sized monitors and enlargement programs are constantly being improved, and are helping those who need it all over the world.

Substitution for sight by sound plays an important role with assistive devices for blind and visually impaired people to use computers. Products that have been developed for substitution for sight by sound are software and hardware products. Programs like JAWS are screen-reading programs which read out the text to the user through headphones and speakers. Whatever the screen says, the program reads. The production of products like these are very useful, and incredibly helpful for blind and visually impaired people to use computers on their own.

All above quoted websites have been tested with Jaws, which is the screen-reading program used by the ONCE, and found to be largely accessible, i.e. they may be browsed to obtain relevant information and shop on line as desired.

CONCLUSIONS

1. New technologies help increase the quality of life for the visually impaired.
2. Their autonomy and independence are reassured.
3. Their self-esteem increases as they feel empowered to perform the same activities as other persons can perform.
4. Social relationships are encouraged, therefore preventing the visually impaired from becoming socially excluded.
5. Commercial, business and corporate websites as well as websites of institutions providing electronic services should be designed in accordance with accessibility standards so that the visually impaired can use them by themselves.

ANNEX 1. SUMMARY TABLE OF DAILY LIFE ACTIVITIES

SUMMARY TABLE OF DAILY LIFE ACTIVITIES

PERSONAL CARE	• Getting information on items such as different brands of shampoos, deodorants, etc., when to use each. • Fashion: Latest trends, colours, etc. • Make-up and cosmetics: Colours, styles, brands. • Buying clothes, personal-care items, etc.
HOME MANAGEMENT	• Cooking: types of food, different recipes, learning about tools and their functions • Keeping track of coins and notes to do shopping • Keeping track of bank accounts • Keeping track of gas, water supply bills, etc.
SOCIAL SKILLS	• Using proper verbal structures to engage in conversation
MOBILITY	• How to learn where your friends live • How to get familiar with your town public transport system • How to find out ways to reach a destination
LEISURE	• Getting information on cinemas, theatres, restaurants, etc. • Buying tickets (cinema, theatre, others...) • Reading newspapers • Reading books • Searching dictionaries, encyclopedias, etc.

76 Learning foreign languages by using a new type of orientation assistant for the blind

By: Dr. Hub, Andreas; Diepstraten, Joachim, Ertl, Thomas
From: Germany
Organisation: Institut für Visualisierung und Interaktive Systeme

Summary

Children and adults often find it difficult to learn basic foreign language vocabulary through conventional teaching methods. This is especially true for blind learners, who lack the benefit of environmental cues. While sighted individuals gain valuable information by noting the position of objects and their association with other objects (e.g., clock on the wall, chairs with the table, etc.), such cues are unavailable to blind learners. We have developed an orientation assistant for the blind that allows both blind and sighted individuals to learn basic vocabulary in their own or different languages while simply exploring their environment. Our device consists of a sensor module and a portable computer, and requires the generation of a 3D model of a specific indoor environment. A database is created which names all objects of interest in several different languages. The user can point the sensor module in any direction, press a key, and the closest object within the modelled environment is announced via text-to-speech engine. Thus, blind children, as they explore their surroundings, gain the environmental cues that facilitate vocabulary development. Blind and sighted individuals of all ages can utilize our device to learn foreign vocabulary, with sighted learners benefiting from the pairing of auditory and visual cues. Additionally, our orientation assistant allows blind individuals to navigate independently and safely within the modelled environment.

Introduction

As noted above, blind individuals lack the environmental placement cues so helpful when learning object names. In addition, sight provides information about size, shape, and color, which helps the learner categorize and recall newly-learned vocabulary. Retention of new words is further enhanced by the ability of the sighted to glance again and again at the target item.

In 2004 we presented our first prototype of an orientation and navigation assistant system for the blind [1]. In this paper, we would like to show that this system could also be used as a learning tool to acquire basic object names and language concepts in different languages. Furthermore, it can be used as an orientation and mobility teaching aid.

Local Sensor Information and 3D Models

Our system is based on the combination of local sensor information with 3D environment models. Accordingly, we generated a digital 3D model of our computer science building, including 3D models of the furniture and environmental details like door handles, light switches, door nameplates, etc.

Hardware Description and Operation

The hardware of our assistant system consists of a sensor module (which contains a 3D compass, 3D gyroscope, 3D acceleration sensor, and a stereo camera), and a portable computer, connected by cable and carried in a backpack. The housing of our first prototype [1] has been modified according to blind users' demands. The sensor module is held like a combination flashlight/cellular phone, and pointed in any direction within the current environment. The keyboard of the integrated cellular phone allows the user to send inquiries to the portable computer, or to a wireless connected service platform [4]. The sensor module can also be attached to the cane.

We determine the location of the user within the building by using a conventional WiFi system. The signal strength of WiFi access points in the user's environment is measured, and compared with the signals in a database containing all possible locations in the building. This comparison allows the system to determine the user's current position.

Conventional and Augmented Navigation Support

By scanning the environment with the sensor module, the user is informed of nearby objects and their features. It is therefore possible to use our device as a navigation system. Comparable to car navigation systems, a destination is chosen by using the keyboard. The shortest way is calculated by the system, and navigation advice provided over the loudspeaker or on a portable Braille display.

However, when sensor module scanning is done in an unsystematic manner, it may happen that important objects or locations may be missed. Therefore, we introduced the concept of navigation areas [2]. When a blind person enters into these areas, augmented information about these locations can be accessed, e.g., room numbers and their occupants, warnings about stairways, the existence of handrails, etc.

Interactive Learning of Object Names in Different Languages

Object Recognition for the Blind and Deafblind

Once the user's location is known, we then look at the direction indicated by the sensor module's 3D compass and 3D gyroscope. This information determines a 3D vector that can be used within the model for object selection. A corresponding picking ray is used, which reflects the vector's direction and identifies the closest object. The name of this object is announced to the user by a text-to-speech engine and loudspeaker respectively. For deafblind persons this name is presented interactively on a portable Braille display [3].

Learning and Teaching Tool

The user can explore the environment just by pointing at objects. The name of objects can be provided in different languages. Users have the opportunity to learn basic words of the target language just by playing with our device and exploring the current environment, provided that there is a 3d model of these rooms and buildings. Besides learning basic words in several languages, our system can also be used to teach orientation and mobility vocabulary and concepts, such as the four directions, angles, distances, number, velocity, and acceleration.

Results

For the visually impaired it is possible to explore unknown surroundings using our system, provided that there is a 3D model of the new environment. By pointing the sensor module of our prototype at objects, users learn the name, descriptive feature information, and navigation possibilities. These facts can be provided in different languages. The results can be presented interactively, either over a loudspeaker or on a portable Braille display.

The first usability tests with blind persons showed that our navigation system facilitated learning of basic object names in both native and foreign languages, simply by exploring the current environment.

Discussion and Future Work

Future work encompasses several areas. One is the application of our device to teaching basic language skills to the learning-disabled. Our orientation assistant is a novel learning aid that focuses and maintains learner attention by pairing both visual and auditory stimuli. Repetition, so necessary to memory and mastery, is under the control of the user, who can activate object naming as many times as necessary, provided that the environment has been modelled.

Our first user study with blind children and adults suggested the need to adjust hardware size, weight, and ergonomics, and to improve localization accuracy. We therefore fuse local sensors with the WiFi system. We also want to better synchronize reality with model information. Another developmental goal is to integrate our system into the "Nexus platform." This is the term given to a global network of several servers, that is still under development, providing services also for sighted persons [4]. Further, we plan to try to detect semi-static, movable objects like chairs or tables, and later detect fast-moving objects. Our 3D models will be updated using cameras, and software ergonomics adjusted to individual demands taking into account the security of the system. Lastly, we will expand our system to outdoor settings, by the integration of the global positioning system, and expand our orientation and mobility support to stores and individual workplaces.

Acknowledgements

This project is funded by the Deutsche Forschungsgemeinschaft within the Center of Excellence 627 "Spatial World Models for Mobile Context-Aware Applications". We would like to thank our colleague Alfred Werner, and all other blind persons who tested our system, for their helpful input.

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77 New contents of mathematical education in primary school for visually impaired children

By: Gordeiko, Vladimir
From: Belarus
Organisation: Belarussian State Pedagogical University

Training at school should promote to development of various cognitive processes such, as representation, imagination, thinking, including spatial thinking which provides creation of spatial representations and operating by them. This kind of thinking is an essential element of game, educational, labour activity of the child where it is necessary to use skills to be orientated in space.

Formation of structures of spatial thinking is of great importance for the visually impaired child. Seizing ways of creation and operating by spatial representations, the child acquires knowledge of surrounding space and skill of interaction with it, develops sensual experience, cognitive activity, creativity, improves practice of spatial orientation, and also raises success of the training at school. All this in turn promotes versatile development of the pupil and his successful integration into a society.

At definition of the contents of pedagogical work on formation of skills to create spatial representations and to operate with them it is necessary to take into account, that younger schoolchildren most frequently meet spatial representations during studying elementary geometry at lessons of mathematics. Studying of a geometrical material, demands mainly emotional-imagined cognitive strategy, which is organic for children of younger school age, and gives the big opportunities for their high-grade intellectual, emotional and aesthetic development. To regular studying of elementary geometry should be given much more places in primary school, than it takes place now. And, at special school such position can be put forward as the special requirement to process of training. Its realization assumes the organization during training dynamic interaction of schoolchildren with surrounding space, with objects filling it, dynamical change of their spatial properties. It allows to fill that the child do not have in the ordinary experience because of the restrictions caused by visual impairment.

At definition of the contents of initial mathematics it is necessary to take into account character of educational actions with a geometrical material. The traditional system of the mathematical exercises intended for studying of a geometrical material in primary school, is limited to tasks into which pupils are offered to allocate properties of geometrical figures, to compare them, to define a belonging of a figure to some class, to calculate its perimeter and the area. Such exercises enable to form at children of skill to create various spatial representations about the form and the sizes of subjects, properties of their components.

Together with these tasks, certainly, rather important for formation of knowledge and skills of pupils, their intellectual development, necessarily there should be tasks for change of geometrical objects, their transformation. Such exercises enable to form composite skills which allow to transform and combine spatial representations in younger schoolchildren, to create on their basis new spatial representations.

Necessity of inclusion of such exercises for the contents of mathematics of primary school proves to be true the regulations about proved in psychology similarity of spatial thinking structure to structure of geometrical transformations group. According to this position of skill of the child to operate with spatial representations it will be coordinated to his ability to carry out the certain set of geometrical transformations.

Now such tasks yet have not found the regular reflection in the contents of mathematics of primary school. Still, the traditional sight at a geometrical component of the contents of initial mathematics as on auxiliary concerning its arithmetic component prevails. Studying geometrical transformations is traditional is included in the contents of mathematics of average and senior school.

But, last decade the significant amount of scientific publications has appeared in which the opportunity of carry of studying of some kinds of geometrical transformations to primary school and even is proved during the preschool childhood. The opportunity of such carry is based on regulations about presence the sensitive periods in process development of the person which are optimum for formation of the certain mental functions. The age of 6-12 years is sensitive for development of figurative components of thinking, and therefore is optimum for development and spatial thinking.

Inclusion of geometrical transformations to the contents of mathematical education of primary school for children with visual impairment has the important correctional value for their development. Mastering of knowledge of properties of geometrical transformations, mastering by skill of them to carry out, helps the child to compensate lacks, incompleteness of his sensual experience, a significant place in which just and belongs to knowledge and the skills basing on spatial properties of objects of the surrounding reality. Spatial transformations of various kinds, can be considered as model of spatial interaction of the child with environment. Just as the thinking as a whole carries out compensatory function in mental development of blind and visually impaired children, and the spatial thinking carries out the same function in developments of various kinds of the activity demanding use of spatial properties of objects of the surrounding reality.

Pupils of younger school age accessible to mastering are such geometrical transformations, as symmetry of various kinds (central, axial), parallel transposition, rotational displacement, and also their compositions. There are some reasons for such choice. First, there are many examples of these geometrical transformations in the environment surrounding the child, in his life experience. Second, their properties and a rule of performance are simple enough and accessible to pupils of age of primary school. Thirdly, these transformations form mathematical group, the composition of several geometrical transformations can be replaced with one. For example, it is possible to replace two consecutive axial symmetry one parallel transposition or rotational displacement.

As is known, cognitive activity of the child with visual impairment demands creation of special conditions for the development. An integral part of the new contents of mathematical education in primary school is using of special educational tools, so-called dynamic models of geometrical transformations. These educational tools should provide to children with visual impairment an opportunity not only demonstrations of all stages of geometrical transformation from initial and before final position geometrical object, but also performance of them by them. Such dynamism of demonstration and realization of geometrical transformation is necessary for reliable mastering rules of geometrical transformations performance and their properties by the child with visual impairment.

Studying of geometrical transformations by younger visually impaired schoolchildren occurs in some stages. In the beginning actualization of representations and ordinary experience of pupils, demonstration of examples of geometrical transformations in the nature and in activity of the person, an opportunity of use of knowledge and skills about them in own educational and daily activity, development of interest of children to studying this material is carried out.

Then knowledge of properties of geometrical transformations and rules of their performance are formed. For example, for studying such geometrical transformation as axial symmetry it is possible to use the following dynamic model. It will consist of two parts of the rectangular form and can be opened and closed, as the book. The internal surface of this educational tool is adhesive. For work with this model pairs identical geometrical figures which one surface also is adhesive are used.

Studying of properties of axial symmetry occurs as follows. The schoolboy or schoolgirl attaches a figure to the left party of the educational tool, then puts on it other the same figure the adhesive surface upwards. After that the educational tool is closed and again opens. The pupil sees, that one figure is located at the left, and another is located on the right. They have the identical form, the sizes and position concerning a bend line of model. It is judged: these two geometrical figures are located symmetrically.

At the following stage pupils practically carry out geometrical transformations, using dynamic models which allow to track dynamics of performance of geometrical transformations. Children also use cards where properties and rules of performance of geometrical transformations are written down. Pupils necessarily pronounce all their actions. After finish work with the educational tool, schoolchildren make corresponding figure on a paper.

Further the dynamic model described above is not used any more. Operating by spatial representations is carried out with the help of movements of hands in air which simulate the mechanism of action of the educational tool. Children put palms of hands together and then open them, as the book. Further pupils draw result geometrical transformation on paper.

At the closing stage younger schoolchildren with visual impairment carry out geometrical transformation by way of mental actions, silently. Cards where properties and rules of performance of geometrical transformations are written down, are not used any more. The teacher can see only final result in a graphic kind.

Such new contents of mathematics in primary school for children with visual impairment provides not only development of spatial thinking, but also, as a whole, all mental sphere of this category of children.

78 Telling the future: Effective support of blind children in (not just) a foreign language classroom

By: Boguslaw, Marek
From: Poland
Organisation: Catholic University of Lublin

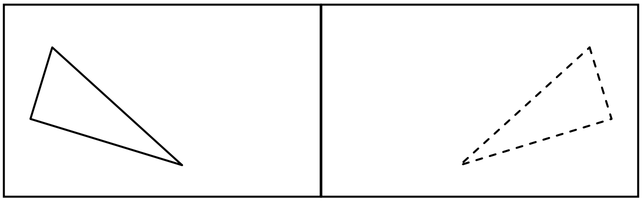
"I think I know what it's like 'to see'. To see must be like being able to tell the future, because you know NOW that there will be a tree, and I will know LATER, when I walk up to the tree and touch it."

This definition of sight, given by a nine-year old child born blind is just as puzzling and moving as it is revealing. It reveals a host of problems which a congenitally blind child faces in trying to solve the mysteries of the invisible world, but, at the same time, it shows the never satisfied hunger for knowledge, as well as inventiveness and unlimited potential for developing strategies for interpretation and for putting together (without vision) scraps of information provided by the remaining senses.

Although it may not be immediately obvious, the above definition of vision places a great responsibility on sighted people involved with the education and well-being of people with a visual impairment. If it is true that 'to see' means 'to see the future', than one cannot help asking whether at all, and what kind of future WE see for infants, children, teenagers and adults we work with.

There is no one single answer to this question, but most of us would probably agree that the kind of future that children with a visual impairment can count on, largely depends on the kind and quality of education they receive. To continue along this line, most us would also agree that the quality and effectiveness of education of these children largely depends on the quality and effectiveness of the support they receive. Finally, and perhaps most importantly, the adult future of a young child with a visual impairment depends on whether or not, his/her talents and intellectual potential have been recognized and given a chance to develop. And yet, despite continuing efforts and constant improvement of services which are available, alongside with success stories one can hear of cases of failure and helplessness, stories of totally blind children in mainstream schools abandoned rather than integrated, of children sent back from mainstream schools to special schools, of unprepared mainstream school teachers of different subjects left alone with the problem of including a totally blind child in school activities, stories of support which is inadequate due to lack of resources.

The paper presented here will not offer far-reaching solutions and will not suggest decisions which must be made at a national level. Rather, it will concentrate on concrete problems, on the sources of various difficulties faced by congenitally blind learners and on some of the possible solutions.



Also, I would like to propose some simple solutions applicable to everyday classroom situations, aiming at helping the teacher to engage young learners with a visual impairment in activities which have often been accessible to sighted students only.

All of the educational tools and other resources presented here were 'born' as a result of an English as a foreign language programme for visually impaired children and students, introduced fifteen years ago at the Catholic University of Lublin. The programme was probably one of the earliest initiatives aiming at making English a possible career for visually impaired individuals, and one of the first programmes recognizing such strengths of blind students as: well trained memory, good listening skills and concentration – all extremely useful in learning a foreign language and in the work of a conference interpreter. It was also the first successful attempt to give specialist training in visual impairment to fully qualified teachers of English, on the assumption that the most effective support can be offered by professionals and specialists in particular subjects, who also have additional qualifications in special needs and who understand the educational implications of visual impairment and who have the knowledge of the available solutions.

In addition to being a potential career, a foreign language is a particularly useful area for discovering a wide range of strengths, weaknesses and of potential problems that young blind learners may encounter in all subjects of the school curriculum. All foreign language course books include activities requiring elements of mathematics (e.g. shopping games), geography (maps), literacy (passages for reading), independence skills (various types pf project work), history, nature and science (reading material or pictures of old buildings and monuments, plants, animals, and technology.

The educational tools presented here focus on helping a child born blind understand a wide range of concepts which are essential for a full and meaningful involvement in such classroom activities as drawing, reading maps and graphs, games developing independence, as well as more serious tasks requiring good understanding of spatial relations and understanding of concepts based on visual experience. The proposal is based on the assumption that this kind of support, aiming directly at removing the gaps in a blind child's knowledge of the predominantly sighted world is just as important as support in the narrow sense of the word – far too often limited to providing access technology and believing that it will solve all the problems.

A sighted person can only try to imagine how difficult it must be for a child born blind to make sense of the 'invisible world', of the unrelated impressions, frequently deprived of a meaningful context, received through touch, smell or taste. How incomplete and fragmented this knowledge is can best be seen from a few more quotations from the language of congenitally blind children:

What colour is the wind?
Does a stone look the way it feels?
How can you see a t*all tree through a small window?*
I've learnt a new English word – 'transparent' – but I don't know what it means.
How can these shapes be the same if they feel different?
I can HEAR that I've lost my way but I don't know where I am.

It should not be surprising that many of the gaps in blind children's knowledge of the world manifest themselves in foreign language lessons. Before introducing a new word, it is important for the teacher to check the child's understanding of the concept expressed by the new lexical item. It happens, more often than one might be prepared to accept, that the children have problems with full understanding of some of the most basic concepts.

How basic some of the concepts are with which children born blind may have problems, became clear in an exercise involving two sets of a teddy bear puzzle, with one of the teddies having a nose, eyes and a mouth (made of modelling clay) to indicate that the bear is coming towards us, and one walking away – a spatial orientation indicated by lack of facial features. The language (but also a spatial

orientation) task assigned to a ten-year-old congenitally blind child was to identify the right and the left leg, ear and arm of each of the bears. It was not surprising that the child correctly recognized 'right' and 'left' on the teddy bear who was walking away, because both 'right' and 'left' were extensions of the child's own body and orientation. Failing to recognize ' right' and 'left' on the teddy bear 'coming towards' the child was, at least initially, not surprising because this orientation requires a much more complex process of mental visualisation. What WAS surprising was the real source of the problem, which became clear when the girl suddenly exclaimed: *"Oh, I didn't know that when people walk, they walk in the direction shown by their faces."*
The problems frequently encountered by blind children and by their support teachers include:

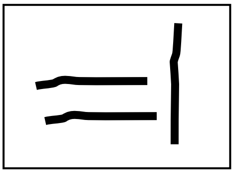
- problems with understanding the relation between objects and drawings
- problems with understanding the concept of a map
- problems with understanding the relation between different geometric shapes
- problems with understanding that rotation does not change the shape
- problems with understanding symmetry
- problems with understanding processes
- problems with understanding complex graphics

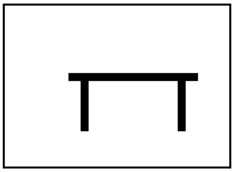
Effective support in the areas mentioned above requires both patience and a good understanding of the nature of the difficulties, as well as the knowledge of tools which are available.

The **teddy bear puzzle**, which turned out to be a very useful tool for explaining concepts difficult to understand, prompted an idea that young totally blind learners would benefit from other educational tools permitting direct experience rather than a description and verbal explanation alone. Soon, a range of HUNGRY FINGERS* tools and resources were born, making support of children with problems listed above, less stressful and more effective:

Transfograph – facilitating the understanding of the relation between objects and drawings.

Understanding the relation between three-dimensional objects and the two-dimensional conventions of representing these objects in drawings is one of the most difficult, still largely underestimated areas of education of learners with a visual impairment – an area recurring in nearly all school subjects. The scale of the difficulty and the need for support in this area can best be demonstrated by the following two tactile drawings:





The three separate lines, two horizontal and one vertical are a drawing of a bus – a drawing made by a congenitally blind child, where the lines stand for the step, the pole which the child holds on to while boarding the bus, and the seat. The other drawing, made by a teacher in an English language class, was not recognized as a table by a blind child, who decided that the picture just showed three lines joined together.

Problems with understanding the conventions used in two dimensional representations of three dimensional objects can be solved with the help of a tool called **Transfograph**

– a box with exchangeable lids, models of different objects (furniture) and outlines of each model cut out in the lids. The models slide into the wooden plates, revealing tactile outlines of a table, chair, bed, desk, chest of drawers and a desk, which can be compared with tactile drawings of each model. The experience of being able to feel and recognize whole models and parts of models extending above the surface of the lids has proved extremely useful in helping the child build a mental representation of an outline – a concept essential for understanding the relation between objects and drawings.

A task in which the child is expected to draw a table mat set for breakfast is a very useful exercise **introducing the concept of a map**. The whole area is easily manageable and contains representations of objects and spatial relations obtaining between them.

Moving to larger areas – for example drawing a table set for lunch for a family, the plan of the child's room or classroom is an easy and natural way to introduce the idea of a scale – essential to understanding maps.

Two tools – **Clever triangles** and **Space manager** were designed to help the child understand the relation between different geometric shapes – one through recognition of different configurations and one through active involvement of drawing shapes and interpreting shapes as different combinations of component shapes.

The fact that rotation changes the rotation of an object but not its shape can easily be explained with the help of a **Rotograph** – a tool giving the child direct experience of being able to rotate different shapes and draw their tactile otlines.

Symmetrograph is another set of tools giving the child a chance to experience symmetry by discovering that two identical shapes cut out in wooden plates which open or close like a book – overlap or are separated by the same distance from the axis when the wooden 'book' opens.

The particular value of the tools described above is that they can be used for explaining difficult concepts to all children, not just those with a visual impairment. The important message sent by supporting a child this way is that totally blind children need not always to be singled out by having to have special adaptations prepared for them. Also, the tools add a new, tactile dimension to the way in which sighted learners are taught, far too often limited to visual experience only.

Processes as well as complex graphics can best be explained by dividing them into more basic elements, as is the case in HUNGRY FINGERS tactile activity books allowing the child to compare different stages of particular operations (loading a lorry, drawing a teddy bear) with the corresponding stages of an emerging drawing.

In addition to tools for explaining different concepts, there are a number of devices which can engage the whole class – both blind and sighted students in a range of educational activities.

Wikki stix (self adhesive strings), **Concept keyboard** (a type of touch screen) and **Tutorette** (a card recorder) are some of the most popular tools used for supporting children in the English language programme at the Catholic University of Lublin – giving the teacher a chance to design exciting educational materials involving Braille, print, tactile drawings and sound. This way language games and quizzes but also some more serious educational tasks acquire a whole new dimension, making learning a pleasure and an exciting adventure.

Using these tools, and preparing other adaptations for a visually impaired child requires time, resources and commitment, perhaps even devotion. But then, as we all know, supporting a child with special educational needs is not just a job – it is a mission and a great responsibility for the child's future, a future which will hopefully mean moving to higher education, satisfaction, fulfilment, independence and a professional career.

More information about the tools described here can be found at the following web address: www.hungryfingers.com

79 Foreign lesson's games for blind and visually impaired pupils

By: Strankauskiene, Grita
From: Lithuania
Organisation: Kaunas Boarding School for visualy impaired

Abstract

For more information please contact the author: gritastran@one.lt

It is usually discussing about benefit and expedience of games at language lessons. Of course games can't change traditional teaching methods, but it's important that games can enrich and enliven language lessons for blind and visually impaired children.

Motivation

One of fundamental foundation to achieve good results is motivation of studying languages. It is very important to prove for visually impaired pupils, that they must study not only their national language but also foreign languages too. The reason for them is not always clear, because their experience of life and possibilities are more limited than of sighted people.

Practical use of knowledge

It is very important to make conditions for communication foreign language in usual and sudden situations of life. Free, noncommittal atmosphere of playing especially has positive effect to visually impaired pupils, who are more nervous and have less self-confidence.

Educational aims

At first are some lingual aims: ability to understand a foreign language and to product right speech constructions. After that there are created special aims for visually impaired, those aims are: development of alive sensations (hearing, tactical perception, visual remainder), training of orientation and mobility habits, image formation, development of practical habits, stimulation of activity and self-support.

Organization It is very important by the choosing of game to estimate orientation habits, motor possibilities and ability to use survived senses, playing experience and mentality condition of the children.

We have to introduce the blind pupils with the game place before playing. It must be a safe place with acoustic and tactical guides; those can help to move blind children more easily.

We have to prepare the ground, if we want the game would achieve one's object, give pleasure to blind and visually impaired children and would be generally functional.

80 The crucial point

By: Gschaider-Kraner, Marija
From: Austria

For more information please contact the author: mgschaiderkraner@aon.at

81 On the Significance of Self-Determination and Independence in the Training of Orientation and Mobility

By: Drolshagen, Birgit
From: Germany
Organisation: Univ. of Dortmund, Fac. of Rehabilitation Sciences, Dortmund Center Handicap and Study

Orientation und mobility training for the blind was established during the Second World War. The intention of the training was to support the blinded adults to become as independent as before they went blind by teaching common and universally valid techniques. Independence was equated with doing everything by oneself.

Meanwhile, the original conception – as Klee (1998) and Thiele (1989) illustrate – has changed. Some examples will demonstrate this change. The target group of the training extended to early blinded children and adolescents, to persons with low vision, and to elderly persons who went blind. The focus of interest has shifted to the individual with its individual strategies of orientation and mobility (Hill et al. 1993, Lahav et al. 2004).

In contrast to this, the statements of rehabilitation specialists vary with regard to the goals which the training should aim at. Some specialists go on emphasizing independence and the qualification for doing everything by oneself as the only goal to be achieved by training. For example Brambring (2003, p. 22) formulates: „Ziel der O & M-Schulung ist es, eine sehgeschädigte Person zu befähigen, selbständig Wegstrecken in einem für sie angemessenen Tempo zurückzulegen" (it is the aim of orientation and mobility training to enable a person with visual impairment to cover a distance independently in a speed appropriate to his or her specific needs / translated by B.D.).

Other specialists for example Klee (1998) emphasize that the aim of independence is to be considered as a relative aim. Cory (1990) turns down the ideology of doing everything by oneself. She puts stress on the right of persons with visual impairments to decide autonomously between the alternative strategies of doing everything by oneself or doing tasks with personal help. As a prerequisite to choose the individual strategy, she however mentions, that generally the visually impaired persons must be able to deal with the tasks without using help.

Drolshagen and Rothenberg (1999 / 2004) explain that this new understanding of independence isn't a change enough. With regards to the Independent Living Movement they go beyond these opinions of rehabilitation specialists who aren't mainly disabled. They demand that the rehabilitation should turn away from the primacy of independence to the primacy of self-determination. They emphasize that persons with disabilities are experts in their own cause and therefore they have the right to decide on a self-determined basis whether they want to do specific tasks independently by themselves or by using personal help or services. As a prerequisite to choose between these alternatives Drolshagen and Rothenberg point out that persons with disabilities must be taught the different strategies of dealing with the individual need of help.

This means a change of paradigm in the theory and practice of rehabilitation. The scientific discussion of the rehabilitation of visually impaired persons is influenced by this demand (Schneider 2004, Walthes 2003). In this contribution I will answer the question if this change of paradigm is also to be seen in the practice of rehabilitation. I will investigate this question exemplary at the training of orientation and mobility. Therefore first I will present strategies which may pose an alternative to the strategy of doing everything by oneself. These strategies enable visually impaired persons to varying extent to move self-determined. After this the results of a study with mobility specialists will show the importance of these alternative strategies in their everyday lessons. Finally I will present some suggestions relating to the future of the rehabilitation of visually impaired persons.

Strategies of self-determined orientation and mobility

At first I want to outline the method of personal assistance afterwards I will discuss the pros and cons of using the different strategies of dealing with the the indivual need for help. In this contribution the method of personal assistance gets special attention because it was developed as a counter movement against doing everything by oneself by representatives of the Independent Living Movement. A detailed overview of the concept of self-determination its aims and its development is to be found in Drolshagen/Rothenberg (1999).

The method of personal assistance

The method of personal assistance was developed by the Independent Living Movement of people with impairments to attain a self-determined life for people with special needs even if they can't or don't want to use the strategy of doing everything by oneself. With the help of personal assistance needy people can become self-determined employers. They can organize and coordinate their required aid so that benevolent helpers become personal assistants. They are employed and paid and can also be dismissed on the basis of poorly performed services by their employers – in this case visually impaired persons (Miles-Paul 1992).

Personal assistance means each form of personal help which enables impaired people to arrange a self-determined life. Personal assistance includes the areas of enduring care help in their households and nursing as well as communicative help by sign language interpreters for hearing impaired persons or the service of reading out for blind people. This can require high professional knowledge or no special qualifications (Assistenzgenossenschaft Bremen o.J., o.S.).

The concept of authorization is at the core of the idea of personal assistance; those who depend on help – personal assistance users – authorized to make all relevant decisions. Because of their employment authority the personal assistance users chose, employ, and can dismiss their personal assistants. The supervisional authority means that personal assistance users instruct their personal assistants on their own and supervise their work. As a result of their financial authority the personal assistance users act as regular employers and pay their personal assistants. Organizational authority enables the personal assistance users to be responsible for their everyday activities so that they can live in a self-determined way.

In summary, this means that personal assistance users determine who will assist them, a man or a woman, with what qualification for which tasks. The Personal assistance users decide when, what, and in which way a specific task is to be completed by which person. The personal assistance users can supervise the work of their personal assistants because of their supervisional and financial authority. In this way it is guaranteed that the work is done in the way the personal assistance users wish.

Discussion of the different strategies of self-determined locomotion.

Corresponding to the traditional aims of orientation and mobility training first the strategy of moving independently by oneself is to be mentioned. a survey carried out by Drolshagen and Rothenberg (1999) illustrates that this strategy of doing things by oneself makes a maximum of flexibility possible. On the other hand doing things by oneself costs much energy, time and stress. As a consequence persons who chose this strategy do without those activities which they regard as to stressful or to time-consuming.

In the literature, the importance of payment is mentioned as a prerequisite that help like support in locomotion will be done in the wished quality and to the wanted time (MOBILE et al. 2001). Using unpaid friends or family members is frequently not a strategy aiming for self-determined locomotion. Rather such a system holds the danger of a dependence on and paternalism by helping people (Drolshagen/Rothenberg 1999). The use of services can be a strategy which allows self-determined locomotion comparable to personal assistance. In these cases the relationship of help is marked by payment for performed services. Payment means "to call the shots" and therefore self-determinism. Limitations concerning choice, instruction, and organisation of helpers have to be considered. A taxi driver may not be quite appropriate as personal assistants because of further official ties as well as she/he would probably not adapt her/his style of driving if asked to do so by passengers.

Each strategy contains pros and cons. There doesn't exist a strategy which is best in every situation. In terms of self-determination of the highest possible level, it is important that people with impairments can decide on their own as experts which strategy they want to use in a certain situation. That implies that they are familiar with all strategies, know about the pros and cons, and have learned in appropriate courses of rehabilitation how to use them. Thus, the task of rehabilitation is to impart the different strategies of handling special needs as equivalent alternatives and point out options (detailed in Drolshagen/Rothenberg 1999, 2004). If and to what extend this task is implemented in education of orientation and mobility should be demonstrated in the following examination.

The study

I do not want to burden you with lengthy methodological considerations. Therefore only a few sentences will introduce you to the methodological procedure of the study. I designed a standardized questionnaire which was sent to all 151 mobility institutions and specialists who are admitted to work as a mobility trainer in Germany. Main topics of the questionnaire are questions to the subjects of their own training, in the process of becoming a mobility specialist, to subjects and aims of their everyday courses with visually impaired persons, and to their estimation relating to their students' independence and self-determination.

40 % of those questionnaires have been mailed back to me. In terms of the commonly known advantages and disadvantages of a written standardized interview this is a satisfying result (Diekmann 2002, p. 374; Schnell / Hill / Esser 1995, p. 333).

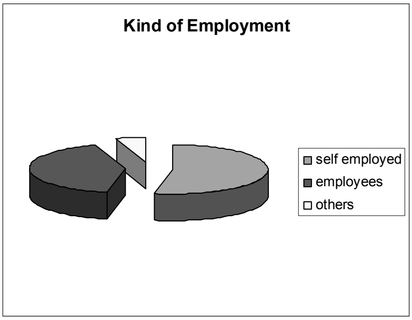
The data were evaluated with the SPSS-programme. Because of the relatively small amount of data the evaluation was made merely descriptive.

Presentation and interpretation of the results

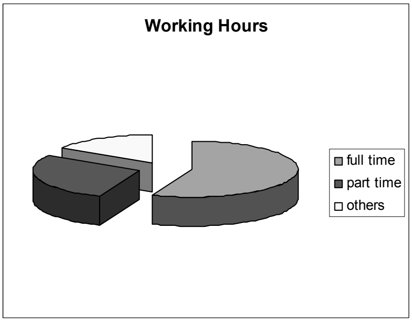
The interviewed persons

First I will present some data of the persons who answered the questionnaire. The number of self-employed mobility specialists is only a little bit higher than the number of specialists who work as an employee in rehabilitation institutions. More than half of them work full time and 28 % part time as a mobility specialist. The others are teachers at special schools. Within this job they work as a mobility specialist (pictures 1 and 2).

Picture 1



Picture 2

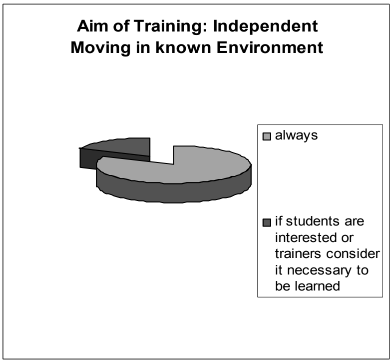


Two-thirds of the interviewed persons finished their own training between 1990 and 2003 (table 1). Consequently, they attended their training when the scientifical discussion of the rehabilitation was influenced by the ideas of the Independent Living Movement (Drolshagen 1994, 1998; Drolshagen/Rothenberg 1999; Klee 1998; Laemers 1999; Metz 1993; Mickler 1993).

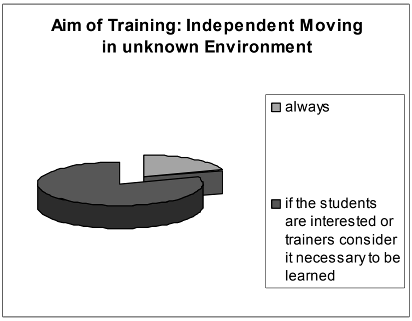
Aims of the own courses

More than 80 % of the interviewed persons generally pursue the goal of enabling their students to move independently in an environment familiar to them. Other aims which are also proposed in the questionnaire are always pursued by less than 33 %. Some of these aims are learning how to use services, how to build up social networks, how to move in an unknown environment, or how to use paid helpers. These aims are only pursued when the students are interested in them or when the trainers consider them necessary to be learned by their students (pictures 3 – 7).

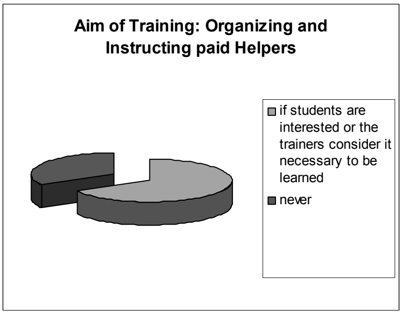
Picture 3



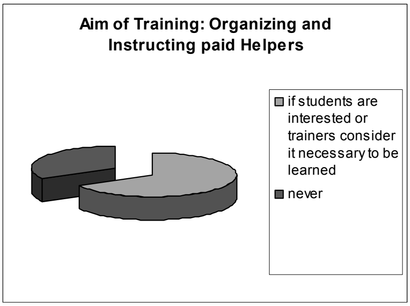
Picture 4



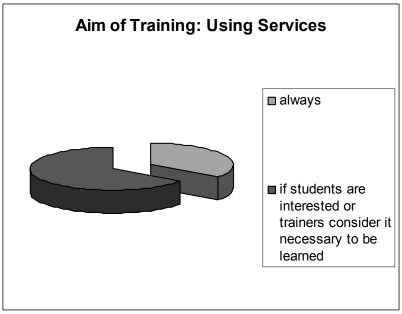
Picture 5



Picture 6



Picture 7



Relating to the aim of learning how to use paid helpers the answers include some strange aspects. It is the only aim which nobody generally pursues. Further one-third of the specialists declare that using paid helpers is an aim which they have never discussed in their courses. On the other hand, a large part of the interviewed persons declare to pursue this aim whenever their students are interested in it or whenever they consider it valuable for their students to learn about it.

Corresponding to the valency of the goals which the interviewed specialists are driving at, 95 % of them say that they had already reached the aims of their lessons when their students have finished learning how to move independently (tables 2 – 3). In terms of this aim they don't distinguish if the students are multiple disabled and visually impaired (table 4).

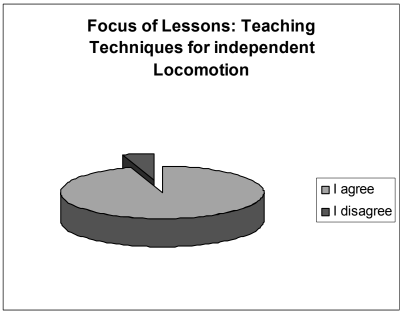
An additional aspect of rating the aims of the own lessons as reached, is if the students have acquired the ability to decide which tasks they want to do by themselves and which tasks they want to deal with by using personal help or services on a self-determined basis (table 5). This is surprising because – as I just described – learning how to use alternative strategies of locomotion isn't an aim of mobility training which the specialists generally aim at. This aim is of rather secondary importance. Moreover, these alternative strategies don't count as often taught subjects of the mobility courses.

Therefore, it is the question how the students should learn to choose independently between alternative strategies when only one strategy – the strategy of independent locomotion – unrestricted belongs to the aims and subjects of the lessons. Even if the mobility specialists agree to aiming at these alternative goals whenever the students are interested in them or when the trainers consider them necessary to be learned this won't change this statement: Because students probably will not say that they are interested in learning alternative strategies when their teachers don't regard these strategies equal to the strategy of doing something without using help. The mobility specialists probably will not consider if their students should learn the strategies of using personal help or services when they hold the strategy of doing tasks by oneself in higher regard.

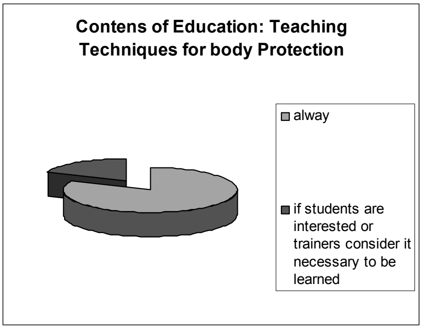
Contents of the education in orientation and mobility

The focus of attention in the education in orientation and mobility lies on techniques which support independence corresponding to the aims mentioned above. Thus, 95% of the participants of the examination point out that the focus of their courses lies on the area of teaching techniques for independent locomotion (picture 8).
The importance of techniques which promote independence is also evident in viewing the contents of the courses in detail (pictures 9 -17).

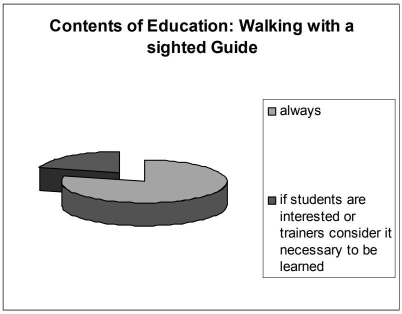
Picture 8



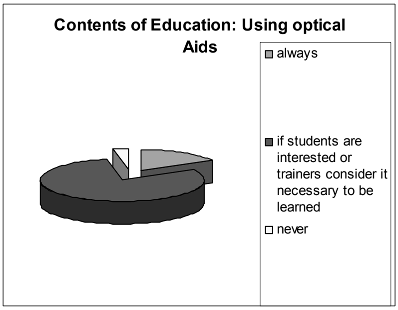
Picture 9



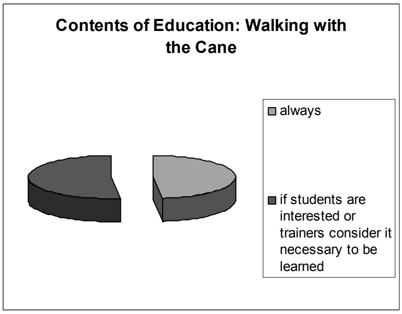
Picture 10



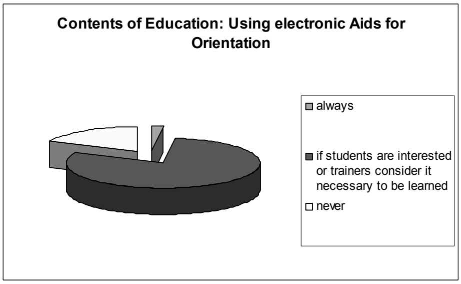
Picture 11



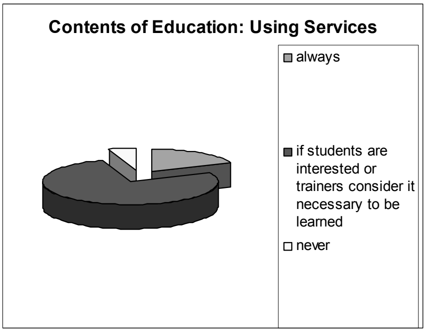
Picture 12



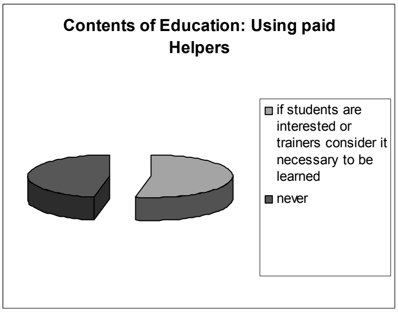
Picture 13



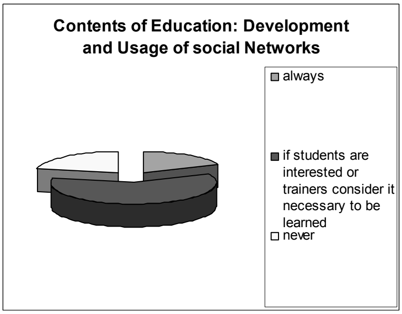
Picture 14



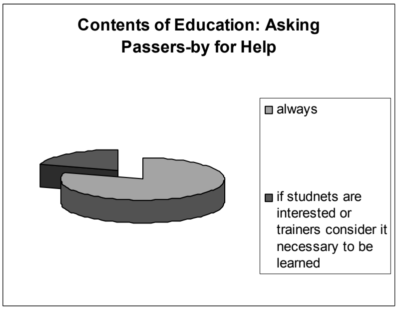
Picture 15



Picture 16



Picture 17



A high degree of consent receive those subjects which are supposed to enable visually impaired persons to do tasks independently. This corresponds with the curriculum of education in orientation and mobility. (e.g.: Hill/Ponder 1976; Staatsinstitut für Schulpädagogik und Bildungsforschung 2000). This includes the use of techniques for body protection (81%), walking with a sighted guide (77%), as well as asking passers-by for help (79%).

The quote of 47% of absolute agreement in the area of the traditional contents of education “learning the use of the cane” is comparatively low. On the other hand, a great number of specialists say that they teach how to use the cane, whenever they consider them necessary to be learned by their students. Therefore, teachers of orientation and mobility decide whether or not to teach the use of the cane depending on the anticipated need of their visually impaired participants.

The same goes for the items “use of electronic aids for orientation”, “use optical aids”, and “development and usage of social networks”.

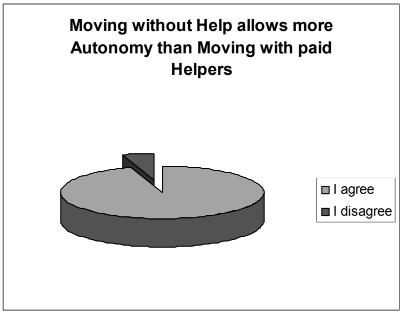
In contrast to these aspects the contents of courses which go beyond the traditional curriculum and which reflect the change of paradigm from the primacy of independence to the primacy of self-determination are hardly integrated in the courses as expected. Nearly half of the interviewees state that they never mention the subject of paid help in their courses. No one generally mentions this aspect.

These results are astonishing. As illustrated above, two thirds of the interviewee’s state that the preparation for the use of paid help belongs to the aims of their courses whenever they think, the students should be or whenever the students are in fact interested in acquiring the capacity (table 6). This discrepancy between aims and contents backup the mentioned considerations concerning the primacy of techniques which promote independence.

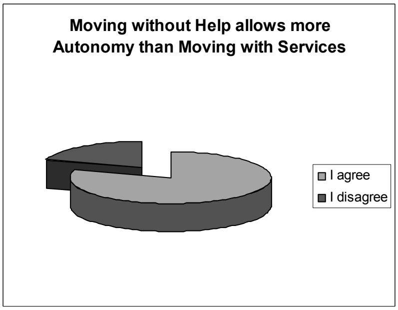
To the rating of the different strategies of moving

Pictures 18 and 19 show that nearly all interviewed specialists think that moving without help allows more autonomy than moving with personal assistance or with services. Only a few interviewed persons rate the strategy of doing everything by oneself and the strategies of using paid help or services to the same value. In this context more than 80 % of the interviewed specialists say it is their task to convince visually impaired persons of the advantages of moving independently without using paid help or services (picture 20). These statements show the primacy of independence.

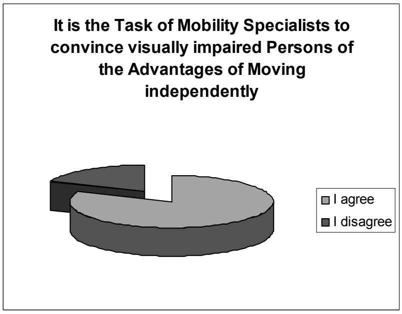
Picture 18



Picture 19



Picture 20



Conclusion and future prospects

The results of the study show that the practice of rehabilitation is hardly influenced by the demanded change of paradigm from the primacy of independence to the primacy of self-determination. Thus, this change only is to be seen in the scientific discussion.

Still, the strategy of doing tasks by oneself belongs to the priority aims and subjects of the mobility training. Alternative strategies such as using paid help or services are of secondary importance. To Drolshagen and Rothenberg (1999) this prevents visually impaired persons from being experts in their own cause and having the right to decide on a self-determined basis which strategy they want to use relating to a given task.

With regard to the demanded change of paradigm, the curricula of training mobility specialists as well as the curricula of training visually impaired students require an extension. These extensions require a new professionalism of the specialists who teach persons with blindness and low vision. Again, this new professionalism must be determined by accepting visually impaired persons as experts in their own cause. Only in that case mobility training will turn away from the primacy of independence and the mobility specialists will rate all strategies of locomotion to the same value. Only than the mobility specialists will accept the decisions of their students without limitations. Visually impaired persons who attend a mobility training will learn to decide in an unconfined way between strategies of locomotion which are regarded as equivalent.

The results of the survey show a difference between goals aimed at on one hand, and subjects taught on the other hand. This difference might be rated as a first step to extent or change the own professionalism with regard to the paradigm of self-determination.

Tables

Table 1

Examination of the own Training

Final Examination	Frequency	Percent	Addit Percent
1970 bis 1979	2	3,64	3,6
1980 bis 1989	18	32,73	36,4
1990 bis 1999	26	47,27	83,6
ab 2000	9	16,36	100
In all	55	100	
Missing	2		

Table 2

Aims of the lessons are reached, when visually impaired persons have learned to move independently in known surroundings

	Frequency	Percent	Addit Percent
I agree completely	41	71,93	71,93
I rather agree	13	22,81	94,74
I rather disagree	3	5,26	100
In all	57	100	

Table 3

Aims of the lessons are reached, when visually impaired persons have learned to move independently in unknown surroundings

	Frequency	Percent	Aditt Percent
I agree completely	16	28,57	28,57
I rather agree	25	44,64	73,21
I rather disagree	13	23,21	96,43
I disagree completely	2	3,57	100
In all	56	100	
Missing	1		

Table 4

Aims of the lessons are reached, when visually impaired persons have learned to move independently in known surroundings relating to the mainly taught target group moving independently in known surroundings

target group	I agree completely	I rather agree	I rather disagree	In all
Visually impaired children in Preschool age without further impairments			1	1
Visually impaired children and youth in school age without further impairments	7	2	1	10
children and youth with multiple	2	2		4

disabilities and visual impairment				
Visually impaired adults without further impairments.	12	2		14
adults with multiples disabilities and visual impairment	5	1	1	7
Elderly persons who went visually impaired in senior age	2			2
In all	28	7	3	38

Table 5
Aims of the lessons are reached, when visually impaired persons have learned to decide on a self-determined basis, which tasks they want to do by themselves and which tasks they want to deal with by using personal help or services

	Frequency	Percent	Aditt percent
I agree completely	46	80,70	80,70
I rather agree	9	15,79	96,49
I rather disagree	2	3,51	100
In all	57	100,00	

Table 6
Connection between the aim„to be able to organize and supervise paid helpers“ and the subject „use of paid helpers“

		Subject of lessons: „use of paid helpers“				In all
		If students are interested	If required	never	If students are interested and if required	
aim: to be able to organize and supervise paid helpers	If students are interested	11	3	1	2	17
	If required		8	5	1	14
	never	1		17	1	19
	If students are intterested and if required			2	3	5
Gesamt		12	11	25	7	55

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82 Rendering psychological support to visually impaired teenagers in changeable modern Russia

By: Kornilova, Irina
From: Russia
Organisation: University of the Russian Academy of Education

The sweeping economic, ideological and ethical transformations in modern Russia often prevent visually impaired children from adequate social accommodation and affect their personal and spiritual development. Visually impaired teenagers seeking for life goals need every social assistance to choose the correct life way, fulfil themselves, keep their inwardness intact and develop it in concord both with themselves and the others.

When we speak about the support and assistance to our children, we separate the roles of the State and society in building up the social and cultural principles of being that precondition successful social adaptation and psychological health of the new generation. The value of an individual is determined by public moral health rather than by his/her physical condition.

Our society is distinguished by hard predictability of future development and accentuating present difficulties and past successes. It is extremely hard to reconsider the stereotypical attitude towards the disabled children and unordinary people in general. Public opinion is the chief tool of the society; it exerts a significant impact on self-esteem and self-confidence of visually impaired people.

The State, however, possesses a variety of means to influence the individual; it employs only such information that contains an integral and accomplished idea. Thus, the State policy, both active and passive, creates the universal approach to socialization of handicapped children. The active policy is represented by such federal programs as "Disabled Children" and "Invalids' Social Protection". The government provides medical rehabilitation, treatment and prosthetics, as well as labor and social rehabilitation of disabled children; it takes measures to improve children's health level, support talented children, assist the orphans and invalids, etc.

Nevertheless, the existing legislation does not conform to the real needs of impaired people, therefore passive policy becomes the major way of governmental participation in invalids' affairs. It includes payment of pensions and unemployment benefits, maintaining the handicapped persons in special hospitals, etc.

The declaration of the top priority of humanism in Russia's public and ideological policy allows to believe not only in the possibility of positive changes of public conscience, but in the likelihood of legal, financial and scientific support to our education, science and practical activities.

We can say much about the problems and ways of their solution on governmental and public levels, but it is only a part of the work. In modern conditions a young man having sight problems is expected to have a fervent desire and strong will to surmount any life difficulties. The aspiration for positive changes in one's life is extremely important, and we consider it as a prerequisite for self-development, self-fulfilment and further successful social accommodation of teenagers. Thus, encouragement and support of teenagers is a significant part of psychological assistance. We also pay attention to the diagnostics, correction and prevention of various problems in cognitive, emotional and behavioral spheres.

The ontogenetic reflection is a tool stimulating positive transformations. It is based on reconsideration and modification of life values and behavioral stereotypes depending on the teenager's desire and ambition to perceive the world and his/her own role in it.

There is a close connection between the quality of the reflection, the opportunity to study the experience, the apperception of social stereotypes, on the one hand, and the development and implementation of adaptation behavioral strategies, on the other. Our five-year research has proved that visually impaired teenagers are more predisposed to the experience analysis and self-examination than their equals in age that can see normally. However, the quality of reflection, whether positive or negative, depends greatly on the teenager's attitude to his visual pathology. Children are prone to appeal to their defect as a justification of their school and personal failures, a reason for their dependence on their relatives, a cause to doubt their own value, a ground for hyper-compensation in certain fields of activity, etc.

Therefore, a teacher and a psychologist shall make every effort to build up such models of behavior, communication and labor that would allow visually impaired teenagers to be capable, active and self-dependent. We mean not only various auxiliary technical skills, communicative methods and customary practices, but the very process of implementation of theoretical and practical knowledge received by teenagers. In the course of special trainings teenagers learn more about themselves and their resources, they are taught to use effective ways of acting in changeable conditions outside the school, and broaden their behavioral techniques. Such a conscious and reasonable behavior is determined at least by three factors: teenager's personality, real situation and social support.

The search of adequate measures of rendering psychological support to teenagers includes the revelation of character accentuation as well as individual features of behavior and attitude toward oneself and one's visual defect. In so doing, we picked out some traditional teenagers' copying-strategies:

- transformative strategies (e.g. comparison and anticipation). They are connected with the stereotypical models of self-appraisal and with reflection based on teenager's attitude to visual pathology and its consequences;
- adaptation strategies (positive interpretation, role behavior, self-identification with stronger and luckier people/groups, etc.). They are less popular and to a great extent are determined by teenager's social skills;
- auxiliary methods of self-preservation in difficult and critical situations (leaving or escaping, struggle, emotional breakdowns, aggressive reactions, negation). They are the least productive but rather widespread among visually impaired people;

Teenagers demonstrate excessive concentration on subjectively successful behavioral and communicative models. Their mechanical replication in a new environment often results in it that small difficulties grow into big ones, and insignificant transitory emotional experiences become stable and obtrusive. However, it is the aspiration to establish friendly emotional contacts that helps to overcome the concentration on one's internal feelings. The results of our examinations prove the existence of positive reflection and give ground for generally optimistic forecasts concerning the future of visually impaired teenagers. At the same time, their level of social isolation is higher as compared to that of children having good eyesight. Besides, the hyper-emotionality and uneasiness of visually impaired teenagers decrease their assuredness to control the current social situation, which leads to the rise of ineffective emotionally-oriented behavioral strategies. Thus, though possessing the mainly positive ontogenetic reflection, visually impaired teenagers still do not have sufficient social skills to implement it in various life situations.

It should be noted in this connection that therapeutic potential of school environment is a prerequisite for improvement of visually impaired teenagers' social and psychological competence, which includes the balanced correlation of teenagers' self-expression, manifestation of their self-dependence and initiative with positive pedagogical influence of teachers and psychologists. In our view, the most efficient behavioral methods and techniques are those which allow teenagers to understand the psychological basis of transformations taking place within and around them, and to create effective models of behavior.

It is evident that the behavioral model must be attractive for a teenager. The mere observation of the wishful behavior is not sufficient; it is important for teenagers to feel the model's effect themselves. For that purpose different role games are used by the psychologist, but the most important factor consists in pupils' permanent being in the school environment, which supports and approves positive behavioral strategies.

Teenagers are predisposed to self-examination, and training of self-control will encourage their self-expression and self-adaptation. This work comprises several stages: analysis of both one's own and wishful behavior; appraisal and use of the incentives (kinds of confirmation) that help to achieve the wishful behavior; use of self-instructions.

Emotional support and recognition of success are often used as incentives. Self-instructions help to surmount the rigid inferiority complex. The psychologist can assist teenager to find the positive self-instruction to break the vicious circle, when negative thoughts impede to implement the behavioral model and fail to bring about the desired result, which only reinforces the teenager's negative way of thinking.

Trainings include various combinations of exercises, conversations and role games. They help to adopt basic behavioral techniques and understand oneself and one's individuality. The training is generally aimed to prepare a teenager to face the real difficulties of the world outside the school, using the acquired behavioral stereotypes.

It should be stressed, however, that excessive zealousness in building up socially approved behavior can lead to the opposite results (the same as the remedy taken in overdose can become a poison). We must not impose our ideasa of the right way of life to the teenager, but rather cultivate the aspiration for self-cognition in him, and create conditions for the development of self-esteem and self-acceptance. It is teenager's personal activity and aspiration for the joy of communication and self-expression that helps to overcome the disadvantages of modern system of governmental support and public opinion.

83 Dysfunctions in the right cerebral hemisphere and their influence on social competencies, ADL and mobility.

By: Pedersen, Jette; Paulsen, Susanne; Mortensen, Elsebeth
From: Denmark
Organisation: Synscenter Refsnæs

Working with visually impaired children we often meet children with difficulties, which can't be explained on the basis of the visual disability alone. It is children, who are verbally well-functioning, but have massive spatial and practical disabilities or have good general intellectual capacities, but great difficulties in the social and emotional area. If the educational practise in relation to these children is only scheduled in relation to the visual handicap of the child, there is a great risk that the difficulties of the child grows or turns into more general learning disabilities.

In order to develop educational strategies, which takes into account the special difficulties of these children it is advisable to take a closer look on the information processing of the brain. Generally information is processed in two different ways: 1. Digital information processing. The way of processing, where information are processed one at a time. This way of processing is primarily used in relation to verbal material. 2. Analogue information processing. The way of processing, where many information are processed at the same time. This way of processing is primarily used in relation to the processing of visuo-spatial information and under circumstances, where information from different sensory modalities is processed at the same time.

The two hemispheres of the brain are anatomically very alike, but often the left hemisphere is a little larger than the right. The hemispheres are connected by a bunch of fibres called the corpus callosum, which plays a central role in transferring information between the two parts of the brain.

The digital way of processing is primarily located in the left hemisphere of the brain. The left hemisphere is occupied with the processing of verbal material and the key words for its function are: sequences, parts, verbal language and words. People who have a well-functioning left hemisphere are good at routine tasks and tasks which acquire the usage of only one sensory modality. The traces of memory are exact.

The analogue way of processing primarily takes place in the right cerebral hemisphere. The right hemisphere is primarily occupied with the processing of visuo-spatial information and the key words for its function are: simultaneous, whole entities and prosody. People who have a well-functioning right hemisphere are good at making an overview, trial and error tasks and tasks where you have to use information from several sensory modalities. The traces of memory are rudimentary.

The different ways of processing can be illustrated by this picture. People whose left hemisphere is dominant will without problems read the names of the colours the whole page down, where people who's right hemisphere is dominant in a short while will name the colours in stead of reading the words.

A child with dysfunctions of the right hemisphere is able to process information sequentially, but has difficulties processing in whole entities. He has difficulties in finding out what a new task is about and needs guidance every time he has to engage in an activity. Therefore many children prefer to choose their own activities. It is also difficult for them to be consistent in their contact with other children, because they can't keep up with the changes in activities children often make. Also it is difficult for them to make an overview of a social situation. They are able to see the elements of the situation, but not able to combine them into a whole and take action according to that. A lot of children have difficulties in estimating time, which also complicates their social functioning. Many children have problems in reading pictures with a lot of information, which of course can be difficult on behalf of the visual impairment itself. Generally we must estimate that the visual impairment minimizes the possibilities of the child to compensate for his difficulties.

When children with these types of problems are to learn new and more complicated things they will take advantage of an educational programme which is made with the aim of helping the children use their strong sides and compensate for the weak ones.

The primary head line in the educational programme for the children is to use and give verbal strategies in any type of activity or problem solving. The children often have a very good memory for words and will be able to do a lot of things on their own, if they are directed or are able to direct themselves verbally. It is also important to introduce new activities carefully. When working with these children it is not enough to tell that today we are going to the zoo. You have to give a precise description of the trip. When do you have to leave, are you going by buss, which animals are you going to make special attention to, where are you going to have lunch, when do you return, etc. It is also important to give the child precise strategies for problem-solving especially in relation to new or complicated tasks. It is not enough to say do this page for tomorrow. You have to tell, when you do this page for tomorrow you have to start with this, continue with that and do this at last. In social situations it is also important to make a structure of the situation for the child. It is not enough to tell the child to go and play with the other children, he will need directions to what to say and to whom, how to continue, etc. Similarly it is important to work with basic social competencies. Most children needs strategies as to how to address other people, how to answer when people talk to you, how to take turns, etc. Furthermore most children need strategies for interpretation of mimics and body-language. Often facial expressions and tone of voice of other people gives no meaning for them in itself, but they have to learn strategies for attaching meaning to this type of signals as well as using the signals themselves. Generally it is important to make as simple a structure of as many situations as possible, because it will make it much easier for the child to navigate in the world. Last but not least it is crucial to tell the child what to do in stead of telling him what he is not supposed to do. Many children with these problems are corrected from morning till night and have therefore a very low self-esteem, which makes their lives more complicated than necessary and gives rise to behavioural problems of different kinds.

Social competence – a model.

A review of the literature gives very many different possibilities to define social competence. In general there is a tendency to understand social competence as: "… the ability to make and maintain qualitatively mutual relations with peers and adults".

In the literature there is a tendency to focus on the *ability* to interact with people as a question about *skills* – and if the person possesses a range of social skills it lead to social competence. This understanding *could* lead to a praxis with training programs in communication, ADL, body languages etc., with no concern of the intellectual and motivational state of the person.

In some of the literature social competence is defined more differentiated and described as a complex interaction between components related to social skills, cognition and motivation.

I find this way of thinking very inspiring, and I have made an attempt to make a model that operates with these three components.

As you see I have chosen to make the model as a tree that gets its energy from the invisible roots up through the trunk, which is covered with bark and only is visible if you look carefully – right up to the top which is very visible for every one.
For the tree as well as for the social competence I find all parts in the system very important, and no part exists whiteout the other.

Components related to motivation are the basis for establishing social relations at all.

Basic trust

A minimum of physical and psychological trust in the situation is the basic, and must be establish before we can expect that the child have energy to establish social contacts.

Positive self-concept and positive social self-concept

Self-concept is about a person's general concept of oneself and include the way they look on their one personal qualities, skills, performance etc.
Often I see children with a relatively positive self-concept, but when it comes to the social aspect; their self-concept is very insecure or directly negative. That's why I have chosen to divide the self-concept in to roods.

Will and desire

The will and desire to establish social relations plays a major role. If you don't want to contribute actively in establishing social contact, the chance for susses is very limited.
Lack of experience or negative experiences in social relations can damage the will and desire to experiment on the social arena.

Components related to cognition

This is a more intellectual component – to understand the social situation, analyse which social strategies and skills there can be used.
For this it is necessary to be able to see and interpret social signals.
Empathy is also about understanding – understanding the point of view of other people, their intentions, wishes and motives. One should recognise the feelings of others and understand it from their situation, and be able to put one self in their place or take their perspective.

Components related to skills

This is about the child's ability to act and perform in concrete social situations.
Skills connected with:

Pro-social behaviour

Positive social attitudes and actions such as; help others, share with them, support, appreciate and encourage them and in general take care of ones peers.

Self-control

The ability to postpone needs and desires, take turns, compromise and be a part of common decisions and handle conflicts. Further more self-control is about planning and judging own activities and behaviour.

Self-assertive

To take initiative to contact, contribute in conversation, play and common activities. The child must be able to express, his point of view, his wishes and needs – and at the same time be thoughtful of others.

Responsibility

To take responsibility for you own basic needs and for other peoples well-being.
To contribute in communication, and be trusted part in common agreements.

Communication

To use non-verbal communication like eye contact, facial expressions, body language, touch etc.

Leisure and play

Here it is the well-balanced interaction with peers that is important. Leisure and play is important to feel joy, relax and have fun and is of great value.

ADL

Activities of Daily Living are another important area, which can provide difficulties, especially for the children who are born with a serious visual impairment.

O&M

Orientation and mobility skills are very important to master fore all visually impaired. Independent moving around is valuable in a lot of social situations.

A method for route learning in mobility training of a blind young girl with right-side brain dysfunctions.

Elsebeth has already presented the theoretical and Jette the social aspects around visually impaired persons with right hemisphere dysfunctions. I would like to present an approach to route learning in relation to mobility. The approach conciders from the student's resources and limitations and is an”aid” to moving about more independently.

Alice is a 16-year old blind girl with the following diagnoses: Prematurity (born at 27 weeks), low birth weight (1018 grams), retrolental fibroplasia, psychomotor retardation and right-side hemisphere dysfunction. She has already received two weekly mobility lessons for several years, which has not improved her ability to move about autonomously in a major way. I have been Alice's mobility trainer for two school years – in the first year with 59 lessons **without** the method I'll present in a minute, and in the second year with 38 lessons **with** the use of minidisks.

My assumptions is that Alice will benefit from a more condensed mobility training, with daily training at shorter intervals and given in relation to her day-to-day needs for moving from one place to another. This will make it easier for her to recall her landmarks and will also facilitate her bodily-kinaesthetic automatization of the route. As a result, routes will be learned more quickly.

Moreover, Alice would benefit from having her routes recorded on a minidisk. This will create consistency in her training, and it will allow her to recall her routes in a uniform manner and include the experience gained during her training. As a result, she won't have to memorise all her routes, and she will have her trainer with her at all times, even when she/he is not present "in the flesh".

Method

1. *Routes are recorded on minidisk.* On a given school day, Alice may have up to 12 routes, for instance:
   - from school bus to classroom,
   - from classroom to assembly hall,
   - from assembly hall to toilet,
   - from toilet to classroom,
   - from classroom to seesaw,
   - from seesaw to gym, and
   - from gym to living quarters. Alice will use 30 different routes during a single school week.
2. *Separate minidisks are produced for each day of the week*. With separate discs, Alice can keep track of her routes more easily, because they allow her to adjust herself to precisely that day right from the morning. The voice on the disc presents the day of the week and each individual route. Thus, it is easy for Alice to find the relevant day **and** the relevant route, in case she needs to adjust the route order during the day.

3. *All minidisks are Braille labelled* with the name of the day **and** – as a help to Alice's assistants – also with a list of the day's routes.
4. *Routes are recorded during training sessions*. This is done in order to utilise whatever information the surroundings give, and because Alice will remember many of her routes, if something out of the ordinary takes place en route so it is not as usual. On-location recordings give an impression of echo sounds, the sound of the automatic door, car sounds, or the footfall of passers-by, a person whistling or saying 'Hi', or just the sound of my voice on a day when it is different because I have a sore throat. All these bits of information seem irrelevant to those with intact eyesight. However, to Alice, these are useful "landmarks"/mnemonics for her individual routes. Moreover, recording en route allows the mobility trainer to tailor the descriptions to fit a specific student's requirements.
5. *Plan*. It is vital for Alice that there is a plan, and that her activities are guided, so she is always following the same instruction and the same route. Using the minidisk directs Alice into fixed routines, also drawing upon her good language memory.
6. *The impact of weather?* The weather can influence Alice's need for routes. Alice likes to use the playground seesaw in the lunch recess, however – as she says – that's not possible if it is raining. So allowance should be made for making an alternate route if she has to spend the lunch recess indoors.

Requirements: This type of route learning places demands on the surroundings.

1. *All persons around the student must be briefed on the procedure.* All persons around Alice must be briefed on the procedure and be aware of its everyday implications, both for Alice and her surroundings.
2. *A contact person must be designated.* This will facilitate the co-operation between mobility trainer and the persons who are around Alice during the day.
3. *Relevant help must be given.* All those around Alice must be prepared to offer relevant help. Alice needs help to insert the correct minidisk into the disc player and put it in the pocket of her clean clothes.
4. *No changes.* All need to be fully aware that it vital for Alice to always receive the same information, and that no changes should be made that will affect the landmarks and instructions recorded on the minidisk.The routes on the minidisks will not match the reality, if changes are made to the time schedule, and thus the order of special-subject rooms used, or if classroom furnishings are moved about. It is inconvenient if Alice is suddenly given a new place in class or in the locker room. Nor should fixed routines be changed.
5. *Room fit-up.* Alice has had considerable difficulty orientating at the five school toilets of Visioncentre Refsnæs, because they are all fitted differently: Is the soap dispenser to the right or left? Where is the toilet paper? Is the paper towel dispenser to the right or to the left? Is the paper basket on the floor, or is it wall-mounted? Alice easily gets confused here, and we had to record route descriptions for all five toilets.
6. *Change of sound environments.* Alice relies very much on a number of recorded environmental sound cues, and her route perception clearly changes if a creaking door has suddenly been greased, or the automatic door does not function. Therefore: **Never** make changes to the sound environment without letting the student know, and remember that sound environments change with weather changes.
7. *The minidisk player must be user-operable.* It takes time for Alice to learn how to navigate on the disc player and switch it on/off. It is not possible to train the use

of the disc player and walk the routes simultaneously, since Alice works best using one sense at a time.

Which effect did the learning approach have on Alice's independent mobility?

- We find increasingly that Alice will walk alone on several of her routes, and she no longer needs to rely heavily on her classmates or teachers/educationists to accompany her on a daily basis.
- On the routes she uses on a daily basis, Alice has increased her walking pace and is occasionally able to say "Hi" to passers-by without stopping.

Perspectivation / reflexions / development

Using this method in connection with route-training caused me to rethink the mobility training that we offer to visually impaired individuals with right-side hemisphere dysfunctions. So a number of questions have presented themselves – questions, for which I will search for answers in the next future.

- *Expectations.* Can we expect blind people with right-side hemisphere dysfunctions to be able to orientate and move about independently?
- *Needs.* Our target is to enable blind people with right-side hemisphere dysfunctions to move about independently – but is this actually the need of the blind child/teenager, or is it the need of the surroundings/mobility trainer?
- *Landmarks.* Are mobility trainers sufficiently skilled in harnessing the individual student's strong sides when it comes to using landmarks? And do student and trainer "tag" the same landmarks on a route?
- *Building development:* Should future council building developments also allow for individuals with a need for structured layout?
- *Language use:* Were my instructions precise enough, and does Alice know the meaning of the words I used?
- *Interprofessional co-operation:* Are the involved professional groups sufficiently deliberate in tapping each other's resources and experiences?
- *Education/training:* Do we have sufficient knowledge of right-side hemisphere dysfunctions and the most appropriate methods to use?

Friday, second route.

Route from morning assembly to classroom:

- You get up from your chair
- Turn left and walk towards the wall
- Turn right and walk with your left hand on the wall till you get to the door
- Then you go out through the door
- Go right ahead till you get to the hand rail
- Put your right hand on the rail
- Walk along the rail towards the automatic door.
- When the door opens, you go through
- Pass the floor mat and keep to the right
- Walk along the wall with your right hand on the wall till you get to the door opening
- Walk into the corridor
- Walk [over - across?] and grasp the hand rail on the left side
- Follow the hand rail all the way down the corridor till you get to the door
- Walk out of the door
- Push, push

- Let go of the door and walk down the flagged path till you reach paving stones
- Stop here
- Turn right
- Follow the flagged path to the next paving stones
- Turn left
- Walk towards the stairs in front of the school building
- Grasp the banister with your right hand
- Walk sideways to the right
- Walk up the stairs
- Walk towards the door
- Walk into the stairway and up the stairs.
- Go to the left hand door
- Go through the door
- Go across the corridor towards the cabinet
- Put your left hand on the cabinet
- Walk along the cabinets
- You'll pass Ø5 [= classroom Ø5?]
- Proceed down the corridor with your left hand on the cabinets till your hand touches clothes.
- You've made it to Ø4.

84 Methods of teaching Braille to blind children in Poland"

By: Paplinska, Malgorzata, Kuczynska-Kwapisz, Jadwiga
From: Poland
Organisation: Academy of Special Education in Warsaw

Introduction

This document describes some results from a research project that has been executed in the Academy of Special Education in Warsaw, Poland. It has been financed by the Ministry of Science and Information Technology in 2005. The research has covered the area of Polish programs and methods of Braille teaching to blind children in primary schools for the blind. The example results, presented here, are based on a data gathered in all nine Polish schools for the blind and visually impaired children, without mental retardation. All teachers from the schools have been included in the investigated population. We have been focused on teaching at the elementary level.

In the document, a subject and scope of the research are presented briefly. Then, some details on the execution of the research. After short overview of the Polish practice of Braille teaching, which is in fact a general and initial conclusion from the project, detailed example results are presented. The results presented here concern:

- Methods worked out by teachers.
- Size of a Braille cell used for teaching.
- The moment of a capital letter sign introduction in a teaching process.
- Usage of tools for writing.

Research

The research has covered the area of Polish programs and methods of Braille teaching to blind children in primary schools for the blind. The main goal of the scientific investigation has been to: get to know, describe and systemise unpublished, up to now, Polish methods of Braille letters introduction. Questioner for teachers, interview, observation and document analysis have been used as tools for the research. The questioner is a set of questions concerning Braille teaching. Interview with teachers has been used as a supplement to the questioner and for verification of consistency. During observed lessons, children were either prepared for Braille learning or particular Braille signs were introduced. Descriptions of the observed lessons have been additionally documented with photos. Some Polish existing texts concerning Braille have been analysed. The research was performed since 2002 till 2005.

Braille teaching in Poland

It should be emphasized there is a relation between a language and a way of teaching Braille. Children in Poland are taught uncontracted Braille as the first, because Polish contracted Braille is difficult for them. The reason is that Polish contractions are not intuitive because of several meanings of a one particular contraction according to the context: its place within a word (at the beginning, in the middle, at the end) and relationship with other letters. This complex characteristics of the Polish language and Polish Braille often discourage from learning contracted Braille. That is why Polish contractions are often found difficult and they become not popular. Their learning is not obligatory and usually is done at the level of secondary school education.

Polish ways of teaching Braille reading and writing are based on the traditional approach focused on development of basic perceptual skills, using controlled vocabulary. Although the need for early preparation of children for learning reading and writing Braille exists, the first contact with Braille is still in the first grade of school, for many young students.

There is no one certified program of teaching Braille in Poland. This is a reason for existence of a wide variety of teaching ways. There is a number of different ways and approaches used in particular schools and by particular teachers. This is characteristic that teachers usually use in their work a student-book as a basis for teaching and additionally prepare their own texts and exercises.

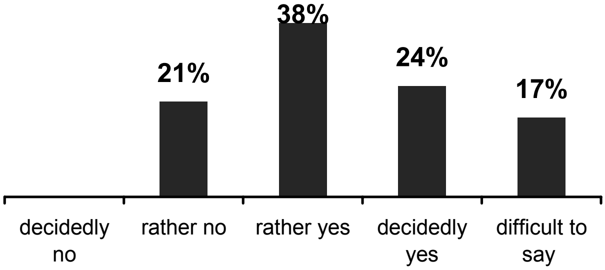
Example results

Methods worked out by teachers

If we consider a problem of methods worked out by teachers in Polish schools, we have to know that (picture 1):

- Sixty two percent of researched teachers use their own method of teaching Braille. The method is usually worked out as a result of experience and intuition.
- Twenty one percent of teachers claim they have not prepared any own ideas for Braille teaching to children.

The question can be raised: do those teachers need help and support from specialists of Braille teaching?



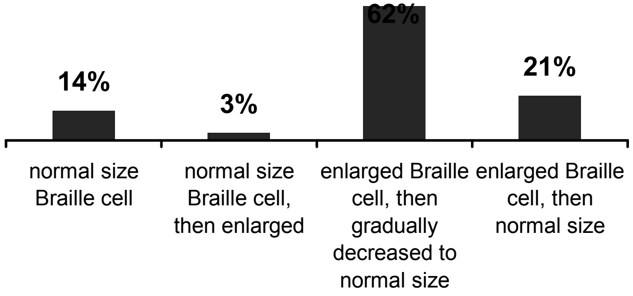
Picture 1. Question: have you prepared any own method of teaching Braille?

As a method we understand here:

- The way a teacher works and how he or she prepares children for learning reading and writing.
- What text-books and directions a teacher uses and how often he or she prepares own texts and exercises for children.
- What order are Braille signs introduced in and what is their size used for initial teaching and during a teaching process.
- What tools are chosen for teaching Braille writing.

Size of a Braille cell

During the research, the question concerning Braille cell size (picture 2) appeared to be especially important. Polish method of Braille letter introduction is characterised by graduation of difficulty – starting from an enlarged Braille cell and gradually moving towards smaller one. Over sixty percent of teachers declares starting from a big Braille cell and goes to the normal one through a middle size cell. Only fourteen percent of teachers have never used an increased cell. Majority of teachers prefer a traditional approach and introduce an enlarged Braille cell earlier or later. Educational equipment is usually used during work with an enlarged cell.



Picture 2. Question: what size of a Braille cell do you use during a teaching process?

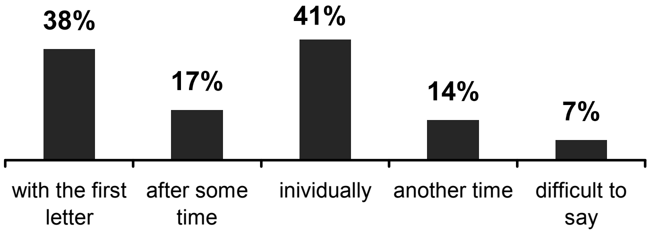
The enlarged Braille cell is usually used for:

- Learning Braille letter through their construction in a cell model.
- Exercises training the orientation in a Braille cell like: describing of sides (e.g. left, right, high, low).
- Learning of point numeration (e.g. first point, second point, etc.).

The moment of capital letter sign introduction

In a Polish Braille code, a capital letter sign consists of points four and six. There is no agreement on the time of the capital letter sign introduction (picture 3). Thirty eight percent of respondents declare its introduction with the first letter together but forty one percent fit the time individually for every student, according to his or her abilities. Fourteen percent of teachers introduce the capital letter sign another time than the first letter. A lot of people answered this question twice indicating that there are not sure and there is no rule how to do it.

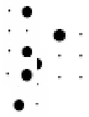
It seems that, according to the methodology of black print letters teaching, a presentation and recognition of a capital letter appear together with a letter. But if we take into account specifics of the Braille system, where a capital letter is created by adding additional sign before a letter sign, it becomes obvious that differentiation of two signs and interpretation them as a one letter can be difficult for beginning readers.



Picture 3. Question: when do you introduce the capital letter sign?

The example is:

- capital letter sign:
- capital letter 'A':
- letter 'm' sign:



The capital letter 'A' is similar to 'm'.

That is the reason why teachers, basing on intuition or experience, usually introduce the capital letter sign later, fitting the time of introduction for individual student abilities.

Usage of tools for writing

It should be emphasized that, not a long time before, a slate and stylus used to be treated as the first tools for Braille writing, which teaching is started from. Then, children used to be taught much easier braillewriter writing. Nowadays, almost all teachers use a braillewriter and thirty eight percent of them use a slate and stylus as well. Sometimes, both types of tools are used in parallel during one lesson.

Summary

It can be hoped that the presented research is an important step for increasing cooperation between teachers in Poland and between them and scientific institutions. The presented research is a beginning of works aiming in preparation of a Polish teacher guide-book, text-books and other literacy materials for children It is planned to prepare a complete program of Braille teaching and preparing for Braille reading and writing.

The non-commercial web-page has been prepared during the project: http://www.braille.pl. The web-page is for parents, teachers and friends of blind children.

85 The effect of psychotherapy indicated by observation and by a change in cortisol levels: visually and intellectually impairment children with challenging behavior

By: Sterkenburg, P.S.; Schuengel, C.; Janssen, C.G.C.
From: The Netherlands
Organisation: Bartiméus & Free University of Amsterdam

Introduction

First of all we want to thank all involved, the parents and caregivers for their commitment to this therapeutic process, the research assistants for their work and the psychotherapist Francien Dekker for her participation.

It is important to note that this presentation is only a small part of our research project. More information and research results can be found in Sterkenburg, Janssen en Schuengel (2005) and in coming publications.

Case study: Ann

This is Ann, 17 years of age, she is blind and she has a severe intellectual impairment. Ann lives in a group-home with 8 adolescents. On a Dutch standardized questionnaire, the CEP (Consensusprotocol), she had a score of three out of a maximum of four, which means that she has serious challenging behaviour (hitting, biting, scratching, banging, etc.). Caregivers mention that they often feel that their hands are tied, they have no solution for the challenging behaviour. In the past, many interventions have been tried for example behaviour modification, but with no success. She has a traumatic attachment history, no autism and there are no contraindications for physical contact.

Case study: Roy

This is Roy, a 17-year-old blind Down Syndrome boy with a severe intellectual impairment. His challenging behaviour includes pinching, scratching, spitting, banging and hitting. These behaviours are so severe that arm restraints had to prevent the self-injurious behaviour. He continues with his challenging behaviour even after repeated behaviour therapy. He has a traumatic attachment history. The results for the consult with an independent psychiatrist show that Roy has no autism and there are no contra-indications for physical contact.

Content

During this presentation we will focus on the following questions:
How does the attachment theory explain this severe challenging behaviour?
What is the effect of the attachment-based psychotherapy on challenging behaviour and on physiological reactions?

Attachment theory: attachment as a buffer for stress

According to the attachment theory, the attachment figure is seen as a person the child can turn to when he/she experiences anxiety or stress.
The anxiety and stress is reduced by a sensitive and responsive reaction by the attachment figure. When the child feels secure, he/she will then start with exploration.
For example, a stranger enters the room; the child feels insecure and turns to the parent. The parent then reassures the child that everything is all right and maybe gives the child a hug. The parent then motivates the child to start playing again.

Children like Ann and Roy, with a traumatic attachment history, do not have an external affect/stress regulation system. They did not have the opportunity to develop a basis for an internal regulation system.

This results in a poor quality of life as they have no sense of trust and no sense of love.

The attachment figure is a buffer for stress, missing this buffer leads to a lack of stress regulation and thus to an increase in stress.

As stress increases challenging behaviour increases, as it is very difficult to sooth these children.

The result of the increase of the stress and thus of challenging behaviour is the production of cortisol, a steroid hormone. This hormone is released by the adrenal glands in response to either physical or emotional stress. It is called a "stress hormone" as it activates the body to react on the "threatening" situation.

Dozier *et al.* (2002) reported that children who have disturbed attachment relations, with unbuffered stress, have atypical cortisol patterns.

As we see the missing attachment relationship as the cause for the challenging behaviour and for the 'atypical' diurnal cortisol cycle **our hypotheses are: if we provide an attachment-based intervention the child will show less challenging behaviour and have a more 'typical' or 'normal' diurnal cortisol cycle**.

The attachment-based intervention is given 3 hours per week over a 9 to 12 month period, in the child's home environment.

The effect of the attachment-based psychotherapy on challenging behaviour and on physiological reactions

Case study: Ann

We started with the attachment-based intervention for Ann, the girl with extreme challenging behaviour: screaming, scratching, hitting, banging, restlessness and clinging behaviour. Behaviour that disturbs her contact with others, it disturbs her environment, the caregivers and other adolescents in her home and it disturbs her own development.

a) The effect of the intervention on challenging behaviour To look at the effect of the intervention the challenging behaviour was scored daily by the caregivers on observation lists, therapy sessions were video taped and scored by independent research assistants, standardized test were taken at the beginning and at the end of the treatment and cortisol measures were taken monthly.

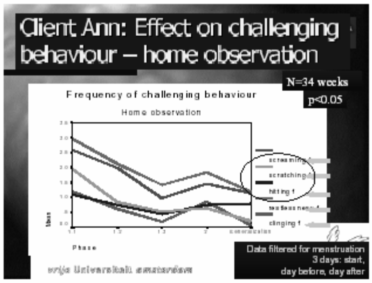
The therapy is divided into three phases:

Phase 1: Attachment therapy:
- Making contact – verbally and by touch
- Symbiosis - mirroring
- Individuation – developing the basic security the child has to develop to cope with stress and thus create internal stress regulation

Phase 2: Behaviour therapy
- Positive reinforcement through social rewards like a pat, hug or complement

Phase 3: Generalization
- Contact between the therapist and the client lessens and the contact between the caregivers and the child is stimulated and increases.

These are the results of the caregiver's daily home observation scoring list.



Client Ann: Effect on challenging behaviour – home observation

N=34 weeks

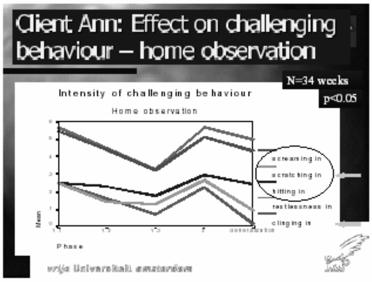
p<0.05

Data filtered for menstruation 3 days: start, day before, day after

Figure 1: The effect of the intervention on the frequency of challenging behaviour as scored by caregivers during home observation.

As shown in figure 1, already at the start of the attachment therapy there is a decrease in the frequency of the challenging behaviour. During the behaviour therapy (phase 2) we focused on screaming, scratching and hitting. After a slight increase, the challenging behaviour decreases again. Restlessness and clinging behaviour decrease although no interventions were aimed at changing these challenging behaviours during the behaviour therapy.

There is a significant decrease in the frequency of all challenging behaviours. Data corrections have been made for a menstruation period of 3 days, as there were many outliers during this period.



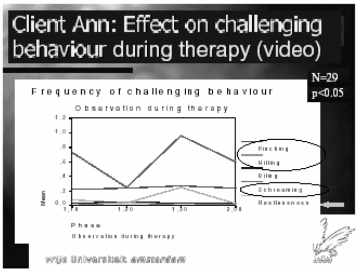
Client Ann: Effect on challenging behaviour – home observation

N=34 weeks

p<0.05

Figure 2: The effect of the intervention on the intensity of challenging behaviour as scored by caregivers during home observation.

When Ann showed challenging behaviour the intensity of the scratching and clinging behaviour was significantly lower at the end compared to the beginning of the therapy (figure 2).



Client Ann: Effect on challenging behaviour during therapy (video)

N=29

p<0.05

Figure 3: The effect of the intervention on the frequency of challenging behaviour during therapy.

The therapy sessions were video taped and scored (see figure 3). Every week one of the three sessions was video taped. Looking at the frequency of the challenging behaviour we see that restlessness increases during the third part of the attachment therapy. At the end of the behaviour therapy there is a significant decrease in restless behaviour. Other than for restlessness no significant changes were found. This can be explained by the low frequency of challenging behaviour during the therapy.

The standardized tests indicate that Ann shows less challenging behaviour.

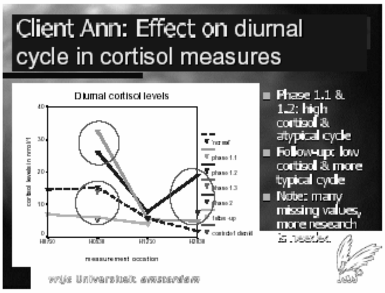
Before the therapy started she showed serious challenging behaviour on the CEP and at the end of the therapy the tests indicate moderate challenging behaviour.

There is a change from 3 to 2 on a four-point scale with four as severe and 1 as little challenging behaviour.

The score on the ‘challenging behaviour scale for mentally impaired persons’ (SGZ) showed less challenging behaviour on the ‘total scores’, from 6.25 to 6.75, as well as on the subscale ‘general/mixed behaviour’ score, from 5 to 6 on a 9 point scale with 3 as severe and 9 as no challenging behaviour.

b) The physiological reaction on the therapy.

Saliva samples were taken once per month during the weekends (when no therapy was given). Saliva was collected using pipettes and cotton tubes.



Client Ann: Effect on diurnal cycle in cortisol measures

- Phase 1.1 & 1.2: high cortisol & atypical cycle
- Follow-up: low cortisol & more typical cycle
- Note: many missing values, more research is needed.

Figure 4: The effect of the intervention on the diurnal cycle in cortisol measures.

Figure 4 shows the mean of the cortisol levels divided over four occasions during the day, per phase of the therapy. The scattered line is the ‘normal’ diurnal cortisol levels of 12 year old children (Bartels *et al.* 2003).

The levels are extreme high in the beginning of the treatment (phase 1.1 and 1.2) and are ‘atypical, high levels in the evening. The same as mentioned by Dozier and her colleagues (2002): if the child doesn’t have an attachment relationship as buffer for stress the child shows an ‘atypical’ diurnal cortisol cycle.

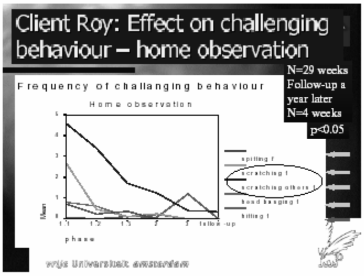
There are missing values for phase 2. In the follow-up (one year later) she has low cortisol levels and a more typical cycle. The matching control child (child matching in age, visual and intellectual impairment) unfortunately had many missing values because the child had a dry mouth (little saliva). The morning measure of the matching control child is approximately the same as Ann’s morning measure during the follow-up.

This indicates that she not only shows less challenging behaviour, but there is also a change on a physiological level. The lower stress level indicates that she experiences less stress.

We must however note, that there are many missing values because it is difficult to take the saliva samples from these children, as they do not understand that they should spit into a jar or chew on cotton-tube. Actually, more research is needed in the field of the visually and intellectually impaired concerning cortisol.

Case study: Roy

a) The effect of the attachment-based intervention on Roy's challenging behaviour
Roy is the blind Down Syndrome boy who wore arm restraints for 9 years preceding the intervention.



Client Roy: Effect on challenging behaviour – home observation

N=29 weeks
Follow-up a year later
N=4 weeks

$p<0.05$

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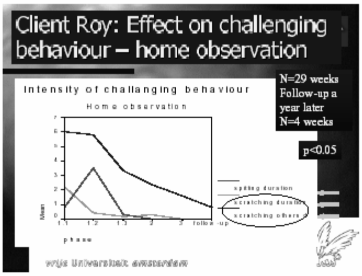
Figure 5: The effect of the intervention on the intensity of challenging behaviour as scored by caregivers during home observation.

The observation lists scored daily by the caregivers indicate a major decrease in the frequency of challenging behaviour during the attachment therapy (figure 5). The decrease continues during the behaviour therapy. During the generalization there is a sudden increase in challenging behaviour. Together with the caregivers we analysed the possible reasons for this increase. The conclusion was that the caregivers were not sensitive to his new way of communicating; they wanted to continue the behavioural training but spent little time on the attachment relationship. When this was clear and they again invested in the relationship the challenging behaviour
decreased to such an extend that at the follow-up, one year later, challenging behaviour very rarely occurred.
There is a significant decrease in the frequency of challenging behaviour, for hitting there is an increase in the third phase, the decrease in the follow-up is significant.



Client Roy: Effect on challenging behaviour – home observation

N=29 weeks
Follow-up a year later
N=4 weeks

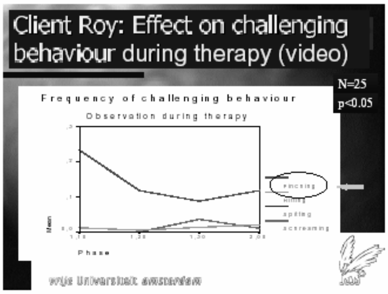
$p<0.05$

vrije Universiteit amsterdam

Figure 6: The effect of the intervention on the intensity of challenging behaviour as scored by caregivers during home observation.

As shown in figure 6 the home observations show a significant decrease in the intensity of the challenging behaviour.
When I met one of the psychologists who treated him in the past using behaviour modification only (with no success), she asked how we managed to take away his arm restraints without increase in challenging behaviour. I told her:
Well, you see, during the last part of the attachment therapy the therapist noted that Roy sat waiting for her on his couch but without arm restraints. She asked the

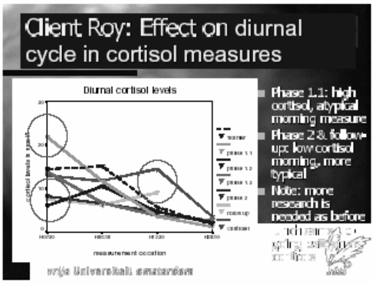
caregivers why he didn't wear them. The caregiver mentioned that actually she forgot to put them on…
From that day onward Roy did not wear the arm restraints anymore due to the decrease in self-injurious behaviour. At first caregivers used bandages but very soon no bandage or arm restraints were needed.


Client Roy: Effect on challenging behaviour during therapy (video)

N=25
$p<0.05$

Figure 7: The effect of the intervention on the frequency of challenging behaviour during therapy.

Figure 7 indicates that there is a significant decrease in the frequency of the target behaviour, pinching, during therapy. The other challenging behaviour occurred rarely during the therapy.
The standardized questionnaire and test show the same result. A major decrease in challenging behaviour as measured using the CEP: from severe a score of 4 to moderate as a score 2 as well as on the SGZ total score from 4 to 5,25. No change was found on the subscale SGZ general/mixed scale, score 4.
b) Roy's physiological reaction on the therapy.


Client Roy: Effect on diurnal cycle in cortisol measures

- Phase 1.1: high cortisol, atypical morning measure
- Phase 2 & follow-up: low cortisol morning, more typical
- Note: more research is needed as before

Figure 8: The effect of the intervention on the diurnal cycle in cortisol measures.

In the beginning of the therapy phase 1.1 Roy has a high morning measure, this is 'atypical' indicating a hyper-arousal in the morning (figure 8).
The diurnal cortisol cycle is low in phase 2 and during the follow-up indicating a more 'typical' pattern and less stress.
New is the high measure before lunch in the follow-up and for the matching child, matching in visual en and intellectual impairment. More research is needed to understand and correctly interpret this up going lunch measure.
Roy's physiological reaction on the therapy indicates a lower diurnal cortisol cycle, more 'typical' and thus we can say he experiences less stress, a lower stress level during the day.

Summary

During this presentation we indicated why we use an attachment-based treatment, and found answers for the question on the effect of this treatment on challenging behaviour and child's physiological reaction. These results were shown using two case-studies.

Both children show less challenging behaviour. There was a

- Decrease of challenging behaviour during the home observation
- Decrease of challenging behaviour during therapy
- Decrease of challenging behaviour in standardized tests

Both children show a change in their physiological reaction with a more typical diurnal cortisol cycle. However, more research is needed on the diurnal corticol cycle of visually and intellectually impaired children. The remaining question is: the cortisol levels during follow-up are lower than the cortisol levels from the regular group, can the visual impairment (blindness) explain these low levels?

Conclusion

These two cases indicate that the attachment-based treatment is an effective therapy as shown by the decrease of challenging behaviour and lower stress level as indicated by a lower and more typical diurnal cortisol cycle. We indicate that attachment is indeed a buffer for stress.

After completion of the attachment-based behaviour modification treatment, Ann shows less challenging behaviour. At first she was throwing her body into the couch, scratching herself and others, screaming and hitting others, at the end of the therapy she enjoys the contact with the therapist and with her caregivers, and Roy no longer wears arm restraints. This therapy gives children a second chance in life.

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Corresponding address:
P.S. Stekrenburg
Free University Amsterdam & Bartiméus
e-mail: ps.sterkenburg@psy.vu.nl & p.sterkenburg@bartimeus.nl

86 International co-operation ISaR ready for Europe

Workshop
By: Csocsán, Emmy; Laemers, Frank
From: Germany
Organisation: University of Dortmund

Dear Colleages,
Today we will to talk about our ISaR project. I will tell you about the philosophy and organisational part of the project, Frank Frank Laemers will introduce the different sort of activities and content and will talk about the computer basis and technological sides of the project.

I am sure that there are many colleagues among you who have already visited our home page or heard the young ISaR project on different meetings and conferences. The idea of introducing it on an international level came from Herman Gresnigt, the former European chairman of ICEVI. He visited us in Dortmund many times and followed the development of the project.

Today we will talk about the development of the project from the beginning up to now and tell you our ideas and questions for the future.

The project started in February 2001 and has been supported by the private Heidehof-Foundation in Germany. ISaR is a web-based resource centre and supports all involved persons of inclusion of children and young people with VI. The name of the project is an acronym of the words Inclusion of Students with Visual Impairment at Regular Schools.

The project management belongs to the University of Dortmund, Faculty of Rehabilitation Sciences. The University of Dortmund is in North Rhine Westphalia and one of the four universities in Germany which offer courses for students in specialisation in teacher training for education of children and young people with VI.

Before I begin to talk about the philosophy of the project I would like to introduce our team.

Renate Walthes and I have the responsibility for leading and our young colleagues carried the project on their shoulders and developed it by hard work and excellent ideas. Frank Laemers, Juliane Leuders, Astrid Iggesen and Stephanie Löbbing belong to the scientific staff, Richard Piatkowski is our webmaster and Stefan Wewel is our student assistant.

The Project has an Advisory Board. The members of the board are experts in the field of education of people with VI and they represent the professional policies in Germany.

The following transparency shows the phases of the project.

Periods of the Project:

01.02.2001 – 31.12.2003	Establishment
01.01.2004 – 31.12.2005	Decentralising
2006	Internationalising → ISaR Europe

Our professional philosophy is based on the requirements of the documents of UNESCO (1994) and WHO (2001) and on the national level state-based Recommendations for Special Needs Education (1994) and Recommendations for

Education of Pupils with Visual Impairment (1998) in Germany (see Drave, Rumpler, Wachtel 2000).

The initial situation was to analyse the situation of inclusion in the field of education of children and pupils with VI in Germany. Much of the experience is more than 30 years old. Counselling and support for children with VI in regular schools and in special schools require special knowledge and raise many questions and produce some problems. On the other side many problems have been solved by teachers, parents and other people involved, many good learning materials have been worked out, methods tested, organisational forms established etc. But in most of the cases the specific knowledge and know-how refer to one particular situation and the knowledge gained, remained in the given school or institution.

The basic idea of ISaR is to use the facilities of World Wide Web and to offer possibilities for teachers and experts but also parents and pupils and students to share their experiences, give and get information and to have the opportunity of cooperating on many levels and in many fields of education of children and youth with VI.

Now I would like to tell you about our methods of reaching our goal and working out the cooperative network" with teachers and experts.

ISaR is mainly a virtual resource centre but we have many "live" activities, based on our philosophy of enhancing the effectiveness of the project. The members of the team visit schools attend meetings and conferences organise courses work as invited lecturers on courses organised by schools and support centres collect, select information, put in the web or send by post give counselling via phone meet parents and their children test learning environments and learning strategies.

ISaR is first of all a professional service for all the participants of inclusion and the members of the team are engaged in a lot of innovative efforts to enlarge the possibilities and to help in quality management on all levels of education of persons with VI.

We often meet teachers to help them to co-operate with each other and to share information. We offer them the possibility of preparing good didactical solutions, teaching materials which have been proved in practice in an inclusion situation, to add to our database etc.

We regularly hold courses for teachers. To these meetings we also invite parents and students with VI.

We also involve the students in the project. They develop didactical solutions, learning materials, test and analyse learning environments and situations. Some of their work you can find in the database of pooled teaching materials.

Our main goal is to support inclusion. 25 % of the children and youth with VI attend regular schools in Germany. But there are many children and pupils who learn at special schools. Also one-third of the pupils in other special schools i.e. schools for children with motor dysfunction or schools for children with serious learning difficulties have problems in the field of visual perception. Most of these children do not get appropriate support from the field of education for children and pupils with visual impairment. One of our next important tasks for the future is to offer more information and help in the field of education for children with MIVI.

2001 project had just started. It was still a baby.

During the years the project has been developed strongly – survived some childhood diseases and now it is a teenager and will be finishing school in Germany. We, the parents, would like to give our child an international future with more facilities and possibilities than we have in Germany.

The motor of the project is the innovative network. The basic idea is that the key to further development of the education of individuals with visual impairment lies in mutuality and in a network of expertise and resources. What is mutually developed will support and facilitate the individual work.

To carry out the ISaR Europe project we need to co-operate with colleagues, institutions and interested persons at an international level. We are working with the motto of the European Conference of ICEVI in Krakow i.e. Together everybody achieves more and I hope we can follow that motto and profit from the advantages of the European ISaR project together with all the participants of the Inclusion of persons with VI.

II. Contents and Main Areas of Work of the German IsaR-Project

I'd like to introduce to the contents of the IsaR-Website as it currently exists only in German.

We have four main areas of work:

1. Databases with literature and teaching material
2. A collection of instructional tools - our "didactic pool"
3. Networking and supplementation of further education courses and
4. A coordination office

1. Databases with literature and teaching material

ISaR offers a database of literature on inclusion and VI which can be searched thoroughly.

Our intention is to provide a broad collection. Topics include general inclusive education as well as specific issues in visual impairment. All entries come with a short abstract. That way the users can obtain more information on the content of the text. The database can be searched by full-text and keyword search and it currently contains more than 920 entries. Entries of articles and texts that are available online also provide the respective links.

The database of teaching material consists of books, games and other materials that are adapted or suitable to the needs of students with visual impairments or blindness. Apart from materials for the individual school subjects there are also games, children's books and assistive devices. All materials are for sale. We selected them from the range of products of German publishers and vendors of assistive devices.

Non-commercial materials that have been prepared and supplied for exchange by colleagues can be found in the Collection of Instructional Tools.

Currently the database contains nearly 2000 entries.

2. Development and maintenance of a Collection of Instructional Tools

We intend to:

- Initiate an exchange of existing ideas, proved lesson plans and projects in close cooperation with colleagues, parents and also students,
- Gather and make available examples of good practice
- Make available information and possible solutions to specific questions
- Offer advice on teaching designs and methods that facilitate inclusive learning for students with and without visual impairments.

To achieve these goals we depend on the cooperation of many colleagues, parents and students. We need them to supply their ideas and concepts which they have developed in their practical work on-site. Ideas and self-made materials like these can't be bought anywhere.

The Collection of Instructional Tools currently contains materials for lessons and games. For easy access we developed a matrix where the materials are ordered by school subjects and by level of education.

We hope for an active exchange on the design of teaching material concerninghow the experience and perception of visually impaired as well as that of sighted students are taken into consideration.

We believe that much creative energy is lost because similar materials are developed over and over again in different places. As it is, there are nearly no facilities for passing on the developed strategies to colleagues in different schools or even countries.

The collection of instructional tools currently contains 90 entries.

I only want to show you two examples - The first is „The habitat of a mole" - developed by Elke Zollitsch - a primary school teacher. She has taught a class with sightedt and two blind chilrden and has documented her work by many photos. Now - as she is retired and heard of the ISaR-Project - she has published an online-book „Learning together is fun" which is available in German on the ISaR-Web. We have put several teaching ideas to our Didactic Pool.

The following series of pictures will show how students can develop an idea of the den of a mole and the mole itself.

After the molehill has been examined and „grasped" from outside, exploration of the inside starts. Finally the mole itself will be discovered.

This example was also very impressive for all the sighted children in that class.

Another colleage who works as an itenerant teacher has developed sample copies with different rules for people with visual impairment. You can download them in PDF and print them on different coloured papers and try out which lines will be the best for a child.

3. Networking and supplementation of further education courses

The success of inclusive education depends strongly on the professional abilities of the colleagues involved. For this reason further education is a very important field.

The website features a calendar with dates of further education courses, exhibitions of assistive devices and technology and more events relevant to parents, teachers and students.

We at ISaR also offer further education courses, for instance a course for regular school teachers who teach a student with VI in their classroom or will do so in the future.

Furthermore, we offer further education for school staff on site.

4. Coordination Office

The intention of the coordination office is to support everyone involved in the process of inclusion of students with visual impairments – regular school teachers, special education teachers, parents and students. This support can range from referring clients to local experts to providing specific assistance on subjects and problems in the area of inclusion.

More than half of our clients are parents who seek information on inclusion and its specific problems and issues. The parents appreciate that ISaR offers support independent of any organization (school or resource center).

One of our main fields of work at the moment is the development and maintenance of a network of different organizations involved in inclusive schooling for children and youth.

5. ISaR-web & databases

Apart from the four specific areas of work I just described, the ISaR homepage offers a plenty of information that I would like to present to you now:

<u>A database with useful addresses:</u>

A multitude of addresses and links can be found here: starting with schools and resource centers for the VI, on to companies selling assistive devices, libraries for audiobooks and braille literature, organizations that offer orientation and mobility training or daily living skills, universities, associations and the broad field of support groups and parent groups.

The item information consists of the following contents:

Information

Here we have gathered information on different areas in the field of inclusion and visual impairment. You can find general and basic information on inclusion and VI as well as help with legal issues or personal reports.

Basic information for beginners

Parents and teachers who are confronted with inclusion of students with VI for the first time have a multitude of questions. For them the most important information is summarised here. The topics range from blindness and low vision from a medical as well as an educational perspective through electronic and optical assistive devices to supportive facilities for parents and teachers.

Legal Issues

Many parents and teachers came to us with their questions on this topic, pointing us to its importance. Research on the internet showed that the available information there was on diverse qualitative levels and often concerned only very specific areas. A comprehensive collection for the use of parents, teachers and other persons involved didn’t exist.

Thus we decided to do our own research on this problem and publish the results online. The contents include:

- The legal situation of inclusive education in the individual states (Germany has 16 federal states, each with different laws on school and teaching)

- Funding of assistive devices
- Funding of teaching assistants for students with impairments in regular schools
- Information on fiscal and other privileges for people with impairments
- Rules for conduct in traffic and obligatory supervision

Personal reports

Personal reports by parents, teachers and students are very helpful for others concerned with VI because they can show from a subjective, personal point of view the benefits of inclusion, but also the problems that can occur, and possible solutions to these problems. We collected some reports and supply links to other reports on different websites.

I'd like to draw your attention to the topic promoting social inclusion.

How can good inclusive teaching be characterized? Usually teaching methods or availability and use of assistive devices are the first to come into mind. The fact that social inclusion is a very important issue - especially for the students themselves - is shown clearly by Marianna Buultjens and Joan Stead in their survey (2002). Chapter 7 of their publication contains the discussion of the results and recommendations. We translated it into German for the ISaR-homepage. The complete publication in English is available online at the website of the Scottish Sensory Centre. (Folie mit Link)

During this year we have added information on children with multiple impairments and visual impairment. One reason is - that in Germany the most children with MIVI do not attend a special school for pupils with visual impairment. They are often at other special schools were often visual impairment

Forum

Through a forum exchange of information is possible, questions can be raised and feedback can be voiced. A multitude of topics comes up there, from concrete questions on teaching to legal information and general issues concerning VI in childhood and adolescence.

Linklist

Our linklist supplies links on the following topics:

- Braille and Large Print
- Computer & Visual Impairment
- Documentation and Legal Issues
- Information for Parents and Teachers
- Inclusion of Children and Adolescents with Visual Impairment - International
- Interesting Links (Instruction, [Special-]Education, etc.)
- Links Referring to Reports of Experience by Parents, Teachers, Students
- Low Vision

I hope that I was able to provide some insight into the multitude of information and contents available on the ISaR-website. But now I want to give you some insights into the easy way how the ISaR-Web can be filled in with information.

Our IT-Specialist Richard has developed a kind of content management system. So every team-member can access this content management system from every part of the world - he or she only needs access to the internet and a login with a password.

It's an easy to use system which can be used after an introduction of a half day.

This content management system gives us the possibility to decentralize the work of ISaR. So our German team has memebers in different parts of the countries from different ressource centres who will work together with us.

Every new content a person put into the system is directly online. I don't want to show you this in detail - if you are interested I'll show you this after our presentation.
So the Isar-web is a system which can be administrated in an easy way and which can provide information in different forms (html, pdf, links ect.).

ISaR - Ready for Europe

Let me now introduce the idea to create a European ISaR-Platform. In September 2004 there was a Teacher-Training-Seminar which was organised by ICEVI-Europe. There we have presented the idea and philosophy of ISaR in a lecture and after that a Workshop follows. One decision of this Teacher Training Seminar was, that such a system might be useful for all European countries. At the moment we are ust preparing an application for the EU to get funding for such a project.

ISaR and perspectives in an international and decentralized context

The next possible step would be to integrate the following elements into the structure:

- Complete Decentralization
- Quality management
- Barrier free website
- Different Languages
- Different Countries & Persons

This few new additions will enable the ISaR project to move to a higher level. In my final example I would like to present you a possibility for ISaR to work in an international anddecentralized context.
If the ISaR structure will be completely decentralized, it will be able to profit from authors from different countries. Thanks to the structure of the word wide web, all that an author of the ISaR website need is a computer with web access, so we have a low entry barrier.
Although all authors will be using the same system, national and international content could be easily published using simple web forms. To ensure, that this system produces content on a high standard, quality control methods will be introduced to ensure that every piece of information is published at the same (high) level.
Content will be published automatically in a print and a web, a normal and a barrier free version. It can be automatically downloaded as a PDF file or sent by eMail to interested newsletter recipients all over the world.
It will be possible to create large specialized communities which will use the synergy effects of different countries provided by the new international communication and interaction possibilities. A lot of energy could be saved if ideas would be developed once and continually improved, instead of being redeveloped parallel at the same time. It is not necessary to reinvent the wheel (Piatkowski 2004).
One main focus of this European project will be on the development of new didactic and teaching strategies for inclusive settings for children with and without visual impairments. It became more and more clear that some problems occurs in inclusive settings because we - as professionals - try to put teaching strategies which were developed in and for special schools for pupils with VI into regular school-system were they don't fit. So we have decided to stress this topic of further development of inclusive teaching and learning.
ISaR intends to promote the chances of children and youth with visual impairments for participation in regular education and to help schools develop competence for inclusion.
It became clear that ISaR depends on support from and cooperation with many colleagues at special and regular schools, with parents and students. Only through

community, exchange and networking further development and a better quality of inclusive education can be achieved. I am convinced that this is true for Germany as well as for Europe.

German IsaR-Web: www.isar-projekt.de
Contact: Emmy.Csocsan@udo.edu; Frank.Laemers@udo.edu

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Keynote speech

87 The social compentence of children with visual impairment

By: Dr. Brandenburg, Sytske
From: The Netherlands
Organisation: Sensis

Hello, good morning everybody, my name is Sytske Brandenburg.
Today is the final day of the conference. When thinking about the last four days I tried to see which moments I most remember.
I found, it was the moments of listening to interesting lectures, the reunion with old friends and sharing all the experiences with my colleagues of Sensis. I felt free in all those social activities.
With each of these valuable moments there was a social aspect involved.
My social competences played a significant role in this process.
Now, at this moment, I feel a lack of social competence.
If I felt a greater social competence, I would not be reading out this text but instead I would be doing my presentation by heart and only with the help of my slides.
A bigger social competence at this moment would give me a greater feeling of freedom. Being social competent sets you free!

The Outline of my presentation

1. I' will start by clarifying the meaning of social competence.
2. Then I will move on to the relevance of the theme
3. The frame of reverence
4. Next, the consequences for the practise
5. Recommendations
6. Conclusion

1. Clarification of social competence

Sacks and others give the following definition of social competence:
They say:
Social competence is the ability to demonstrate a repertoire of behaviours and actions that promote positive relationships and that are accepted by the culture or society to which a person belongs.(Sacks & Siberman, 2000)[13]
Social skills and social competence are often used in both ways.
But within the mentioned definition, there is a difference.
Social competence is more than social skills.
A social skill is one of the three dimensions of social competence.
We can divide social competence into the following three dimensions:

- First: the cognitive dimension: Do I know how to do this presentation?
- Secondly: the behaviour dimension: Do I have the social skill to do a presentation?
- Third: the emotional- or attitude dimension: Do I dare to do it in this context?

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[13] Sacks, S.,Z.,; Silberman, R., K. (2000). Social skills issues in visual impairment. In B.Silverstone, AM.A.Lang, B.P.Rosenthal & E.E.Fay (Eds.), *The Lighthouse Handbook on Vision Impairment and Vision Rehabilitation* (pp. 377- 393). Oxford University Pres, inc.

2. The relevance of the theme

Now we know the definition of social competence.

Many questions are in my mind:

- Why is it an important theme of this conference?
- On what bases do people say that social competence is an important issue? Are that personal experiences of individual teachers? Do parents tell us? Do children complain?
- If it is a problem, Is it then a problem for <u>all</u> youngsters with visual impairment?
- Do we have enough arguments supplying support to prevent problems, instead of waiting until there is a clear demand for it? Don't we want to work demand oriented?

There are several signs that it might have been worse.

For example:

The outcomes of the research of Sabine Kef on the whole population of adolescents and young people (Kef, 1997) [14] in the Netherlands show us that the feeling of well being of young people with visual impairment do not fundamentally differ from that of the sighted young people.

These positive results <u>could</u> lead to the conclusion that there is nothing to worry about and there is no basis for special attention.

<u>This</u> would mean that I can stop my presentation now and you can look for more interesting social activities somewhere else.

However, I will not stop, because we have to realise, with Sabine Kef, that the whole studied population, has been counselled in the field of their social development, during early intervention, during the school years, until adulthood.

So probably the positive results are due to our counselling.

So, we still have not enough arguments for so much attention for this topic.

Let us have a look at further research outcomes. The Lighthouse Handbook presents you a nice review of research outcomes.

We know the following facts from research outcomes:

- <u>First:</u>
  Children with visual impairment follow the same path of development as those with normal sight but at a slower rate.
- <u>Second:</u>
  Besides the slower rate there are more indicators of psychosocial problems;
- <u>Third:</u>
  There is a very great variability within the sample of youngsters with visual impairment and
- <u>Fourth:</u>
  There is a lack of knowledge about the facts that account for that big variance.

Now we know

- that the social development of a fair number of children with visual impairment is problematic,
- we don't know why the development of one child is problematic and why it is not with another

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[14] Kef, S. (1997). The personal networks and social supports of blind and visually impaired adolescents. *Journal of Visual Impairment & Blindness, 91, 236-244.*

- we know that the non-problematic social competence of young people is probably a result of counselling social development during many years in childhood and adolescence.

We know from a study of adults with a visual impairment in the Netherlands (van Lierop, 2001) [15] that people with a visual impairment who are unemployed have more problems in their personality development than people with a physical impairment. Partly this is due to a lack of social skills and a right attitude with regard to their visual impairment.
We also know from experience that children with visual impairment need a better social competence than sighted peers to feel as free as sighted peers in social situations. They have to ask for help more often, they have to give more explanation etc ….
This double reason: more at risk and the need of a greater competence is also an argument to pay attention to social competence.
I think, now we have found enough evidence to speak of social competence as a risk full field of development.
Does that make us professionals?
If I establish a problem with my central heating, I am not yet a professional mechanic.
So the question remains: on which basis we call ourselves a professional in this field?
I think we need to be convinced of our professionalism on basis of research outcomes. If we want to be proactive in this field. If we want to prevent problems in the field of social competence, instead of waiting until the child is already socially isolated, we must look for a good work model. This model must give us handholds and give us a say in the matter for preventing and solving social problems.
I want to illustrate this:
A blind youngster of 13 years old shall start at the secondary mainstream school.
Can the itinerant teacher say to the teacher of the mainstream school that he will discuss the social inclusion of the blind girl just on base of his own experience?
Of course people of my generation who started as a teacher at a special school and are experienced itinerant teachers have in a way a say in this matter. But what about the young person who will be the new itinerant teachers if our generation will retire: probably they never counselled a blind child before. They cannot appeal to experience in this field.
And what about an itinerant teacher who says that the youngsters he works with have no more social problems than the sighted children? Is he a professional? Why not?

3. The frame of reference

The approach on basis of risk- and protect factors in combination with the adaptive task approach.
I already mentioned that we have to look for a work model, a theoretical and research based model as a frame of reverence. We found that the combination of the adaptive task approach with the risk- and protect factor approach give us handholds. Handholds to found supplying support before the social problems arise. The target of the preventive support is to give the youngster from the beginning as much chance as the sighted peers. Not just equal chances on social contacts between the lessons, but also during the lessons.

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[15] Lierop, B, van.(2001). Reïntegratie na scholing. De brug tussen arbeidsongeschiktheid en arbeidsparticipatie. Den Haag, Elsevier.

First a little bit theory about the adaptive task approach
Then an explanation of the risk- and protect factors.

3.1. The adaptive task approach

Very shortly I want to say something about the adaptive task approach. Professor Brambring already mentioned the differences between the formerly used way of looking at the development with the accent on the child and the new day way of looking.
The adaptive-task approach emphasizes a child's environment and the demands that it places on the child as he or she develops…."
Warren says: "Developing is a mutual shaping process of the child on the environment and of the environment on the child.
As this process proceeds, the child acquires skills and capabilities that persuade him or her to adapt to the challenges (or tasks). "
It is a clear implication of this approach that *the child's capabilities are shaped in considerable part by the nature of the expectations that the child finds in his or her environments* "(Warren, 2000 [3].

As an illustration,
A blind girl, 12 years old, talks regularly with some girlfriends about their boyfriends. The blind girl also tells of her experience that she is in love with a boy but the boy doesn't know yet. The other girls give their reactions. Now the blind girl is performing "the task": talking about feelings and about relationships. If this blind girl had no girlfriends, she could not have been able to fulfil this developmental task in this period.

3.2. The Risk- and protect factors approach

Now we continue with the risk- and protect factors approach:

3.2.1. First the risk factors

We mean by risk factors, the several developmental factors, we know from research outcome, that are associated with visual impairment to varying degrees. They influence the social and psychological development of children with visual impairment. Lang (*2000*) [16] .
Lang (2000[5]) mentions the next factors:

- Access to (social) information:
- Perspective taking
- Expression of stereotyped behaviours
- Awareness of visual impairment
- Dominance and protection by caregivers
- Society's views of vision impairment

It takes too much time to explain every topic now. I only show you them to give you an idea of what is meant by research based risk factors. These risk factors can serve as guidelines in education.

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[16] Lang, M., A. (2000). The role of psychosocial factors in adaptation to vision impairment and habilitation outcomes for children and youth. In B.Silverstone, AM.A.Lang, B.P.Rosenthal & E.E.Fay (Eds.), *The Lighthouse Handbook on Vision Impairment and Vision Rehabilitation* (pp. 1011-1028). Oxford University Pres, Inc.

For example, knowledge of the risk factors gives, the itinerant teachers the possibility to account for the special attention the youngsters with visual impairment need in mainstream school. If we work in this way, then we really work on social competence in a natural way.

If we work with the concept of risk factors it gives us the possibility to speak about them in a dialogue with the child (if possible), the parents and the teacher of the mainstream school. In this dialogue the decision is made if it will be necessary to pay extra attention in the field of social interaction and in what way, if attention is needed.

The child must always play an active role in this process, on his or her level. The goal must always be that the child keeps the direction about his or her life, within the range of the capabilities of the child.

Now we know the risk factors but what do we know from research outcome about the known positive effects of several interventions in social development of children with visual impairment. What do we know about the protect factors?

What do we know from research outcomes about the best way of organising this environment?

Let’s look now at the protect factors.

3.2.2. Protect factors

Lang (*2000*) [17] mentions that there are 4 main categories in interaction childhood characteristics These interaction characteristics can be used as guidelines in education.

I ‘ll mention the four categories of actions that are associated with positive social behaviours and give some examples.

First:

Specific behaviours of educators

- For example: Direct prompts about appropriate behaviour are related to increased social participation *(Workman, 1986; in Lang,2000[5])*

The second category:

The location and physical structure of education programs

- For example: Providing less physical space for particular activities increases social interaction. *(Brown, Fox, & Brady, 1987 in Lang,2000[5])).*

The third interaction category:

Specific instructional techniques and interpersonal features of teachers

- For example: The cooperative learning model promotes social integration, social acceptance, self-esteem, and student achievement *(Armstrong et al.,1977; Ballard et al.,1977; Bina, 1986; Cooperet al., 1980; Gerard & Millar, 1975; Gonzales, 1979; Madden&Slavin, 1980; Slavin, 1974, 1981; Tackaberry, 1980; in LANG[5]).*

Fourth:

Support groups for parents

- Parent report that support groups enable them to address effectively issues about attachment, acceptance and overprotection. *(Thomas, 1996;in LNG[5])).*

- What is the practical benefit of all this knowledge for the carer and the teacher?

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[17] Lang, M., A. (2000). The role of psychosocial factors in adaptation to vision impairment and habilitation outcomes for children and youth. In B.Silverstone, AM.A.Lang, B.P.Rosenthal & E.E.Fay (Eds.), *The Lighthouse Handbook on Vision Impairment and Vision Rehabilitation* (pp. 1011-1028). Oxford University Pres, Inc.

- What does this all mean for the practise in the mainstream and special school, the residential units and the education at home?

I want to restrict myself to the link with the new way of learning and the new role of the teacher.

4. Consequences for the practise

We must mention that the frame of referent has three feet:

- Interaction child -- environment
- The risk factors
- The protect factors

In the new way of learning on the basis of the social constructivism the role of the teacher is managing the learning situation.
In the traditional form of education the teacher is the most important person of transfer the education to the students.
Within the new form it is the teacher who is responsible for creating an environment wherein the student can learn for himself.
A traditional form of learning is the way you are learning at this moment (if you learn something of course..), I transfer my knowledge to you. You are the passive student who receives the knowledge.
In the process of preparing this lecture I learned a lot by reading, by connecting this new knowledge to my own experience and in checking this knowledge by my colleagues. This could be addressed as active learning.
In the new way of learning the keywords are: independency, own initiative and contact with the experience environment. Social constructivism means learning in collaboration and interaction with others.
Okay, lets elaborate on this. We could ask ourselves the following question:
Is this way of learning of interest of the children with visual impairment?
Does this way of learning provide more possibilities, or is it in a threat for the development of social competence of visual impaired children?
Is this way of learning always the most effective and efficient way of learning for them?
Or is it for blind children more efficient and enjoyable, listening to a passionate history teacher, rather than having to search all this information with a group on the internet?
The fact that:
the new way of learning connects with the experience environment,
that theory is linked with practice and
that the accents are on own initiative,
are of course the ingredients par excellence that are in interest of the visual impaired youngsters.
This way of teaching, of counselling is not new in our field of education and care. It has been propagated and it was practised already for a long-time in the field of education and healthcare for children with a multiple disability and early intervention.
The new way of learning provides a whole new range of possibilities for visual impaired children. Nevertheless, a condition is that the learning environment is set up in such a way that the youngster with visual impairment gets the chance to learn the social skills, he so dearly needs in this way of learning.
Sometimes social skill training will be necessarily to provide the child with the skills he need for example for successful learning the social competence to present a successful PowerPoint presentation. Sometimes he will need skill training if he fails. But the guideline should be: arrange the learning situation in such a natural well-considered

way that learning social skills is felt as a normal day-activity and not something that is also on the schedule. Sometimes they really need specific training. This training must always have a connection with the lack of skills the child is aware of.

I heard during this conference that several organisations are engaged in this field of new learning. This way of learning is not only important in the field of the school organisations. Also in the field of rehabilitation, early intervention, residential units, the care of children with multiple handicaps and at home, this way of learning should be arranged.

Social learning in a natural rich context for the individual child should be arranged with the support of the protect factors.

The protect factors give the professional the possibilities to organise a suitable rich natural learning environment. But it gives him also the possibility to found the choice for a traditional way of transferring knowledge by speaking in a fascinating way about history if this is in the advantage of the individual child.

The choices must be found in the reference frame and in the features of the individual child and not pure in the ideology of the new way of learning.

5. Recommendations

I want to put the recommendations in the form of needed competences of the teacher (it could also be for other carers)

As we divided the social competence of the youngsters with visual impairment into three components, the competence of the teacher can also be divided in the same three components:

So the competence of the teacher consists of:

1. Knowledge, the cognitive aspect
2. The Skill, the behaviour aspect
3. The Attitude aspect

1. <u>Knowledge aspect</u>

- The topics mentioned above, should be common knowledge for teachers who want to call themselves professional in the field of education of social competence of visual impaired children. The knowledge must be their reference in looking at the social competence of the <u>individual</u> child.

2<u>. Skill aspect</u>

What skills should a professional have?

Good social skills. He is the coach but also the traditional teacher.

He must be able to give direct prompts about appropriate behaviour, but he must also be able to be the teacher with his hands on the back: just stimulating and monitoring the self activity of the youngster.

<u>Last but not least:</u>

3. The attitude aspect:

This aspect is the most important aspect and it is also the most difficult to change. I believe on base of research outcome of Robinson (2004) [18] and of my own experience that only video-interact training and guided inter vision will be successful in changing the attitude.

I told you about the importance of the necessary knowledge and skills of the professional.

But I guarantee that it does not work without the right attitude.

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[18] Robinson, B.,L.; Lieberman, L.,J.(2004). Effects of visual impairment, gender and age on self-determination. *Journal of Visual Impairment & Blindness, juni 2004,* 351-366.

6. Conclusion

Right, in conclusion, I started my presentation with the statement that being social competent sets you free.

But also to being a competent professional sets you free.

This is the end of my “traditional” presentation.

I’d like to thank you for your attention and I wish you productive and enjoyable “interactive” workshops.

Keynote speech

88 Family, “Aiming for excellence” – aiming for excellence with families, for families or despite families …?

By: Prof. Walthes, Renate
From: Germany

You may notice this keynote does not fit in the system and the list of the previous keynotes: Assessment, Low vision, Professionalism, ICT, ADL O&M and Social competence are descriptions of professional functions. The last keynote speech is titled **“Family”**.

What may have prompted the programme committee to put this theme forward as a keynote speech? Please allow me to speculate about this title.

- Are families supposed to aim for excellence? And who should have the right to impose this aim on families?
- What should aiming for excellence mean to a family?
- In which way are we as interveners, therapists or educators involved in a familys’ attempts to be excellent?
- Who defines when a family has achieved excellence?
- Do families who have achieved excellence need further support?
  You may say that these are the wrong questions – then let’s try to create other ones.
- Are we as excellently in dealing with families as we are in assessment, ICT or O&M?
- What are goals of cooperation under the headline of excellence?
- Or are the needs of families just hindrances in the excellent work of professionals?

To talk about families within the scope of this conference seems more difficult to me than I had first expected when I agreed to deliver a keynote speech.

First and in general: Talking about families must not be placed in the same systematic structure as assessment.

Families are more than faceless functions, more than a group of persons – a family is a special social system. As such the family system is aiming for self-preservation, survival and self-organization. It does not aim for excellence – or do you seriously think there is a standard of family-excellence?

What did you expect and what can you expect from a speech with “Family” as its topic?

As I can’t see into your head it’s impossible for me to know what you really expect! As far as I know you are part of the professional system that publishes and gives workshops. I’ll take the previous opinions and statements for granted as a kind of guideline for what you may expect.

If you know me well, you may expect that I will in general not fulfil your expectations.

In the following 40 minutes I will try to figure out several aspects of this very complex topic.

Firstly, I would like to talk about the image of the family in Europe and the changing image in almost all countries.

The secondly focus will be on the question of how the image of the family usually changes, if the impairment of a child comes on the scene.

Thirdly, I will concentrate on the results from the cooperation between families and professionals/ early interveners.

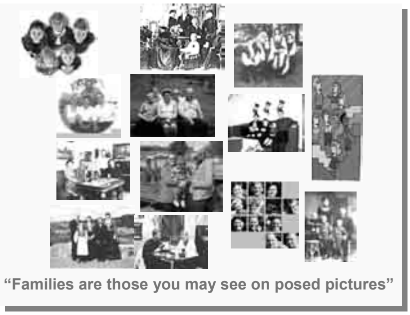
Fourthly, I will provide you with some examples of successful cooperation.

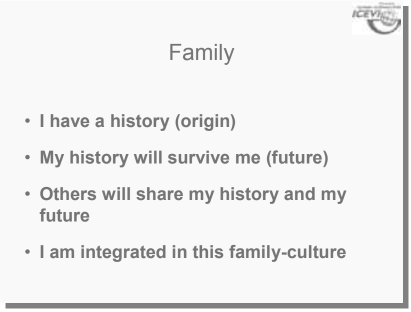
And finally, I will mention the main needs in research.

1. Family in Europe - an endangered species?

The increasing number of elderly people and the urgent need of children are hitting the headlines of many newspapers. Europe seems not only to be an ancient continent, but its' population is on the track to self extinction. Fewer children mean less income, less security and less future. The traditionally known family with a mother, a father and two or more children is more and more displaced by other forms of systems. One adult families, family systems with changing partners, partners of the same sex as parents, day mothers due to the employment of the legal guardians, surrogate mothers and foster families are more or less defining the new way of family life. Despite the renaissance of the traditional family pattern, families appear to have never been more different than today.

So which should be our definition of a family within these different types? One may say "Every combination based on relatives, children and sharing a common flat"
another one:
"Families are those you may see on posed pictures"

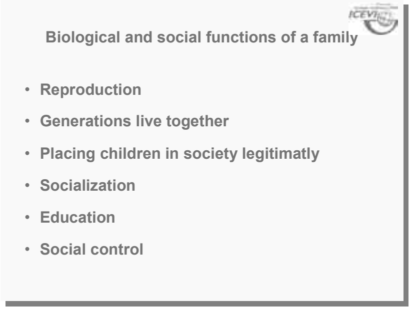

"Families are those you may see on posed pictures"


Family

- I have a history (origin)
- My history will survive me (future)
- Others will share my history and my future
- I am integrated in this family-culture

or: "In families at least two generations live together".

Niklas Luhmann, a sociologist, says that post modern social systems are no longer defined through their status or birth but are destined through their functional tasks (1984, 1992).


Biological and social functions of a family

- Reproduction
- Generations live together
- Placing children in society legitimatly
- Socialization
- Education
- Social control

You may all have associations about the claims families might have. Those tasks are care, well being, love, strong bonds, common history and managing everyday life in a way that keeps the system alive. Family means managing the diversity of everyday life. As in every social system, a specific communication exists within the family which isolates the family system from others. Self containment is one of the characteristic aspects families have.

2. Families with a child with impairment

At the same time self containment is an aspect, which changes radically if impairment of a child enters the family system. Some findings describe various ways, in which families deal with their impaired child. Most of the literature states that the due to the impairment (e. g. blindness and vision impairment), the families are similar. An impaired child automatically leads to an impaired family or bringing up an impaired child results in the family losing its' privacy.

It seems to me that every single family with an impaired child is expected to open their hearts and minds to the professionals - almost nothing should stay private.

A family with an impaired child is no longer regarded as a "normal" family with the general competence to bring up their children. If we analyze the literature we may come to the conclusion that nothing is normal if a family has a child with vision impairment. Some early intervention programmes assume that families with children with the same kind of diagnosis (glaucoma or ROP) have the same problems. They assume that the impairment itself is responsible for the problems families have. The fact that families have to deal with similar problems is not because of the kind of impairment but because of the similar reaction of the environment. It is not the impairment itself or its functional effects that must be considered, but rather the social responses to the vision impairment.

Many reports, many statements assume that families with an impaired child are a homogenous group, but we should consider that cultural, religious, educational, life-style and income aspects make them very different.

If one studies the different publications about cooperation between professionals and families in the field of blindness and vision rehabilitation, one may observe that many features are lacking.

3. I would first like to talk about, what is known about families and professionals

1) Families with a vision impaired child are trapped in a net of help. Services differ from country to country. The net of help is sometimes clearly structured with low thresholds and an open door or call on policy. Sometimes the structure of responsibilities is confusing. Parents have to go long ways before they enter the right system with a helpful treatment fit for them.

2) Unlike the "child centred perspective", working with families remains a claim but not a reality. If professionals are considering their connections to families they are mostly addressing children with impairment and mothers excluding fathers and siblings.

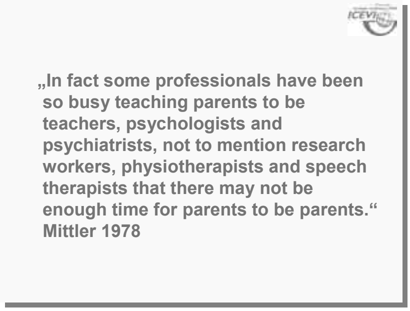
3) It seems to me that it is often taken for granted by professionals that parents with a vision impaired child need support. Sometimes these services are offered without asking if they are welcome. This is due to the fact that in almost all social systems, the institutions that refer family to services are also suppliers of the services.

4) Families with a child with vision impairment have to cope with the fact that different professionals require / use different or conflicting measures or steps. Chantelanat refers to a family with a two year old boy and 21 professionals around the family (2002, 115) and 9 different professionals on average. In some countries multidisciplinary meetings are well established; in other countries families have themselves to coordinate the different servers with their demands, approaches, and ideologies.

5) Families have to accept that they have to function every hour, every day and have to be "specialized generalists" but that professionals are "specialized specialists", who know little about the complexity of the real life. Professionals have time to consider

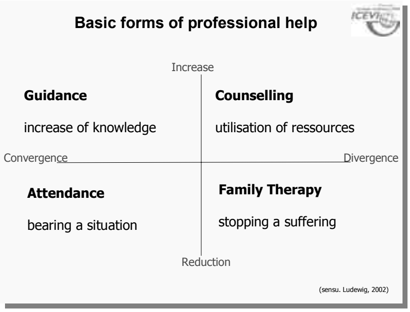
and reconsider measures. Families often have no time to make their decisions. We found that in most cases, when making difficult decisions, the families had to act under pressure put on them by the professionals. With hindsight, they said that most of the pressure was unnecessary and some decisions turned out to be wrong.

6) During the last three centuries the idea of the role parents should have, has changed from the idea regarding parents as laypersons to parents as co-therapists to parents as partners. If you look closer at the role parents have in your system in your respective countries you might come to the conclusion that in some way all models are still represented. For a single family changing their role from a layperson to a professional person is the main task. In cooperation with the medical system they have to behave like laypersons, physiotherapists demand parents to be co-therapists. As a result of these different and inconsistent demands families tend to react depending on the specific context. This is not the best way to develop a feeling of coherence and self efficacy.



„In fact some professionals have been so busy teaching parents to be teachers, psychologists and psychiatrists, not to mention research workers, physiotherapists and speech therapists that there may not be enough time for parents to be parents.“
Mittler 1978

7) Dealing with families, professionals usually combine different types of help - not knowing what the family in question exactly needs. Family therapists differentiate four types of help: guidance, attendance, consulting and therapy. In his systematic diagram Ludewig demonstrates out that each kind of help has to fit to the demands or problems each family has. The four types of help are different in their approach with regard to increase versus reduction or convergence and divergence.



Basic forms of professional help

Increase

Guidance

increase of knowledge

Counselling

utilisation of ressources

Convergence

Divergence

Attendance

bearing a situation

Family Therapy

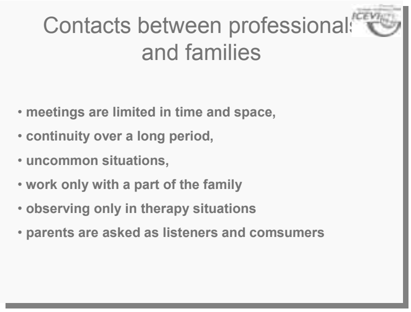
stopping a suffering

Reduction

(sensu. Ludewig, 2002)

While guidance and counselling are aiming for increase (of knowledge), attendance and therapy are aiming to reduce suffering or problems. While guidance and attendance use external structure and help (convergence), counselling and therapy should use the internal problem solving potentials of the families (divergence). To find out which approach is needed in different situations, helps to avoid misunderstandings that affect the efficiency of the cooperation. If guidance is needed, professionals have to provide knowledge. To accompany a family to make them stronger may be the right

solution if the child has e. g. progressive impairments. In case of problems in the relationship of the parents, family therapy may be provided. Counselling may be the most common approach in our field but to offer counselling where attendance is needed can irritate parents and professionals.
Beside all these important aspects in the specialized literature you can find, how do we as early interveners, as teachers, psychologists, medical doctors or researcher create the contacts with a family with a child with VI or MIVI. This may vary from country to country and be different from system to system. I hope you agree with the following descriptions:



Contacts between professional
and families

- meetings are limited in time and space,
- continuity over a long period,
- uncommon situations,
- work only with a part of the family
- observing only in therapy situations
- parents are asked as listeners and comsumers

a. Meetings between families and professionals are limited in time (usually not more than one hour) and space (either the home of the family or the institution where the professionals work).
b. Sometimes you have to take up where you left off in discussion or carry on with a play or a consultation you had to leave unfinished at the last meeting because of time matters.
c. Meetings between families and professionals are out of the ordinary situations even if they take place in the home of the family.
d. Professionals mostly work only with a part of the family, they get to know most things about the family by talking with one parent or the child.
e. Observing each other happens in play or therapy situations and less in every day activities. The group consists of one parent, the child with VI and one professional. Opportunities where a group of families and a group of professionals work together are rare.
f. If parents and professionals meet to discuss the results of an assessment or a therapy or to decide further steps, families are predominantly invited as listeners and consumers of the professional statements. There is seldom enough time and only basic information about the meeting are given to parents beforehand.

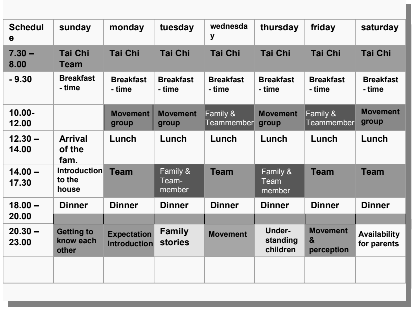
To get to know if these are sufficient or good conditions to work together based on the principle of partnership one has to define partnership as I will show you on the slide. One needs to have alternatives to evaluate one's own concept.
I will show you one of many possible alternative forms of cooperation.

- To achieve a common purpose/ goal;
- To accept the different competencies of parents and professionals;
- To agree with the definition of the mutual roles;
- To share responsibilities to achieve a common goal;
- To be loyal, confident and honest in all aspects concerning the actions or steps;
- To share all relevant information;

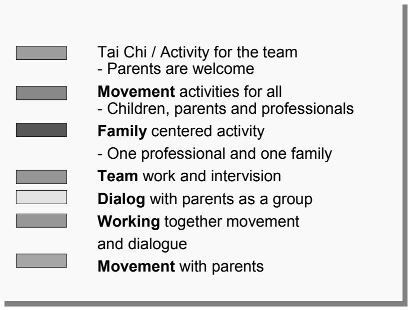
- To accept the decisions parents make in their legitimate role to the benefit of their child and their family.

I have to mention that for almost 17 years I regularly conducted parent-children courses.

Parent- child courses mean living together and learning from each other for an intensive period of two weeks in a place suitable for families, where neither the interdisciplinary team nor the families are in a familiar environment. Eight families and nine early intervention professionals come together to spend a very intensive time. The two weeks are structured as you may see in the following diagram.



Schedule	sunday	monday	tuesday	wednesday	thursday	friday	saturday
7.30 – 8.00	Tai Chi Team	Tai Chi	Tai Chi	Tai Chi	Tai Chi	Tai Chi	Tai Chi
- 9.30	Breakfast - time	Breakfast - time	Breakfast - time	Breakfast - time	Breakfast - time	Breakfast - time	Breakfast - time
10.00-12.00		Movement group	Movement group	Family & Teammember	Movement group	Family & Teammember	Movement group
12.30 – 14.00	Arrival of the fam.	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
14.00 – 17.30	Introduction to the house	Team	Family & Team-member	Team	Family & Team member	Team	Team
18.00 – 20.00	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner
20.30 – 23.00	Getting to know each other	Expectation Introduction	Family stories	Movement	Under-standing children	Movement & perception	Availability for parents



▨ Tai Chi / Activity for the team
- Parents are welcome

▨ **Movement** activities for all
- Children, parents and professionals

▨ **Family** centered activity
- One professional and one family

▨ **Team** work and intervision

▨ **Dialog** with parents as a group

▨ **Working** together movement and dialogue

▨ **Movement** with parents

All the different kinds of activities are marked by different colours. Blue stands for activities where everyone may join the team as Tai chi in the morning or jogging/ inline skating or biking in the late afternoon, orange represents activities with the whole group taking part in an activity such as movement and space, movement and rhythm or basic movement aspects like rolling, jumping, balancing, moving like animals etc.

All these themes are integrated into the frame of a story like sea travel or living in a jungle where all the participants move and work together.

These group activities are prepared by the professional team and are taken into account that visual aspects have to be experienced in a different way (which means auditory or acting/ moving); that parents and children can have new movement experiences. The plum colour stands for activities between one professional and one family concentrating on the wishes, questions and demands of the whole family. One professional and one family work together during the two weeks, but if there is a special question or problem another professional can join the group. Lime green represents the time for team work every second afternoon, where the families have free time. Light yellow is the colour for the talks, discussion, dialogues with parents and elder siblings in the evening. Subjects can be:

- The situation where I don't understand my child. We call this subject "How to understand children";
- Kindergarten or what we can do to prepare the transition to school in a positive way;
- My child with VI and his/ her siblings;

Some of these subjects are discussed with the support of the team, some are worked out in a mixture of movement experiences and discussion (dark yellow or brown) for example. Green stands for movement activities in the evening, e. g. to learn movements with or without sight, to learn a new technique or to dance.

If there is a special question or need for a further assessment and there is a specialist in our team a family can require e. g. low vision assessment, movement assessment and a reflecting team.

You may notice that there are different requirements for the professionals and for the families, and these requirements do not fit into the traditional concept of the relationship between families and professionals. Living together in a house, having breakfast and dinner all together but at lunch the professionals are with the children and the parents are on own. Sharing course and free time, and learning routines from each other. Dealing with different habits – some parents care about healthy food, others give sweets all the time – some of the family or team members are not morning persons, others like to chat with a glass of wine all night long – all these aspects are new challenges especially for the professionals but for parents and children, too. Mostly these parent-child courses are the first opportunity for the family to travel and to have part-time holidays together. Sometimes the families experience being in a large group for the first time ever. This situation produces new possibilities for everyone and thoroughly changes the relationship between families and professionals.

In the next video a father summarizes his expectations of the course:

Text video slide:

"I would like to forget my sorrows or learn to cope with them."

"I will have a chance to decrease the burden of my wife. She has to cope with everything concerning our son."

"I hope we will have time to talk without time pressure. At home we don't have time."

"More time in general concerning F. as well ..."

"Particularly having fun at home we have time just to fed him and bring him to bed."

"Seeing F. together with other children as he will attend the kindergarten soon think it is good for him."

"The professionals should give ideas how to handle F. and how we can foster him in a better way."

"To share experiences with other parents having activities together and observe the other children how they develop and behave that is all."

I would like to summarize what in my opinion are the main advantages of these courses:

1) Time – during a two week course all members have time to start a process and to finish it; you may discuss a problem in the afternoon and may continue after the evening session and may arrange a meeting the next morning. To play or act together may create a progress because family and team members don't only have the defined time but can work together in the movement groups, too.
2) Transdisciplinary work - the interdisciplinary team works together not only during the team sessions but the whole day, because there are no enclosed areas or rooms for one professional and one family. It is an open space inside and outside; a space for quiet activities can be set up if necessary and if it is required. A small group can have a

separate room – but usually the team and family members are aware of the activities of the others. This is a wonderful situation because you can benefit from each other, two team members and two families can bring together their activities. The siblings of one family may take part in an activity of another family and can learn about their competencies and the difference and similarities between their blind sister and the boy of the other family, for example. During the team sessions we can exchange our impressions from ones own experience, we can create new ideas and help the members to realize them. Every member of the team can be questioned by every family but all the information will be collected during the team sessions.

3) Acting together – is a third main advantage on the road to a partnership based relationship between parents and professionals. Working together under the motto of "ability" parents and professionals can discover very new aspects. To be able to carry three adults and five children as a basic element of a human pyramid clarified his role not only in his family but also in the group and motivated the young Russian father to join the movement groups which he at first had rejected as childish. In turn, his wife could feel confident in her way of dealing with her youngest son and finally they had the experience that they could play together and have fun with everybody for the first time. Acting together assumes that professionals are able to pave the way for an easy and joyful contact and that there is no judging of skills.

4) Parents and families as a group – the support parents can give each other is mostly underestimated and valued as being mere coffee talk or one family complaining about their fate. Giving parents a suitable framework enables them to experience the mutual competencies. I am full of admiration for the gentle, supportive and respectful way the parents discuss with each other. To learn of the enormous help they could be for each other, helps them to stay in touch after the course and to organize themselves as an association. To reflect on the family as a group means, that every member of the family (mother father, siblings, children with VI) has the opportunity to learn something about the themes, ways to handle problems and strategies of other families. They also experience their own competences in dealing with other children or adults. This gives them a clearer understanding of the difficulties of their own family. Some years ago one sister of a little blind boy told me: "I thought my brother's bad mood was due to his blindness. During the parent - child course I met several very nice blind boys and girls and learned that him getting on my nerves was not due to his blindness but to him, being my brother". Now I will show you a short comment on the course.

Text video slide:

"I never thought my dreams about this course will come true."

"I was so much surprised of all impressions and experiences I have got."

"First we learned about all the different vision strategies Robin uses."

"We learned to accept and appreciate the importance of his vision strategies for interaction."

I learned to be aware of myself in a different way because the professional person worked with me and my family."

"Until now I did not believe that a person like me could change this way."

5) The whole concept is based on ability: It strengthens everyone when he or she has an opportunity to demonstrate his or her ability and not focus on the negative aspects. Working together in a complex way like a parent-child course opens old and new abilities for everyone. In the last fifteen years I have noticed a change in demand from parents. In former times the most important goal for the parents was to live as a family and enjoy life with their vision impaired child. However, this has changed. Nowadays,

parents want varying types of therapy, nothing else. After several days of our approach, parents are relieved to find that they can spend time with their child in play and still receive the same results or better than with the therapies. This is what we experienced in our parent-children courses.

Text video slide:

"From the very beginning the team has worked very professionally in all aspects concerning the introduction and the handling of special topics with a clear schedule. Everyone could benefit a lot. Being accompanied not only by one professional was pleasant, and having the opportunity to talk to every member of the team of professionals was great, as one has to consider their different perspectives. These different perspectives due to the varying professional backgrounds complemented one another."

These five aspects create a different relationship between parents and professionals. Attending one or several courses many parents describe that they feel more confident, stronger and coherent in dealing with their children and the professionals. Being allowed to trust in their own ideas and suggestions has increased and shifted their emphasis from therapy – orientated to a family centred perspective.

It is up to you to consider whether what have just described is different or similar to the way you work.

Nevertheless, our common starting point is: To strengthen parents and those close to the child, not to change them."

To do this in a way and to aim for excellence we should finally look at the needs in research.

- There are lots of statements about the family and the problems they have with their vision impaired child but only few studies where parents get a chance to speak (Pretis 1999).
- There are more methods and types of cooperation between professionals and parents in early intervention settings than there are in the publications that deal with the needs and tasks of parents of pupils, young persons or adults; (Heckmann 2004).
- Publications about attachment and the relationship between parents and their child seldom consider that interpersonal relationship does not exist in a social vacuum.
- In European literature, cooperation between families and professionals focuses on middle income parents or affluent families, most of the professionals come from the so called middle class. Understanding the specific problems of families living in poverty, minorities or families with migration background is a great challenge if one does not know the specific cultural background or even the language.
- According to the risk and resilience research with children we need more resilience-research with families. The question how families can cope with the burden of having an impaired child should change to the attention to which factors keep families alive and functioning, which factors strengthen families. Theories of Salutogenesis (Antonovsky) should enter the field of early intervention and cooperation with families.
- There are more macro analytic studies about the cooperation between professionals and parents and only few micro analytic ones. We do not know in detail how families deal with diagnosis and prognosis given by medical doctors and given by early interveners or psychologists. There are no studies about families, who break off a therapy or changing to another early intervention program.

Please, allow two final reflections, which bring two different insights together:

1) In several Swiss studies, it is mentioned that parents regard the way early interveners work as very supportive but very unusual way is mentioned. The system of early intervention appears as a world of its own with no contact to the reality of other systems and institutions.
2) Gregory O’ Brien studied the journey through life of 326 young persons with impairments between the ages of 18 and 22 asking for predictors for positive development. The only highly significant predictor was early intervention; no other therapy or special school or integration proved itself to be positive a prediction for positive development as early intervention. Is it the point of involving the whole family in the process that is the key to the long lasting effect? Many parents complained about the transition from the early intervention system to other systems. They felt alone without further support and cooperation. They didn’t realize the slowness of the institutions, with which they have to deal afterwards. Despite the fact that the relationship between professionals and families should be improved in several aspects other systems can and should learn from the progress the early intervention system has made. I would like to end with a little play on words.
Aiming for excellence with families is real; families make their excellence available to professionals. To respect and to appreciate this excellence is all we can do to strengthen families.

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89 Assessment of vision for special education; what should teachers know and be able to assess

Workshop

By: Hyvärinen, Lea
From: Finland
Organisation: Prof.h.c. Rehabilitationswissenschaften, Universität Dortmund

Abstract

For more information please conact the author: lea.hyvarinen@lea-test.fi

90 Play acting, an art to learn the things of life

By: Mª Jesús Bellón Fernández, Pilar A Bescos, Isabel G Soriano, Consuelo S Gomez
From: Spain
Organisation: ONCE

Introduction

The importance of social skills

The advent of theories on emotional intelligence (Goleman, 96) and the multi-dimensional perspective of intellect has drawn interest to emotional and social variables formerly overlooked. At the same time, social competence has been related not only to satisfactory social and personal development, but also to the success of the teaching-learning process in both the daily living skills and academic dimensions.

Inasmuch as there are three components to social skills – physiological, cognitive and behavioural – the difficulties deriving from an insufficient repertoire of such skills can find expression in any of these areas and translate, as (López, 99; Ovejero, 98) note, into:

- learning difficulties deriving from emotional, social and behavioural problems owing to the deficient development of social skills
- emotional and social problems
- anxiety, isolation, lack of interest
- disruptive behaviour ….

An appropriate repertoire of social skills is, of course, important for all pupils - with or without disabilities -, but it is vital to blind or visually impaired youngsters:

- firstly, because such skills are instrumental to their social integration and to preventing their isolation. A recurrent finding in any number of studies (Caballo, 2001; Díaz Veiga, 1997, Díaz Aguado, 2003) is that blind and visually impaired pupils face severe isolation.
- secondly, their very disability prevents them from acquiring the basic skills needed to communicate, such as the proper use of facial expression and body language, smiling, eye contact …
- thirdly, since imitation is instrumental to learning to relate to people, the lack of visual imitation has an adverse effect on these pupils’ ability to learn manners and social conventions in general.
- fourthly, a suitable level of social competence improves self-esteem, reinforces a positive self-concept and helps improve their acceptance of their impairment.

Albeit in a less exhaustive and “scientific” way, we have also observed such difficulties, not only in the classroom where our pupils show evidence of their lack of social competence every day, but also in two specific situations:

- “Things of life” workshop. Monthly activity open to pupils from the ages of 9 to 14 that aims to provide them with the necessary guidelines to cope with everyday situations.
- Summer camp. Open to pupils from the ages of 8 to 14 for two weeks during the summer.

Both activities have provided the opportunity for an ongoing evaluation not only of the programmed tasks, but of pupils’ social competence and resources, their failings in establishing inter-personal relationships, the way they relate to their peers (other members of the group), their family and adults (we ourselves and monitors).

Drawing on past experience, we believe that direct and specific training in the area would help our pupils to integrate more effectively in the various social spheres where they interact, and better assimilate other learning, academic or otherwise.

Why a stage-play workshop?

There was a time when theatre was the chief form of entertainment: kings and warriors liked nothing better and seeing a good play was highly satisfactory for children and adults alike.

While the stage has roused more interest in some ages than others throughout history, since Antiquity very few authors have recognized its importance as a means of communication or its educational value. The dramatic arts are, however, our point of departure, because…

- stage-playing allows us to convert conflict into amusement. It opens windows to begin to think or re-think. It helps us understand conscious or unconscious unknowns through new sensations and experiences.
- theatre – viewed as play-acting – teaches us to recover all our many corporal possibilities: the body in constant movement, restless under the spell of the inability to keep still, or the immobile body, stopping time with its immobility, freezing space and situations: the recognition of bodily stress that intensifies in moments difficult to control. Different ways of confronting ourselves, our conflicts and emotions. This is where our work begins, as we associate movement with space and time and therefore with thought.

And in particular with respect to the population on which we focus our attention, because…

- theatre enables us to simulate reality, creating and representing everyday situations where each individual can exhibit his/her social skills.
- theatre enables us to work in structured situations and controlled areas, reducing anxiety, fear
- theatre enables us to teach verbal and non-verbal communication skills (posture, facial expression, ...).

Experience

The things of life: a different view – through stage-play

Introduction

The experience proposed is set in the context of comprehensive education for the person as a whole during his/her leisure time because it is in such environments that individuals with impairments encounter fewer obstacles to establishing personal relationships; environments where no-one is measuring performance, where aptitudes can be expressed more freely, where less anxiety is generated, where there are opportunities to be oneself and feel and enjoy peer respect and acceptance.

The population chosen for this experience is a group of teenagers, whose age makes them particularly receptive to socialization training, because - like youngsters without visual impairment – for them their personal relations are a top priority. Yet these adolescents find it exceedingly difficult to satisfactorily relate to others for want of social resources and their inability to access and therefore understand the non-verbal language used by teenagers with no visual impairment.

The baseline for project design is the group's reality, their personal experience, specific needs and priorities and their own perceptions. The aim is to offer strategies for acquiring social skills through stage-play or acting to identify and intensify the aptitudes and skills they have already acquired and teach them the ones they are lacking.

The added value deriving from the natural environment chosen for this experience, the Pyrenees Mountains in the Region of Aragon, is particularly propitious for the pace of group development.

Briefly, this experience consists in bringing a number of visually impaired teenagers together to share and learn as a group, re-structuring their inner and outer selves and relating to one another through stage-acting in a natural environment.

Population

General needs of blind and visually impaired teenagers:

- Need to access the physical world through other senses or supplement any visual information received with other senses.
- Need to learn orientation skills and acquire a command of movement and a spatial sense.
- Need to acquire an alternative reading-writing system.
- Need to acquire personal independence-related habits.
- Need to understand and assume their visual circumstances.
- Need to improve their self-esteem, for the negative view they often have of themselves as incompetent individuals is a major source of dissatisfaction and hinders their ability to identify their aptitudes and capacities.
- Need to relate to other teenagers.

Specific characteristics of our population:

Group of around 15 blind or visually impaired teenagers between the ages of 13 and 18 receiving support in the ONCE regional facilities in Aragon, La Rioja, Navarre, Basque Country and Cantabria.

Some of them have participated in specific holiday activities for blind people organized by the ONCE but none have participated in holiday activities organized by institutions unrelated to the world of visual impairment.

Some of the participants know one another; none have ever taken part in theatrical activities.

Before beginning the programme, information will be requested on each and every one of the youngsters involved. In addition to their personal medical histories, there will be reports (visual pathology, aids and devices needed, recommendations, possible individual objectives on which to work, and so on) for each of them drafted by the educational teams in the ONCE's respective regional headquarters. The team of educators involved in this experience will also draft an individual report on each of the participants to evaluate their personal development.

Objectives

General personal objective:

1. Favour the development of appropriate social skills in blind and visually impaired teenagers through acting.
   1. Acquire independence and self-confidence in performing the programmed tasks
   2. Favour personal hygiene and grooming habits
   3. Further uninhibited and spontaneous behaviour
   4. Provide vocal training
   5. Enhance self-image and non-verbal communication
   6. Favour creativity and artistic expression
   7. Practise different theatrical techniques

General group-wide objectives:

2. Teach solidarity, respect and participation
    - 2.1. Respect each individual's pace and space
    - 2.2. Respect basic rules for harmonious co-existence and communication
    - 2.3. Help and be helped
    - 2.4. Create a feeling of group belonging
3. Further environmental education

Methodology

Initial criteria:

The actions involved in all the activities conducted in this teenage encounter are based on a series of criteria geared to attaining the above objectives.

These criteria require activities to:

- Be relevant to participants' specific reality.
- Be fun and entertaining.
- Involve active and participatory work.
- Be designed not separately but as a part of an individual and group process.
- Programmed to adapt to group functions and be open to participants' proposals.
- Be based on the exchange of experiences and interpersonal communication among participants.
- Be conducted in groups to which each individual contributes skills or aptitudes to foster co-operative attitudes and teamwork.
- Provide an opportunity to live and establish contact with others and the environment, fostering group awareness.

Coaching techniques and motivation

The purpose of this type of techniques is to create good group rapport. They may be an end in themselves, be used as support for other techniques, to break the monotony or release stress in tense situations or get the group in the mood for something (to start a task, at the beginning or end of a session, and so on).

What all these techniques have in common is that they are designed for participant amusement, although other mixed techniques can also be used.

When explaining these techniques the educator avoids any competitive focus.

The following are examples of some of the activities planned:

- Activities relating to interaction with the environment: techniques for relaxing in a natural environment, outings and strolls in the area, sharing spaces with other groups in the surroundings, cultural outings.
- Outdoor games: co-operative and mobility games; techniques to perfect walking, jumping and spinning skills; exercises to learn to fall without getting hurt, keep one's body under command and keep one's balance; learning traditional games typical of the region.
- Art and crafts workshops: making musical instruments, disguises and masks; stage design and decorative murals.
- Activities around self-expression through movement: mime, dancing, acting out songs, rhythmic and movement dissociation exercises.
- Activities around linguistic expression: reading exercises (syllable-by-syllable, speed, individual expressive, collective and acted out[19], and so on), guided and/or spontaneous colloquia and debates on subjects chosen by participants, word

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[19] Dice el castellano: "colectiva matizada": no sé a qué se refiere. Sin más contexto, he pensado que tal vez es que falta el "dra" de "dramatizada"

association games, creative story telling, word formulation, imitations and vocal games, declamation, regional legends and stories .
- Sports activities: water sports (rafting), hill walking, co-operative games, traditional games and sports, initiation to mountain-climbing.
- "Soirées".
- Assemblies.

Specific strategies

- Discussion of the proposals brought up in previous meetings with participants.
- Meetings with parents to explain activities.
- Meetings with the group of professionals to become better acquainted with the participants.
- Compilation and pursuit of leisure and free time resources in the area.
- Regular technical team meetings to design and develop activity programming.
- Regular meetings with the drama teacher to set up acting workshops.

Timetable

DAY	MORNING	AFTERNOON	EVENING
Sunday, 10 July	Grouping of participants at Saragossa. 12:00 noon. Departure from Saragossa to camp (Aragonese Pyrenees).	2:30 p.m. Dinner. Room assignments. Tour of facilities. Introduction dynamics.[20]	9:00 p.m. Supper. Introduction and acquaintance dynamics. [21] Welcome party. Assembly
Monday, 11 July	9 a.m. Breakfast. Co-operative game. Project introduction. Group-by group formulation of rules for harmonious co-existence.	2 p.m. Dinner. Tour of camp. Stage-play workshop: Rhythm and movement.	9 p.m. Supper. Decorative mural. Relaxation workshop. Assembly
Tuesday, 12 July	9 a.m. Breakfast. Stage-play workshop: balance and movement. Voice command workshop.	2 p.m. Dinner. Stage-play workshop: reading exercises. Vocal games. Vocal imitations.	9 p.m. Supper. Soirée: acting out songs. Relaxation workshop. Assembly.
Wednesday, 13 July	9 a.m. Breakfast. Hill walking. Stage-play workshop: senses game. Hearing and classifying noises and sounds.	2 p.m. Dinner. Stage-play workshop: self-expression through movement. Creating musical instruments.	9 p.m. Supper. Soirée: evening game. Relaxation workshop. Assembly.
Thursday, 14 July	9 a.m. Breakfast. Outing to Buddhist temple at Panillo.	2 p.m. Picnic at Joaquín Costa Reservoir. Canoes and pedal boats.	9 p.m. Supper. Intercultural game. Debate. Relaxation. Assembly.
Friday, 15 July	9 a.m. Breakfast. 11 h. Outing to Traditional	2 p.m. Dinner. Stage-play workshop:	9 p.m. Supper. Soirée: Masquerade ball.

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[20] Creo que se refiere a la presentación de los participantes entre si, con los educadores, animadores, etc.

[21] ídem

	Games Museum. Toy workshop.	Masks and disguises.	Relaxation. Assembly.
Saturday, 16 July	9 a.m. Breakfast. Stage-play workshop: declamation. Exercises	2 p.m. Dinner. Stage-play workshop: Mime. Exercises.	9 p.m. Supper. Soirée: Improvised stage-play. Assembly.
Sunday, 17 July	9 a.m. Breakfast. Rafting.	2 p.m. Dinner. Stage-play workshop: Choreographic exercises.	9 p.m. Supper. Soirée: Dancing. Relaxation. Assembly.
Monday, 18 July	9 a.m. Breakfast. Preparation and stage design for group farewell party performance.	2 p.m. Dinner. Preparation and stage design for group farewell party performance.	9 p.m. Supper. Farewell party. Room decorations. Final performance.
Tuesday, 19 July	9 a.m. Breakfast. Packing. Final assembly. Participant and coaching team evaluations.	2 p.m. Dinner. Departure for Saragossa and other destinations.	

Evaluation

Since this experience is designed to achieve a series of pre-defined objectives, the results must be verified and if possible, the objectives, content, activities, methodology and, in short, the process as a whole, should be evaluated.

The following evaluation instruments are planned: daily assemblies, direct observation, open interviews, team meetings and camp diary. Two specific questionnaires have also been designed:

- Questionnaire to be completed by participants:
  Participants evaluate the general and organizational aspects of the activity. To be completed at the end of the programme.

Attached as Annex I.

- Questionnaire to be completed by professionals:
  The various professionals involved evaluate the stage-play workshop sessions. To be completed after each session.

Attached as Annex II.

Follow-up

This project marks the beginning of a line of work that should be continued in the future. Before carrying it forward, however, its effectiveness as a social skills training programme must be verified. A Programme Follow-up Protocol (Annex III) has been formulated to be completed by school tutors and/or psychopaedagogical therapists, and we ourselves where appropriate.

We shall also build on the theatre experience acquired by our teenagers to form a theatre group in our ONCE facility and encourage their integration in theatre groups outside the organization.

Conclusion

Since the stage-play workshop proposed in the present communication is scheduled to be held in the first half of July 2005, the results and conclusions may not be available for the ICEVI European Conference. The organization and any interested participants will be furnished with this material as soon as it becomes available, however, along with any graphic documents generated during the programme.

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91 Selfconcept in blind and visually impaired children and adolescents in comparison with their non-disadvantaged peers.

By: Martínez Perez, Maria Isabel
From: Spain
Organisation: Universidad de Extemadura

Abstract

For more information please contact the author: officenter@telefonica.net

Blind and visually deficient schoolchildren are faced with certain difficulties within their social, family and school environments. We consider self-concept as a cognitive-motivational variable relevant to the functioning of their personality and to their conduct. Several studies have shown that children with visual problems often have lower levels of self-concept than their non-disadvantaged peers. We analyzed the structural and functional characteristics of self-concept in a group of schoolchildren in our area with and without visual deficiency. Our study group consisted of 2935 children, of which 261 were visually disadvantaged. We focused on how their perceptions are organized within this construct, the differences in self-concept between the two groups and how this construct is related to academic performance. Our results indicate that visual deficiency and age are determining factors in the self-concept of schoolchildren.

92 Reading and Disability

By: Tapia Martin, Isabel
From: Spain
Organisation: Educational Centre of Resources "JOAN AMADES" (ONCE / GENERALITAT)

Profile of population

We start from the concept of person. We think of the affectations but also of the capacities.

We give attention to a population of 340 people, during de educational stage, from 3 to 20-21 years.

The affectations of this sector of population in a big percentage are due to important neurological injuries, produced by different causes: syndroms...

Derivatives of the neurological injuries can have at the same time:

- Sensory deficiency: visaul and auditory
- Cognitive deficiency
- Motor decifiency

We can establish different groups of population according to their skills and capacities:

- Group of population, with needs of assistance
- Group of population capable of making functional learning
- Group of population capable of carrying out more elaborated learning

According to their needs, its necessary to give it answers individual, to make specify adaptations of the material to use and especially believe in its capacities.

The reading

Ways and resources

Deals the difficulties that so much can show this population to see, to hear, to understand, to move around or to communicate, has to count with different sensory ways to access to the reading:

Visual reading

- Books in ink and contrasted images
- Books with language of signs (SPC)

Tactile reading

- Books in braille with images in relief
- Books with tactile images
- Books-box with objects

Auditory reading

- Sound books (recorded)

Books with computer support

- Written books in ink with images in CD-rom
- Book on the tactile side table (integration of all sensory ways)

Toselect a reading consicering is important

- The level of understanding with simple narrations
- The visual level, the code of writting that the person needs: braille or ink with good visual contrast, or the language of signs (SPC) for that population that shows difficulties in the oral communication.
- Adapted to their needs, to value if they can open a book, or if they can pass de page.

- These people mature mentally. It is necessary that they are these readings suitable to their interests. In this sense there is one big hollow in the market. People go from the child reading suddenly to the book of adult.
- Associations of Easy Reading (LF) are working to offer readings suitable to different sectors of society.

The different ways to make a reading, some concrete situations

Joan and Braille’n speak

He has important difficulties of field and visual concrete. Due to the tetraparesia, futile in wheelchair, it is difficult him to make a follow-up tactile to read the braille’s points. He makes it in cards with thicker points in relief. He uses a hand, the other one is from support. He writes in Braille’n speak o sound braille (pricking point ready). It requires of recorded or virtual readings, in tape of cassette or in cd room.

Inma and her puppets

- She is Down syndrom. For the congenital cataracts that she suffers, it presents difficulties in seeing clear at a certain distance.
- Taking advantage of this attraction for the puppets and the songs, the tutor achieved, when she was smaller, to center her attention for lintening to small comic strips.

Ona and the tactile story

- At visual level she perceives the light. It roots and leaves objects with a hand, it is difficult to her to touch tactile and to make a tactile exploration. She makes some demands trought verbal sounds, which have a meaning set in a context. She goes in wheelchair. She likes the music a lot. She has improve a lot her intentionality of actuation.
- She follows a program based on sensory resources. School and the teacher of musiciantherapy have prepared her some stories to touch and to listen.

Mireia and the sound book

- She goes in wheelchair. She needs of the another one to manipulate, to root, to hold, to drag,...
- She has difficulties in the visual perception of the detail.
- She likes a lot to listen. In general she is capable of retaining oral contents.
- She can listen and understand narrations recorded in cassette or in cd room.
- Operating an adapted commutator passes pages to the computer.

The introduction to the visual stimulation. Activity of group

- The activity is anticipated with music, aromas and step to the darkness is given for like this to use to the utmolst the projections of the lights of colors and the reflactions that these produce above of brilliant roles, phosphorescent cloths and other resources.
- To pioneer this activity, once is anticipated, it is asked that the children step or permit to start, each one according to their communicative capacities (to prick a commutator with their recorded voice, to make a gesture, to produce a verbal emission, or to make a smile).
- The beginning of this activity is listening a poem. She/He likes to hear it, they demonstrate it.

- They are children with different handicaps and with severe affectations, but they understand the emotional language and have fun of hearing what manifests feelings and emotions, even if they don't understand the literal contents.

The story in the sensory stimulation. Adaptation of the story "The hairy worm"

- After anticipating the activity, the room is darkened. The children have perception of light and another can see contrasted images. Their level of understanding it is reduced to understand some intstructions set in a context. They are children with severe affectations.
- It is started with background music and initiates the narration of the story. The worm goes out to walk and finds different characters.
- The story is represented in different formats: in images (slides), in objects (the different characters are tridimensional, they can be touched themselves, to smell, to fell their weight. Every time that a new character appears, the slide is passed for children, and the concerning object is left them to correspond, at the same time that it is narrated and the background music is heard.
- It is made a reading with a sensory integration support.

93 Scientific and research design: The Vital Problems of Sight Disabled Children's Social Rehabilitation in the Republic of Belarus

By: Ananiev, Valery
From: Belarus
Organisation: Belarusian State University

In our country the notion of "social competence" is practically not used both in scientific and popular scientific literature. When studying the problem of the handicapped the term "rehabilitation of the handicapped is used". In Disability Prevention and Rehabilitation of the Handicapped Law of the Republic of Belarus the rehabilitation is defined as a process the aim of which is to help the handicapped to achieve maximum physical, intellectual, psychological and social activity level and support it by assigning the necessary means for expanding the independence of a handicapped person and changing his life. At the same time the following directions of the handicapped rehabilitation are distinguished:

- medical rehabilitation is a process aimed at renovation and compensation of functional opportunities of a human organism by medical and other means;
- medical professional rehabilitation is a process of restoration of the ability to work. It combines medical rehabilitation with determination and training of professionally important skills, with job selection and adaptation to it;
- professional rehabilitation is a system of measures for providing a handicapped person with an opportunity of getting a new suitable job or preserving the old one. It also includes change of the job and help in his integration or reintegration;
- labour rehabilitation is a process of employing a handicapped person and his adaptation at a concrete work place.

The term "social rehabilitation of the handicapped" includes all mentioned above directions (all directions are considered as a united process) and "the social competence of the handicapped". "Social competence of the handicapped" is represented as a bilateral process the aim of which is, on the one hand, to form adequate social behaviour and attitude towards the society of a handicapped person and, on the other hand, to form adequate attitude and social behaviour of the society towards a handicapped person. Besides, the significance of each side of this bilateral process is equal.

In 2005 the sociologists of the Sociological and Political Research Centre of Belarusian State University fulfilled a scientific research project "Topical Issues of Social Competence Formation of Visually Handicapped Children in the Republic of Belarus". The aim of this research was to work out concrete ideas for improving the system of social rehabilitation of visually handicapped children in the Republic of Belarus. In the process of the research the following issues were studied:

- general and specific problems of each group of visually handicapped children;
- the problem of the switch-over to the integrated education system of visually handicapped children;
- the effectiveness of the existing social rehabilitation system of the visually handicapped in the Republic of Belarus;
- defining the factors that assist the successful medical, labour and social rehabilitation of the visually handicapped;
- working out a system of measures for thorough and full rehabilitation of visually handicapped children.

Almost all schoolchildren who study in graduation classes of special schools for visually handicapped children took part in this research. The total number of respondents was132 pupils.

Below there are some of the results of our sociological research.

Table 1.
Distribution of Respondents' Answers to the Question
"What Problems Worry You Most at Present"

Leisure	6,1%
Economic conditions	36,3%
Communication with other people	20,5%
Education	64,4%
Protection of rights	6,8%
Employment	60,6%
Another answer	5,3%
No answer	0,1%

The analysis of table 1 shows that the problem that worries the school leavers of special schools for visually handicapped children now is defining their future status in the society.

Illustration 1. The Attitude of the Respondents towards the Integrated Education

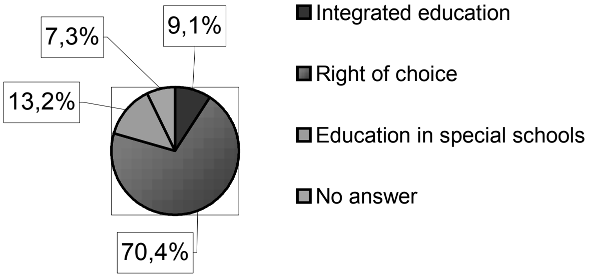
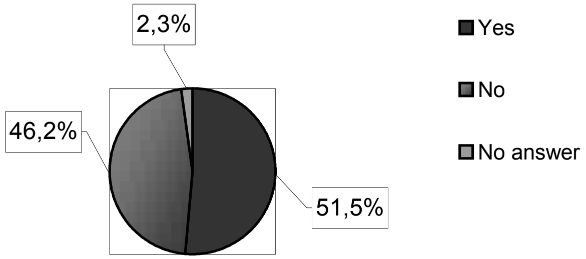


Illustration 2.Wish of the Respondents to Study in an Ordinary School



As seen from Illustrations 1 and 2 the majority of the respondents have positive attitude towards the opportunity of getting the integrated education. However, the number of schoolchildren who want to study in an ordinary school just slightly exceeds the number of those who want to study in a special school. This fact shows that Belarusian schools are not ready to adopt integrated education system for the handicapped.

Table 2.
Distribution of Respondents' Answers to the Question
"What are you going to do after leaving school"

Working at a special enterprise for the handicapped	9,8
Working at an ordinary enterprise	2,3
Entering a college	25,0
Entering a university	23,5
No answer	39,4

Table 3.
Distribution of Respondents' Answers to the Question
"What job are you planning to get"

Economy	6,1%
History and Sociology	1,5%
Public Catering	2,3%
Art	2,3%
Law	2,3%
Pedagogics	5,3%
Psychology and Social Work	11,4%
Computer Programming	1,5%
Massager	3,8%
Coach	0,1%
Technical jobs	6,8%
No answer	56,1%

Table 4.
Respondents' Motives When Choosing a Job or an Educational Establishment

Job attractiveness	18,2%
Prestigious educational establishment	10,6%
Prestigious job	12,1%
Equipment of the educational establishment for the handicapped	3,8%
Visually handicapped are trained for this job	5,3%
An opportunity to get a work place easily	15,2%
No answer	54,6%

The analysis of the data from Tables 2-4 allows to make the following conclusions:

1. Almost a half of the respondents are planning to continue their education and to get job training. The fact that a large part of the respondents (39,4%) didn't have ready decisions about their future plans for life is explained by the fact that the research was carried out in March of this year and the respondents still had time to make their choice. Besides, the choice of the future job is often determined by the results of final examinations.

2. It should be noted that at present in our country visually handicapped people are most likely to get a job in humanitarian sphere. That is why the choice of humanitarian jobs proves that the results of teachers' work in the sphere of professional orientation of visually handicapped children are high.

The data described above represent only the first result of our work on this project. In future we plan to carry out regular monitoring sociological researches on the described problem.

94 Joint Attention-An important issue in the development of social competence of the blind child

By: Ingsholt, Anette
From: Denmark
Organisation: Synscenter Refnaes

Introduction

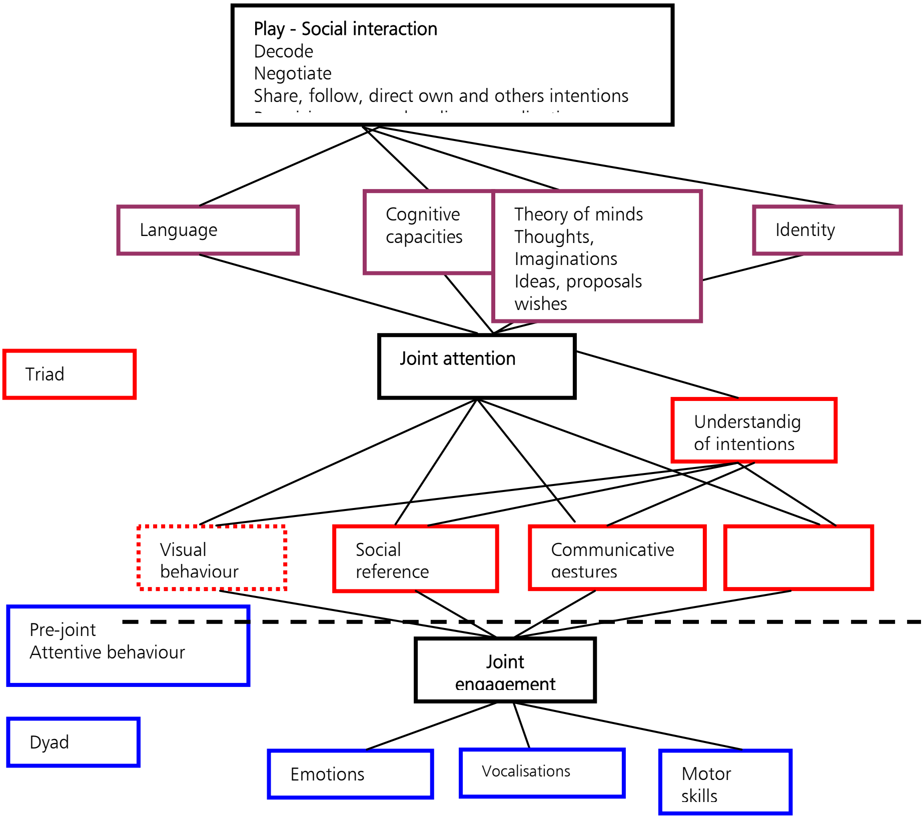
In the following minutes I have chosen to highlight an important theme with huge importance for the development of social competencies in a child: the phenomenon of joint attention.

The capacity for establishing joint attention with other people is based on a child's social interactions with other humans. Thus, this phenomenon has a key significance for the development of social competence in a child. Joint attention is a part of ongoing complicated social and cognitive processes. Before a child is able to participate in episodes with joint attention, he must develop a number of cognitive skills. Normally, the development of the essential cognitive capacities necessary for mastering the phenomenon joint attention is indicated around the age of 12 months when the child begins to use specific social behaviours.

I have tried to describe the relation between the phenomenon of joint attention and the essential developmental areas in the following figure:

General development and joint attention

The social development begins in the first months of life in the dyad. Here, the activities are characterised by joint engagements in face-to-face interaction where especially emotional, pre-verbal and motor elements are essential. In the first months the child shows a high degree of interest in people, and his attention is often caught by social stimulation. When the child is about 4 to 6 months, he exhibits a growing interest in objects (Schaffer, 1984). But at that time, the child is not able to focus his attention on more than one theme at a time. Therefore, he has to choose to focus either on the object or the parent. Around the age of 8 to 9 months, the attention system is more mature, and around 1 year of age the child is able to attend to two themes at the same time (Ruff & Rothbart, 1996).



The three core processes behind joint attention: to share – to follow – to direct
FIGURE 1

In the first year of life, a child also develops an array of pre-joint attentive elements in the dyad through face-to-face interactions without external objects. Together, these aspects result in a child who, around the age of 12 months, is able to engage in activities, where external objects are involved. Normally, from this point on essential conditions are present that enable the development of joint attention.

Gradually, the activities of motor skills, emotions and vocalisations in early joint engagements grow into behaviours of social reference and the use of communicative gestures and imitative learning. The child's display of these behaviours is an indication that he has developed the cognitive skills necessary for establishing joint attention. These behaviours are testimony to a growing comprehension of intentions and the child's ability to manipulate his own as well as other people's focus of attention. To achieve this he relies on three core processes in joint attention: the capacities for sharing, following and directing his own as well as other people's focus of attention.

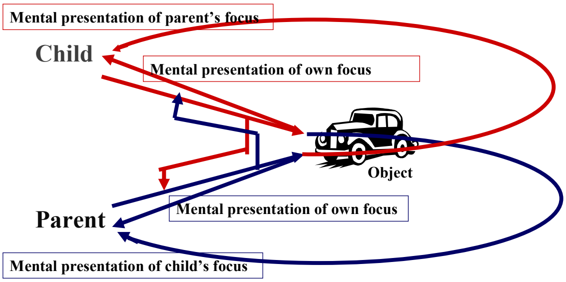
The evolving ability to establish joint attention, which is evident during the second half of the second year of life, leads to a key step in the progression of development in language, identity, cognitive capacities, theory of mind etc. This in turn facilitates the development of language and cognitive capacities into more mature patterns of social interaction. This facilitates the development of the child's ability to decode the behaviour of others , to share, follow and direct proposals, plans, and ideas of other’s, and to promote, negotiate and reach compromises that reflect a balance between the child's own ideas, proposals, and plans and those of others.

Joint attention

The phenomenon of joint attention is complex and elusive, because it involves mental processes that cannot be directly observed. As mentioned above, the child's physical acts and behaviours are the indirect indications of the presence of the cognitive processes that underlie episodes of joint attention.

I have tried to illustrate the process of joint attention in the following figure:

Joint attention - definition



Cognitive aspect:

Focus of both on the object + knowledge of own and partner's focus => comparison of own and partner's mental representation => joint attention

In an episode of joint attention both the child and the parent direct their focus of attention towards the same object or phenomenon. Both are aware of the target of their own focus of attention, while at the same time they are aware of the target of their partner's focus of attention – and both understand that they share the same target. In their minds, they make a comparison between their own perceived target and the perceived target of the partner's focus of attention (Tomasello, 1995).

It is through the core processes that the mutual awareness is created that they share the same experience. This knowledge is perhaps the most important pre-condition, and it must be present before a child is able to establish joint attention (Carpenter, Nagell, Tomasello, 1998).

Another necessary pre-condition is a comprehension of intentions.

In order to find episodes with joint attention involving blind children, we then have to find signs in the child's behaviour that indicate his awareness of the fact that both he and his parent are focusing on the same object and that the blind child understands the other person's intentionality.

The theoretical definition of joint attention has changed over the years, from exclusively including visual behaviour as the basis for joint attention to also involving a number of other types of behaviour.

This is good news in relation to blind children. It supports my own research (Ingsholt, 1999), which showed that blind children are able to develop joint attention, and that they are not – due to their impairment – excluded from developing and from using this important phenomenon in social interaction with others.

But some questions emerge spontaneously when we look at the progression of the development of joint attention in blind children who are cut off from the sense of sight.

One key question is how the blind child develops the basis for joint attention. Another concern the way that social reference, communicative gestures and imitative learning are developed and take place in a triad involving a blind child. This question is important in relation to blind children, because normally these behaviours in a child indicate that the child is enable to share, follow and direct his own focus and that of others, and because sight is often a key element in all these types of behaviour. But the most important question is maybe, how we can help the blind child to develop the cognitive skills that enable him to participate in episodes of joint attention where he is cognitively aware that he has the same focus of attention as another person.

Because the time is limited, I have chosen mainly to focus on the last question. Before I proceed, I would therefore like to talk about the tools at the disposal of the blind child and his parents in their mutual interaction; tools, which they may use in episodes both before and after the capacity for taking part in joint attention is acquired.

General tools used by child and parent in joint attention

The parent's tools

The parent' most important tools are her voice and hands. The voice can express paralinguistic elements that reflect emotional states (Stenberg & Hagekull, 1997, Caron, Caron, & MacLean, 1988) and communicate precise messages through verbal language. When a child is able to understand the meaning of words, the verbal language enables the parent to specify her focus of attention. Thus, the verbal language is a great help for the blind child in his search for the parent's focus of attention.

The parent's hands can pass on objects to the child. They can touch the child in emotional and instructive manners and cooperate with the child, for example in the method of "hand-over-hand" (Miles, 2000). Through her body and its auditive, olfactory and tactile inputs, the parent can pass on feelings of closeness and physical contact.

It is mostly through her voice and its paralinguistic and linguistic content and through her hands that the parent may provide information about the external world to the child.

The specific task in relation to joint attention is to help the child identify the parent's focus and to stress the match between hers and the child's focus of attention. In general, it is important to specify very clearly to the blind child, what is the parent's focus of attention, when and how she shifts her own focus of attention in order to match the child's focus, when she is looking for and eventually identifies the child's focus of attention, or when she tries to direct the child's focus of attention to match her own to achieve a shared focus.

Of course, a sighted parent has the advantage of sight, because sight is a good tool for observing the child and his behaviour. But it is important to note that the use of sight may have a negative effect for the blind child if the parent communicates nonverbally and forgets to use her voice, hands and body to communicate with the child.

The child's tools

The child's tools are similar to the parent's - except that he lacks sight. The child is able to indicate his focus of attention through the orientation of his face (Ingsholt, 1999) or by pointing with his body (Preisler, 1993) toward an interesting object – often a sound. Facial expression can display emotions. The child's hands can be used in reaching or give-and-take movements, in the manipulation of objects, and in gestures. The child also uses body language, language in the form of vocalisations, single idiosyncratic words, and, with time, fully developed conventional and verbal words.

Every child develops a number of individual signals that achieve shared idiosyncratic meanings for the child and parent through mutual interactive experiences, because the blind child is not able to visually catch and spontaneously imitate conventional acts.

The blind child also has difficulty imitating sequential actions. Everything has to be absorbed through the child’s own experiences, and much must be learned through direct instruction. Even conventional, simple and communicative gestures, which are normally effortlessly picked up by sighted children, have to be learned.

The blind child receives auditive and tactile input from the parent, mentalises it and reacts on the basis of his interpretation.

Normally, an essential tool in joint attention is sight, but as described above, other tools are also available and useful in joint attention. Even if visual actions are common in joint attention it has been shown that visual behaviour is not necessarily a prerequisite in joint attention.

In many situations the auditive (Stenberg et al.1997, Caron et al., 1988) and tactile senses can also be used. But these two sensory modalities are not always as useful as sight, as they are less precise and more difficult to use.

But, looking at the tools that both the child and the parents possess, there are many aspects to build on and use in relation to sharing, following and directing each other's focus in order to achieve joint attention.

The main thing is that the parent must be aware of the active role she has to take in her interaction with the child in relation to joint attention.

What can we do?

Pre-joint attentive behaviour

In the first year, it is important to engage in many dyadic situations. Here it is beneficial to work with emotional expressions in voice and tactile communications

Amusing sounds may catch the child's attention and direct his focus to the parent. In this way the child learns to focus on the parent and to expect amusing episodes with her in face-to-face interaction without toys.

When toys and objects are introduced it is important to respect the child’s difficulty in showing attention to two themes at the same time, to respect his solitary interaction with toys and to keep a harmonious balance between his self-actions and those available in social interaction.

In social interactions it is important to be sensitive to the child’s needs for breaks, for “warm up”-activities, for increases and decreases in stimulation and for terminating stimulation altogether.

The key words in the first year are trust, expectations and varied experiences going hand in hand with ritualistic games and standardised procedures. It is extremely important to introduce shared fun and joy early in the young children life together with the feeling of confidence and trust.

The first 6 to 12 months are the time when all the basic tools to use later in joint attention are founded.

All the behaviours mentioned are examples of behaviours that form part of the joint engagements between the blind child and his parent. Together with the available tools, they all help build the foundation for joint attention during the child’s first year of life

The second year of life

When the child is around 12 months old, his attentive system is ready to allow him to encompass two themes at the same time, and now it is possible to begin to support and strengthen the development of joint attention in a more effective and precise way. In the triad it is important for the parent to be attentive to her own acts as well as to the child's acts in order to facilitate episodes where both the child's and the parent's focus can be involved in creating opportunities for shared experiences.

Advice to parent

When possible, the parent may follow the child's focus of attention – and announce through explicit acts when she has identified the goal of the child's attention. Sometimes it is unclear what the child attends to, and the parent must base the announcement on her interpretation of the child's behaviour. When the child and the parent are focusing on the same object, the parent makes it clear to the child that she and the child are sharing the same experience.

In other situations the parent may try to direct the child's focus of attention to exciting external objects and events. When the parent has succeeded in shifting the child's focus of attention to match the parent's own focus, the parent tells the child once more what she is focusing on and emphasises that her focus is the same as the child's.

If the parent does not inform the child about the fact that she focuses on the same thing as the child does, then the parent and the child will have an episode of co-orientation, but not with joint attention. Under such circumstances the blind child is not aware that the parent shares his experience, so he is not able to achieve an experience of joint attention. Thus, the child does not have the opportunity to develop a cognitive understanding of shared experiences

The parent may eventually experience togetherness and joint attention, but this does not automatically ensure that the child has the same sense of a mutual experience. Co-orientation toward the same object is not enough to signify joint attention (Collis & Schaffer, 1975, Collis, 1977, Butterworth, 1991) I am afraid that the latter situation, co-orientation, is very common for blind children.

Episodes without joint attention – blind children

Episodes without joint attention also occur in simultaneous attention, when a child shifts his focus of attention back and forth between two phenomena, when a blind child repeatedly contacts his parent vocally, verbally or by reaching out toward the parent in order to ensure that the parent is close. Or when a child is trying to discover how a parent is going to respond, with e.g. praise or punishment, to an inhibited act that he has recently performed.

If the blind child does not know that the child and the parent have their focus of attention centred on the same object, there is no joint attention present in the triad.

The reason that this may occur is not the blind child's lack of vision as a tool for establishing joint attention; it may occurs because the child's system of attention is still immature, or because the motivation to search for, find, follow or direct the parent's focus of attention is nonexistent. Even, when the blind child is interested in knowing about the parent's focus, it may be difficult for him to uncover this on his own initiative. The cues naturally available to the blind child may be too unclear to enable him to identify the parent's focus.

Therefore, the parent has to make an effort to make the focuses “visible” for the blind child. If the parent fails to do this, the blind child may miss the opportunity to develop an understanding of the cognitive skills underlying joint attention, an effect that hampers his ability to develop a capacity for joint attention.

Indications of cognitive skills behind joint attention

In relation to the development of joint attention, social reference, communicative gestures, and imitative learning are often used as indications that a child masters the cognitive requirements behind joint attention.

In particular, the child's capacity for sharing, following and directing his own and other people's focus of attention are reflected in these behaviours, and also his understanding of other persons as beings with intentionality. All are examples of types of behaviour that blind children typically have difficulty handling because sight is essential in these types of behaviour.

The successful development and use of these behaviours is often highly dependent on the parent's ability to handle her own focus as well as that of the blind child.

In this paper I have not been able to discuss the full theoretical basis for the complex phenomenon of joint attention. I have only been able to offer some hints about how to help the blind child develop the use and understanding of this special and crucial phenomenon.

The goal of the paper was simply to point at a phenomenon which I feel is extremely important, and which we must devote much more attention to in the future in order to give the blind child a fundamental tool for developing his social competencies – and to do so at the early stages of development in order to develop a sound basis for the successful development of good social competences. To begin to lay this foundation when the blind child reaches school age is a little too late.

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95 Social Competence

By: Delgado, Reiner
From: Germany
Organisation: Deutscher Blinden- und Sehbehindertenverband

Abstract

For more information please contact the author: r.delgado@dbsv.org

In the German legal system a distinction is made between "education" (Bildung) und "upbringing" (Erziehung). While education is a part of education and science policy, upbringing is included in social policy. Providers of education for the blind and partially sighted must adopt a much more holistic approach than this is the case as regards with non-disabled people.

- While sighted adolescents are able to perceive visual responses to their behaviour and appearance, young people with vision loss depend much stronger on verbal responses.
- Blind and partially sighted youth who grow up in a residential educational institution live in a "protected area" which is largely adapted to their special needs. Demands to do well and rules of conduct is something which is frequently unknown to them first of all.
- Apart from the need to develop their personalities, blind and partially sighted people face the additional challenge to safeguard their identities as disabled and different in a society of non-disabled people. They must integrate their disability into their self concept and learn to assert themselves with their disability in their social environment and deal with the reluctance of non-disabled people in a positive manner.
- Organising one's life, employment and recreation are fields where people with partial sight must cope with special problems to achieve a satisfying life-style.

What is the state of discussions shared by special teachers and educators for the blind and partially sighted?
What is the attitude of those concerned?
What is the social competence that blind and partially sighted people must have acquired by the time they leave school?
Which tasks can the school or boarding school perform – who is still able to teach social competence?

96 Social Skills – the benefits and boundaries of a learning concept

By: Thiele, Ilona
From: Germany
Organisation: SFZ Berufsbildungswerk für Blinde und Sehbehinderte Chemnitz gGmbH

”The young of today love luxury. They have bad manners, scorn authority, have no respect for older people and gossip instead of working. Young people no longer get up when older people enter the room. They contradict their parents, devour their meals at the dinner table, cross their legs and tyrannize their teachers”
”Don't need that – can do that already”

Hello, dear colleagues. In this address we would like to give you an insight into the development of our work in the area of social education with blind and visually impaired trainees.

We, Ilona Thiele and Manja Uhlig, work in the SFZ vocational training centre here in Chemnitz as the Head of the boarding school and as a social education specialist in the boarding school respectively.

About 200 young people are trained in 27 different occupations at the vocational training centre, about 40 of them are undertaking one year of basic vocational training to prepare them for vocational training. A small number are learning basic blind techniques such as orientation and mobility, Braille and training in activities of daily living required for acquiring an occupation. The young people come from all over Germany and live in boarding during their training.

Our paper is organised into the following sections:

1. Changes in our young people
2. Our first response to these changes
3. Our new social learning training programme
4. Summary

Changes in our young people

Studies by the National Association of Vocational Training Centres (BAG BBW) on young disabled people starting their careers have shown that the participants coming to our training centre are changing all the time. In addition to a steady decline in basic intellectual conditions and a patchy command of literacy and numeric skills and blind techniques, we are seeing more and more behavioural problems and development delays. This is connected to problematic social backgrounds in families and society but also to an increase in the number of multiple disabilities. This group of participants from disadvantaged social backgrounds is growing steadily in relation to the participants with better social skills and more knowledge.

In the general discussions on social education of recent years, the negative trend has often been attributed to the practice of housing participants in special boarding schools, because boarding schools and homes were always on the margins of society and the belief was still wide-spread that, “a bad parental home is better than no parental home“.

We cannot fully subscribe to this opinion based on our observations and experiences. For if you maintain that a boarding school upbringing is poor compared to a family upbringing, you assume that improving the social education skills of blind and visually impaired young people is not fundamentally possible in places like the SFZ training centre, and that it is only possible in families. This presents us with a paradox situation, firstly, because a growing proportion of our trainees come from families with lacking social skills and, secondly, we often witness the progress that students have made in our boarding school coming under great pressure under the tension of the family situation and sometimes becoming undone. Nevertheless, the bond to the parental home is necessary and something we support. The young people go home every fortnight, so they keep in touch with their relatives, upon whom they often remain dependent once the training is finished.

Our centre considers it its duty to break down prejudices, offer high-quality training, train specialists and to strive for cooperation with the parental home.

Our response to these changes

Our work, which is mostly with young people who are legally adults, has shown that the process of guiding young people from life in the parental home towards living an independent existence can give new impetus to the process of learning social skills and acquiring occupational and social skills.

The function of the boarding school is to enhance the family's role and it is our job to start, support and accompany the process of personal development with the goal of enabling the young person to lead a life which is largely independent and based on self-determination.

That is why we radically changed the traditional boarding house concept of our vocational training centre in recent years and adapted it to meet these new needs.

Following a 'beginners phase' of one year on average in a boarding house on the training centre's grounds, the aim of which is to prepare the trainee for independent living, the trainee goes to a residential group in the so-called "training section" which is usually also on the grounds. From here the trainee moves for the last time to an external residential group, which is either in assisted living facilities or in a relatively autonomous residential group without round-the-clock assistance and nighttime supervision.

About 120 of the 200 trainees reside in living quarters outside the centre. An assisted centre is offered in the same part of town as a point of contact, it is open in the evening and also offers an Internet cafe for the blind and visually impaired.

In order to facilitate the learning of social skills in this well-structured learning environment, we have systematically improved our staff's expertise in the following areas:

- The theory and psychology of learning
- Socialization theory
- Group behaviour dynamics and group management in theory and practice
- Training boarding section staff to become mobility assistants
- Training boarding section staff to be ADL trainers
- Casework among colleagues

In this process we have taken as given that young disabled people generally have to experience a strengthening of their own identity.

We see our boarding school programme as a practice field for developing psychosocial skills where the participants can learn:

- responsibility for their own actions
- being adult
- the ability to cope with conflicts
- feelings of self-worth
- dealing with their own and others' feelings
- developing their own identity

Other subjects such as hygiene, health, sex education, perception, outfit, conduct, eating habits, drug abuse, addiction and violence are also included.

We don’t suppress deviant behaviour by trying to ban it; instead we deal with it together it in a constructive way.

We can only ensure and use the greater scope of action required for this if the staff involve themselves in the process as people and not just as functions. Recent years have shown that changing the day-to-day conditions of our boarding school work is a difficult and slow process under these circumstances and that the programme presented is not always deployed and lived consciously by staff.

To improve this we developed a special programme that we have been testing for a year now. We selected the year of pre-vocational training for this because in a short space of time we have to develop competences among the students that will prepare them for vocational training.

Our new social learning training programme

Professor Wolfgang Seyd (of the University of Hamburg) named “seven messages addressed to those who really want to do something for the social competence of those being rehabilitated“. In the fourth message he says: “Social training is successful, but not as an unspecific intervention, not as a patchwork of well-meant single courses, but as a **systematically carried out set of measures that are precisely planned and which use proven methods”.**

“Those who do not take a systematic approach to the training measures,“ Seyd writes in the 5th message, “analysing strengths and weaknesses by careful planning of content and methods, from targeted implementation to checks and reflection, might as well leave it altogether. **Dialogues and crisis intervention are no substitute for systematic training programmes.“**

One of the main aims of the year of pre-vocational training is to encourage motivation for a vocational training course and to ensure the future trainee is ready for the course both cognitively and socially. We have divided this process into several elements. We would now like to report on the work with the modules that deal with social learning and carry out a first evaluation.

The social learning training programme is composed of the following modules:

- Motivation
- Planning and structuring the day,
- Communication
- Perception (self and others)
- Problem-solving strategies
- Dealing with the disablement
- The ability to form interpersonal relationships
- Rights and duties as a trainee / employee
- Other key qualifications like health, nutrition, outfit etc.
- Awareness of the environment
- Politics and dealing with the media
- Looking for a job and job applications training
- Preparing to enter working life
- Unemployment and possible coping strategies

The weighting and imparting of these contents as well as the methods and teaching practices are geared towards the participants. The modules are interchangeable at any time and can be applied during the pre-vocational preparatory year as well as throughout the vocational training course itself and to the relevant job descriptions.

Our aim is to integrate social learning into all three years of the vocational training on the basis of our one-year experiences from autumn 2005. This will require interdisciplinary and holistic cooperation by all education staff, trainers, teachers, people involved in the participants' development and a concrete, well-coordinated training plan.

The training units are binding for each trainee, are prepared and evaluated during school lessons and take place during training hours. The contents are explored in more depth by means of project days and evening events with the support of the boarding house staff and are experienced by the participants in a practical way using the resources of the Chemnitz local authorities and the business community. The trainees receive a training log with confirmation of their participation and information leaflets on the various themes. They keep this log until the end of their training; it helps prepare them for the transition to working life.

Due to the modular structure of the training measure the following interaction methods are possible:

Imparting knowledge and drawing on subject matter context in **group lessons / traditional-style class lessons**

Individual work and partner work for preparing and deepening knowledge of subjects

Discussions **to promote concentration and communication**

Role play, interactive games, plan games, acting games etc. to promote social skills and the capability to act

Exploring and excursions to emphasise the practical side and to experience new learning situations

Metaplan method for solution-oriented working and to increase oral communication

Which methods are selected depends on the participants – the students should not be overstretched or not challenged enough – and the subject being taught. The focus here is not on the teacher but on the trainee, who should be taught to cope with subjects and tasks as independently as possible.

I would now like to pass over to my colleague, Manja Uhlig, who will tell you about our practical experiences in the area of communication and job applications training.

In the training programme special emphasis is given to communication and holding discussions.

Through communicative exercises and by acting out discussion situations we can influence the behaviour of all participants and help them take action themselves and take responsibility for their actions. The conversation partners are no longer only passive, they become interaction partners themselves. In addition to the verbal communication methods we've been teaching so far, we highlight the significance of non-verbal communication. Our experience of a two-day workshop on the subject of "dealing with your own disability" in spring of this year was particularly positive. It was conducted by two blind trainers using the Peer Counselling method. This method involves the counselling of disabled people by disabled people and one of the fundamental premises of this method is that disabled people are the best experts in the matters affecting them.

The participants drew four main conclusions:

- The blind person must internalise, not just intellectually but also emotionally, that he/she really can be independent and self-sufficient. (This presupposes acceptance of his/her own disability)

- The blind person has to learn and use specific skills that allow him/her to become self-sufficient and independent.
- The blind person has to be able to cope with the views, prejudices and lack of knowledge in society on a daily basis.
- The blind person has to learn to integrate himself/herself among his sighted peers and – by the manner in which he/she presents himself/herself and his/her actions – ensure he/she is accepted.

We would like to show you a short film clip and introduce two young people who see themselves with their disability as follows.

In the first stage of our social learning training in the pre-vocational phase we made significant progress in enhancing the social competences of the young people.

The participants rated the following as positive:
- Learning to deal with day-to-day things (structuring)
- The selection of topics and the methods are a good change to the usual training and school work
- There was a strong link to practice especially in the mock job interviews

The negative factors mostly related to the participants' behaviour during the training:
- Insufficient involvement by the participants
- Lack of punctuality, interest and intolerance of some participants

In addition the young people gave us theme-related suggestions for our future work:
- Take up the themes: politics, free-time activities and possibilities in Chemnitz, family, behaviour toward each other, finances, information on a training course in a vocational training institute
- More time for social learning and even more practice-related

An important area and a key module in our social learning training programme is the **training in job applications** to prepare participants for the transition from vocational training to working life.

The training in job applications was developed at our centre a few years ago mainly for the third year of a vocational training course and was held on a voluntary basis in the form of individual and group discussions which took place outside the curriculum. There was no concrete schedule for them. In view of changes in the labour market, we developed a new strategy for a training module on job applications that was initially conducted by external coaches with our trainees. For business management and empowerment reasons we trained staff from our ranks to take over from the experts.

Now the training is a fixed part of the vocational training course in the third year; it comprises two and a half days and is conducted by the case managers.

In February of this year we started incorporating elements of training in job applications into the social learning programme for the one-year pre-vocational course for the first time – in other words we started with the "beginners".

The contents and methods of our approach are not primarily aimed at the question of "How do I write an application"; instead they deal with themes and modules like presenting your own personality, communication, how to conduct yourself at a job interview (and later in working life) and what an employer expects from a candidate.

At the beginning of the training the students take a little detour and look at the labour market situation and the prospects for the future based on labour market analyses. This is certainly not intended to demotivate the students; on the contrary, it is intended to motivate them and should be seen as a chance to present their personality to the company in the best possible light.

Appropriate salary expectations and what can be reasonably expected in terms of e.g. distances to work, fixed-term contracts or project assignments and flexibility in the organisation of the work are other contents.

At this point we will show you excerpts from an interview with two company representatives who cooperate with the vocational training centre and who have described their expectations of and experiences with disabled people.

The training in applying for jobs concentrates on the development, stabilisation and/or improvement of the trainees' self-awareness. It starts with a situation analysis in the form of a questionnaire to help participants become aware of their current situation. These are followed by very extensive analyses by the trainees themselves and by others. At the start these are also portrayed using questionnaires but later they aim to stimulate a discussion. The focus here is on making participants aware of their own individual strengths.

Here we would also like to show you short sequences from a training session where young people evaluate themselves.

The grand finale is the mock job interview, where it is not just the verbal communication that plays a big role in being able to communicate clearly. Rather, facial expressions, gestures, posture, eye contact and outfit can also enormously influence relationships and discussions. Learning to read non-verbal signals is a long process and is particularly difficult for the visually impaired. Theory lessons are not enough, the training contents must be practiced in real-life situations, role-play lends itself well to this end.

Organising an outfit and style consultation outside the job applications training is also a good idea because this theme can only be dealt with very generally in the job applications training.

The first attempts at a written application are produced by all participants, evaluated by their case managers and then discussed in the group. Once the participants have completed the job applications training they write another application, the second often ends up being more personal and richer in terms of content.

There are other opportunities for practicing application letters and job interviews, such as starting a training course, an internship, a place at a boarding school or applying for a free-time activity at a boarding school.

Summary

Practice has shown that the demands of the labour market are constantly on the increase, and therefore the demands on future employees are also growing. Even if 65% of the young people we trained were placed in jobs this year – despite the unemployment rate of 18% in the new Länder – we cannot afford to sit back and relax.

Work processes are becoming more and more complex and that requires employees – and particularly those at the beginning of their careers – to be capable of acting, flexible, responsible and, above all, to have team skills. The link between good social skills and being able to cope with the future confidently is by no means something that all trainees are aware of. Teaching and practicing social skills must be given more attention in all areas of life and should be promoted at school and at work on a day-to-day level. We should be endeavouring to coordinate the development possibilities for young people with the requirements of commercial businesses and we should be doing this in such a way that employers are not just informed but are also interested in employing disabled people, that young people are so competent that they become entrepreneurs of their own skills, i.e. that they can describe and sell their knowledge and abilities well.

With our work we have laid strong foundations and we are, of course, interested in “adding on new extensions to our social skills“. The tasks remain as interesting and challenging as the young people themselves

„The young of today love luxury. They have bad manners, scorn authority, have no respect for older people and gossip instead of working. Young people no longer get up when older people enter the room. They contradict their parents, devour their meals at the dinner table, cross their legs and tyrannize their teachers“

Socrates, 470 – 399 b.c.

97 Why we need intercultural awareness?

By: Schulze, Manuela
From: Germany
Organisation: BBW Stuttgart - Nikolauspflege

Slide 1

We regard Nikolauspflege in Stuttgart as a contact point for the blind and visually disabled and their relatives. We provide facilities for all age groups, starting with early intervention for infants through school and vocational training and on to adult education and advanced training.

Slide 2

The vocational training centre conducts its activities under the roof of Nikolauspflege and trains young adults in 20 different vocations, making them fit for the labour market. There is something which has been touched on frequently during the conference and which we can only confirm: it is becoming increasingly difficult to find jobs and integrate these youngsters in the world of work. The barriers of social disadvantage appear to grow at the same rate as do the economic problems of a society.

Of our approx. 170 trainees for whom we want to find jobs at the end of their training, there is one group which is adversely affected in two ways. This is the group of young people from a background of migration. By this I mean all those who grow up between two cultures because they immigrated to Germany from other countries as children or young adults, or whose parents immigrated to Germany.

Some thirty percent of our youngsters come from a Turkish, Russian, Polish or Serb background. A total of 14 different nations come together in Berufsbildungswerk Stuttgart. It is precisely these young people with a background of migration who are continually being defined by their deficits (even in the Nikolauspflege). Language problems are seen as a cause for complaint or perhaps some of them have problems adapting. Indeed, the young people repeatedly have to defend themselves against prejudice and discrimination.

If we want to work successfully with this target group, we have to join forces with the young people and identify the barriers they indeed face. After all, our mission is to smooth the path for blind and visually disabled trainees, and particularly for those with a background of migration, to take their place in society and the world of work. For this purpose we require intercultural competence.

Slide 3

The YAPALIM-MACH MIT (JOIN IN) project supports this goal at the Stuttgart vocational training centre. “Yapalim” is Turkish and means “Join in”, the title is self-explanatory and the intercultural aspect is apparent. The project has two main objectives: we want to coach both the trainees and the employees in intercultural competence and in handling conflicts professionally. My colleague Gesine Duve spoke on the topic of conflict management on Tuesday, so I shall focus on intercultural competence instead.

Slide 4

While preparing this talk I wondered what might be of interest to you as listeners. On the one hand I think it is important to know what we mean by intercultural competence. It is not necessarily the same as you may think. The term is open to interpretation. So I owe you a definition. On the other hand, I would like to get to the bottom of the following matter with you: "Why should intercultural competence be not only an essential prerequisite for personnel working with visually disabled migrants but - beyond that - what can it help us learn about the quality of our work in general?

Slide 5

If you have a heterogeneous group of young trainees before you from different social and cultural backgrounds: what might your possible reactions be?

You could ignore the differences. You could say "Everyone is treated in the same way here". This would be a **universalistic approach**. I have found a very good caricature by Hans Traxler (mip-journal 9/2004) to illustrate this.

Vocalisation

A variety of animals, e.g. a goldfish, an elephant, a monkey and a poodle are standing in a row as if taking part in a competition. A human referee is sitting in front of them, who poses the following task, "to make for a fair selection the examination tasks are all he same for everyone: climb up the tree". As paradoxical as it may sound, treating everyone the same way does not always mean that they are actually being treated the same. The monkey will have no trouble with the task, whereas the elephant will. At the same time, this approach will not help you identify the elephant's strong points or, analogously, the strong points of the young people with a background of migration.

By contrast, the **ethno-centric approach** stresses the differences between the groups. From that point of view you would say "the migrants are completely different. We are unable to teach you with the means available to us". However, if one were to follow this line of thought right through, it would mean that blind trainees can only be taught by blind trainers and teachers and visually disabled children cannot be given adequate support in normal schools. But it has already been clearly stated several times at this congress that this is not the case.

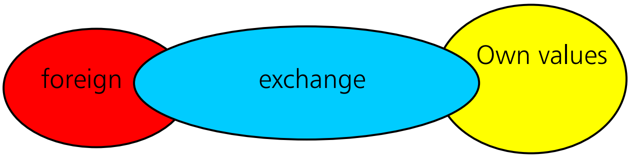
Let's now turn to the **intercultural approach**. As supervisor of an heterogeneous group you must be aware that the people have their different cultural backgrounds, but you also realise that they are not irrevocably nailed down to them. Culture is a very dynamic thing. Depending on the respective situation the actors make use of different cultural roles. With this approach it is important to differentiate:

- When have which migration-specific or cultural factors had an impact on my work with the youngsters?
- When do we regard migrants as a group which justifiably makes other demands and when do we see them as normal youngsters like all the rest with strong and weak points in keeping with their age?

If we ask ourselves these questions we open the door to greater sensitivity and intercultural competence.

Slide 6

What is intercultural competence? First we need to define it.
I will use an example to explain what I mean; I always think that makes more sense. Imagine you are residential educator and a girl tells you that her parents do not want her to live in a mixed-sex residential group. The girl is of Turkish origin and comes from a fairly conservative home.



Intercultural competence includes an awareness of what is "**foreign**". So a competent member of staff should know something about the role of women in Turkish society, or he or she should be aware that migrated families frequently live more traditionally than in their countries of origin, in order to preserve their identity.
Equally, intercultural competency involves an awareness of one's **own values**.
As a member of staff you should also know that it is your job to prepare the girl for a life in German society. Maybe you also need to reflect on the fact that you have prejudices against the patriarchal heads of Turkish families, which make it difficult for you to enter into a dialogue with the family.
However, it is precisely this which is the most important factor in intercultural competency – the **exchange** of ideas. You have to seek a dialogue in which you are willing to accept the perspective of the parents without losing sight of your own. It may transpire that the parents are frightened that the daughter might become alienated from the family values. Maybe the educationalist is able to counteract the fear by making it clear that many of the values of the institution are the same as those of the family. This offers the girl the possibility of seeking its own way between the systems.

Slide 7

Intercultural competence makes people sensitive to the points of view of migrants. We can contemplate and assess our work from their perspective. This enables us as staff members to become aware of their potential and to recognise the social obstacles they encounter. This, in turn, makes it possible for us to develop more suitable programmes that really meet the requirements of our clientele. Lack of success in our programmes is then no longer said to be due to the deficits of the users. We have to ask ourselves the reason if the majority of youngsters with a background of migration is little able to deal with certain problems:

- ask them why they can't cope with it?
- Could it be that what we are offering is not "free of barriers" for all users?
- Have we overlooked cultural, religious or language barriers?

If we examine our work for this type of quality it will have a positive impact on our users and not only those with a background of migration. As we intended to prove, intercultural competence not only enhances the quality of our work, it also puts us in a position to view diversity as something positive and to see the strong points of all our clients as a resource from which we can benefit.

98 Communication Disturbances in Visually Impaired Children

By: Prof. Dr Vuković, Mile, Eskirovic; Branka
From: Serbia and Montenegro
Organisation: Faculty of Special Education and RehabilitationDefectology University of Belgrade

Introduction

In the last time, it is intensively disputed about inclusive education, i.e. about the inclusion of the children with special needs into the mainstream education system, together with the children without any disturbances in psycho-physical development. Considering this fact, we wanted to emphasize in our work the characteristics of the communication and language development in visually impaired children, in order to get the teachers and other proffessional staf in the school as acquainted as possible with possible problems in social interaction. Since speech and language are one of the basic means for the acquisition and transfer of adopted knowledge, showing the particularities of speech and language disturbances in these children, we aim to prevent possible problems in educational process, which may be just the result of inadequate interaction between a teacher and a pupil.

Definition of communication, language and speech

The word "communication" originates from the Latin word "comunicatio". In verbal form, this word means to communicate something to somebody. In daily life, people communicate to each other messages, thoughts, ideas etc. which means they communicate with each other. Since communication is the relation between individuals, it is at the same time interaction as well. Cummunication is a kind of interaction, in which individuals establish relations by means of various signs, which are being integrated into complex systems. As a kind of interaction, communication implies interaction relations between individuals, which are realized by sending and receiving of signs, both symbols and signals (Rot, 1982).

The intensive use of symbols led to the creation of language, a complex symbolic system, i.e. to the symbolic communication. That is why many authors emphasize that just the development of symbolic communication, i.e. symbolic function, is the base for distinguishing human beeing from other beings. The basic and, at the same time, the most powerful means of communication between human beings is language. Beside the communicational function, language has the role of means for expressing our thoughts. Language is a complex sign system, which is composed of more hierarchically organized levels being in certain mutual relations and forming a structure (Bugarski, 1991). The first level of language system is a phonological one, and relates with the organization and function of language sounds (phonemes). The second (lexical) level are words, which are entire and independenbt language units standing for the notions. The following level is the grammar - a complex system of rules, which enables a speaker to express the unlimitted number of sentences, i.e. meaningful wholes with a limitted number of lexical units, and the listener to understand language messages. The grammatical level comprises morphology and syntax. The basic unit of the morphological level is a morpheme, which is also a smallest language unit with the independent meaning or with the grammatical function. Syntax deals with the rules of integration of words into more complex language wholes, i.e. sentences, and with relations between the elements of sentence structure. The semantic level of the language structure comprises the plan of language contents and the study of meaning. This level is composed of lexical semantics, which deals with the meaning of words, and sentential semantics, which deals with the meaning of sentencies. The highest levele of the organization of the language system is pragmatics, which deals with principles of the use of language in the process of communication. Within each level, special terms and techniques are used enabling receiving information on one of the aspects of language structure, regardless of a temporary action of other levels. Cristal (1987), emphasizes that the idea of language levels is widely applicable, particularly for the analysis of language, because it enables clearer and more complete consideration of the forms of their organization, than any other method so far. Besides, the analysis of the levels of language structure has certain empiric value in psychological and neurological sense.

The act of communication is possible when the participants in the communication process dispose of the same code, i.e. sign or symbol system, on the basis of which messages are composed. If we understand language as an abstract system of objective signs, which are used for interpersonal communication, speech implies a concrete realization of this system (F. de Saussure, 1989). That means that speech and language are mutually conditioned and interdependent; speech is lanugage in action. In the process of communication, language is realized by different modalities: speaking (oral language), writing (written language) and gestures (gesture language, in the deafmute persons).

Factors of communication development

The disputes on origin and development of communication capabilities have emphasized two main groups of factors: 1) inherited biological basis and 2) social conditions in the early period of life (Brown, 1975; Chomsky, 1972; Ivić, 1978; Wigotski, 1983). It has been concluded in these disputes that the inherited general capability of acquiring language is given by birth, but that the acquisition of symbolic communication depends on intellectual development and on the intensive learning. The development of communication capabilities starts with the afective communication, which is in principle genetically given as a primary sociality of a child (Ivić, 1978). After the affective communication, the practical-situational communication is developed, in which adults and the child participate. Understanding of functions and realizing of meaning of objects and actions is the base for development of verbal communication. The development of verbal communication is then conditioned by the intensive social interaction.

Concerning the basic factors of development of communication capabilities, the disturbances in communication can be caused by different factors, which have also served as a base for some classifications of communication disturbances. In the most general sense, causes of communication disorders in children can be organic, functional, psychological and environmental, which can be seen from the following review.

Etiology of speech and language disturbances in children

The review of literature shows that the research of etiologic factors of speech and language disturbances in children has drawn great attention of researchers, which has contributed to a nearer definition of some forms and types of communication pathology. Lenneberg (1964) has extracted the following etiologic factors of communication disturbances in children

- hearing impairment,
- mental retardation,
- children psychoses,
- congenital anomalies and

- brain impairment.
- *Matić* (1968) extracts six possible etiologic factors, and these are:
- prolonged physiological dyslalia,
- hearing impairment,
- defects of speech organs,
- congenital and acquired retardation of motoric of speech organs,
- bad living conditions and
- mental retardation.
- Seeman (1969) pointed out ten causes of speech and language disturbances:
- functionally late-appeared speech,
- defects of speech organs,
- hearing impairment,
- intellectual retardation,
- educational neglect
- impairment of the centres in cerebrum cortex
- extrapyramidal diseases
- heavy corporal asthenia,
- late-appeared speech development of unknown etiology (*alalia idiopathica*) and
- acoustic agnosia.
- Emerick and Hatten (1974) point out the following etiologic factors of communication disturbances:
- mental retardation,
- emotional disturbances (mutism, autism, and speech in case of schizophrenia,
- brain impairment,
- disturbances in neuromuscular coordination,
- disturbances in senso-motoric control,
- environmental impact and
- hearing impairment.
- Bishop and Rosenbloom (1987) point out that the factors of communication disturbances, among others, are:
- structural or senso-motoric defects of speech organs,
- hearing impairment,
- brain dysfunction or impairment acquired in prenatal or perinatal period,
- brain dysfunction and impairment acquired in the childhood,
- emotional disturbances,
- social deprivation and
- unknown etiology.

These authors have especially extracted the typology of language disorders, which appear as the result of the etiological factors mentioned. So they connect, for example, the general retardation in language development with chronically conductive deafness, all types of mental retardation, social deprivation and late-appeared speech of unknown etiology.

It is evident that, despite unequal terminology, the general agreement of the authors is obvious, regarding the determination of possible etiological factors of speech and language disturbances in children.

Forms of language and speech disorders in development stage

According to the traditional approach, which is dominant in the clinical logopedic practice, the following forms of language disorders in children can be distinguished:

1. Alalia - functional absence of the ability of verbal expression in children two or three age old, with normal hearing and normal intellectual capabilities.
2. Articulation and phonological disorders

3. Developmental verbal dyspraxia (articulation disturbance, which appears as a result of the impairment of capabilities to programmed the position of speech musculature and of the muscular movement sequences. necessary for the voluntary production of phonemes).
4. Dysphonia (voice disturbance),
5. Developmental dysphasia (a disturbance in the development of language, which appears by the children without any neurological and intellectual deficit, as well as without any hearing disturbances).
6. Rhinolalia (pathologically nasalized speech - hypernasalization),
7. Dysartria (a disturbance of speech, caused by an impairment of the central or peripheral nervous system),
8. Aphasia (the loss of the acquired language functions caused by any brain impairment),
9. Stuttering (a disturbance in the rhythm and the tempo of speech),
10. Tachyphemia (pathologically quick speech),
11. Bradylalia (pathologically slow speech),
12. Dysgraphia (a disturbance in writing),
13. Dyslexia (a disturbance in reading),
14. Dyscalculia (a disturbance in counting),
15. Dysphagia (disturbance in swallowing caused by a brain impairment, a degenerative disease of upper and lower motoric neuron. It can be caused both by structural and anatomical abnormalities, for example, cleft palate, partial/total laryngectomy).

According to the WHO classification (1992), the following forms of speech and language disturbances in children can be distinguished:

1. The specific disturbance in speech articulation (the use of sounds under the expected level for child's age, with normal level of language development);
2. The disturbance in expressive language (capability of expressive speech, i.e. speech production under the expected level for mental stage of a child, with normally developed capability of understanding speech);
3. The disturbance in receptive language (understanding of speech under the level expected for the normal stage of a child, which is usually accompanied by the impairment of speech production, including also the abnormalities in sounds production);
4. Acquired aphasia with epilepsy - Landau-Kleffner's syndrome (the loss of acquired speech and language capabilities acompanied by the abnormalities of EEG and by epileptic attacks);
5. Other developmental disturbances in language and speech (lisp)
6. Unspecified developmental disturbance of speech and language (a language disturbance which is not marked otherwise).
7. Specific developmental disturbances in school skills, which included:
   - specific disturbance in reading,
   - specific disturbance in spelling,
   - specific disturbance in counting,
   - mixed disturbances in school skills
   - other developmental school skills disturbances (the developmental expressive disturbance in writing).

Particularities of speech and language in visually impaired children

Visual impairment and language development

Since the visual system has a secondary, and not a primary role in acquiring speech and language, the total lack of sight (blindness) or low vision do not lead to significant disturbances in the area of verbal communication. It is considered that, in adequate conditions, only the heaviest visual impairment by birth may lead to deviations or late language development. This applies for the children who do not have useful forms of recognition. Lower visual impairment may impact language development in cases when the visual impairment is accompanied by other impairments: intellectual impairment (retardation), brain impairment or hearing impairment. It is to have in mind that the late language development or language deviations in low vision children can sometimes by mistake be attributed to visual impairment It is known that visual handicap is successfully compensated by perceptive auditive and tactile-kinesthetic modalities, as well as by programmed development of visual perception in case of low vision. There are also ideas that blindness is a stimulating factor in development of verbal capabilities, as the relationships with the environment are prevalently created by means of speech. However, it is the fact that the lack of sight in the early development stage deprives a blind child of acquisition of visual experience and impoverishes his/her senso-motoric experience, which conditions the establishing of qualitatively different communication with his/her environment and leads to certain particularities in development of communication abilities. In most general sense, these particularities are being manifested by general slowness in development of language structure (slower development of lexicon), by reduction or absence of conscious movement control or body position control, by the lack of expression movements (gesticulation), by poor mimicry and inadequate movements of articulators, which of course can lead to certain problems regarding the establishing communication relations with the environment.

The review of previous research

The previous research has resulted in different positions regarding language development and language disturbances in visually impaired children. It can generally be said that the majority of blind children adopts main elements of language structure, as well as sighted children, or these capabilities are at least near those expected for their sighted peers. However, the empiric data indicate some differences in use and nature of the language acquired. So, for example, researchers and educators traditionally emphasize "verbalism" (the use of the words which are not clearly connected with concrete notions and ideas), as a characteristic of verbal behavior of blind and severely visually impaired children. Verbalism is also understood as the confusion of thoughts (Dokecki, 1966). During the last years, this notion has been analyzed more in details regarding the aspect of language understanding and language competence of blind children. This approach has been encouraged by a theory, which emphasizes the importance of visually percept information in acquiring language by sighted children. While some researchers (Landau, 1984) emphasize the similarity in acquiring language by blind and sighted children, others (Andersen et al.1984), point out some fine differences. These differences are being manifested by the difficulties in acquiring the meaning of words, in using first words, in strict relying on standard or artificial (formalized) forms of expression, as well as in the problems of understanding deictic words (which directly apply for personal (I/you) and local (here/there) characteristics of speech situation), whereby the meaning is determined by the perception of the speaker.

Fraiberg (1977) found that blind children later adopt some words and combining of the first words in sentences, while other language capabilities vary within the frames expected for sighted children. She emphasized that object ideas, which are adopted by sighted children by means of sight, are discovered by blind children through comparative working manual acoustic-tactile exercises. These findings implicitly suggest that blind children have difficulties in acquiring of meaning of certain words, because of frequently limited senso-motoric and social experience, which results in conceptual difficulties. It can therefore be expected that blind children master with more difficulties meaning relations among the words (homonymy, antonyms, synonymy, metonymy).

Andersen et al (1984) emphasized the differences in acquiring of early vocabulary by blind children in compare with sighted children, stressing that they use the language in a more restrictive way,: a) not use idiosyncratic forms, b) more slowly leaving the use of the first words, c) words by which actions are meant are limited to the activities they have performed themselves, rather than to the activities which include other people and objects. They have difficulties in using functional and/or relation words (again, more etc.), when they want to give information on dynamic positions, (e.g. they do not use the word "more" to express an addition to something, but to meet their own needs). Authors indicate that blind children worse understand words with symbolic function, emphasizing that therefore, they have difficulties in creating of an active hypothesis on meaning of a word.

One of the differences in acquiring language by blind children, which is often mentioned, applies for the later acquisition of I/you pronouns. Fraiberg (1977), for example, indicates that blind children not rarely adopt the stable "I" when they are three and four years old. She connects this with the late development of the representative role, since both functions represent the incapability of using other objects as the own symbolic representation. Urwin (1984) has also noticed a limited use of pronouns by blind children. She presumed that, because of the limited approach to the environment, blind children have a small opportunity to comment others and therefore later adopt pronominal system.

Freeman and Blocklarger, (1987) point out that many blind children become competent users of language, showing the knowledge and understanding of language equivalent to their sighted peers.

Examining a blind child on use and understanding of "sighted terminology", "look and see", Landau (1984) found out that the child gave correct answers to the instructions "look and see", "look up", "look behind" or "look at the table", examining with his hand the area or object which were contained in the question. Surprisingly, the child has shown the understanding of these words in relation of the activities of sighted persons, which is probably the result of timely including into an adequate educational training.

The early limitations of blind children to identify objects seem to indicate that they have not yet learned to mark objects which are, regarding children's prospective, absent or hidden. On the other hand, sighted children begin to adopt the names of the objects relying to a great extent on their visual characteristics and on the ability of simultaneous perception.

It is noteworthy that blind children frequently use vocal imitation and echolalia during the acquisition of language. Such forms of verbal behavior seem to help blind child to hold the attention of listeners and the subject of conversation and to entice parent's voice, which serves them as a reference point for moving, in absence of visual perception. Some authors think that the overused echolalia and the difficulties in using I/you pronouns may deal with language symptomatology, which can be seen in autistic children (Elonen and Cain, 1964; Fay and Schuler, 1980). Since it is presumed that the echolalia serves an autistic child for different communication and cognitive functions, Prizant (1985) suggested that echolalia can represent only an alternative way in development of language in visually impaired children. Communication functions of the children with visual deficit can be developed by a more active and more creative approach.

Ruseckaja (2004) founded that 26% school children with dyslexia showed problem in visual funcioning Futher analyze the correalation between spoken language, visual functioning and type of reading errors has pointed out

Non-verbal communication

It is known that, beside verbal communication, non-verbal channels play an important role in the process of communication. Perception and use of non-verbal signs is effectuated primarily by means of sight. Together with the difficulties in learning normal gestures, some blind children develop idiosyncratic gestures, which can hardly be interpreted by sighted persons (Fraiberg, 1977). Parke et al. (1980) have compared the use of non-verbal forms of behavior by blind and sighted children of school age, and have found that blind children nod less and laugh longer than their sighted peers during an active conversation. It has been noticed that blind children more frequently knit brows in an unsuitable context than their sighted peers, who do it when they want to stress a word. Blind children somewhere have difficulties in suitable voice modulation. They are often too loud, which is attributed to the lack of their imagination on the exact location and the distance from the listener. The higher voice can also serve blind speaker to hold the attention of the listener. In this way, some of them compensate for the visual way by means of which sighted persons hold the attention of the listener, following non-verbal signs, such as facial expression, contact by look and nodding.

Our experiences

Within a wider epidemiological study, in the year 2004, we evaluated the capability of articulation and writing in 39 blind and 11 low vision pupils, between the age of 7 and 15. In examination of writing abilities, children from third to eighth class was included ((Vuković et al, 2005).

The examination of articulation has been carried out individually, by applying the articulation test for the sounds of Serbian language, as well as on the basis of conversation with subjects, with the aim to obtain an image on articulation capabilities, also during a spontaneous conversation. By evaluation of articulation, we took into account the form of the disturbances in the pronunciation of sounds, as well as the type of distortion, i.e. impaired pronunciation. The evaluation of writing has been carried out on the basis of the analysis of the capability of writing by dictation and of the independent writing. In the first case, the children were dictated the text titled "Dear friends", which contained all letters of Serbian language, and in the second case, children were given the task to write their own essay to the subject "One my experience". Regarding that blind children used Braille, we carried out a transcription of the samples written on Braille typewriters. We classified the data obtained into three categories. In the first category we put the children without any mistakes in writing, including the children who replaced or omitted 1-2 letters. In the second category we classified the children by which a greater number of mistakes has been identified, in the sense of replacement and/or omitting graphemes. The third category included the children by which we found letter mistakes, putting words together and the incomprehensible ranges of letters in the form of non-words.

The evaluation of writing in low vision children has been carried out by the test for the evaluation of maturity of handwriting and for thee discovering of dysgraphia. The test is a modified version of the scale for discovering of dysgraphia, which has been constructed by the French authors Ozias and Ažiriagrea. The scale has been translated and modified for the Serbian-speaking area (Ćordić and Bojanin, 1997). The scale contains 25 items divided into three groups. The first group of items (7) serves for the evaluation of spatial organization of handwriting as a whole. The second group of items (13) relates to the evaluation of the performing of a range of letters, and the third group of items (5) discovers the mistakes regarding the form and the proportions of the letters. Each item brings a number of points. On the basis of the number of points at the test, which is obtained by the addition of dysgraphic items, it is concluded whether a handwriting is dysgraphic, immature or harmonious. The score of 14 points and more indicates that the handwriting is dysgraphic, 19 points and more indicates that the handwriting is expressively dysgraphic, and the score of 10-13.5 points indicates that the handwriting is immature The score of below 10 points indicates that the handwriting is harmonious.

Results and discussion

The results are shown in tables, but the data have been processed for blind and low vision subjects separately. The data in the tables are expressed in absolute values.

Table 1 - Distribution of blind subjects in relation to the capability of articulation

Age	With disturbance	Without disturbance	Totally
Younger school age	4	14	18
Older school age	3	18	21
Totally	7	32	39

Table 2 - Distribution of blind subjects according to the form of articulation disturbances

	Form of disturbance		
Age	Omission	Substitution	Distorsion
Younger school age	2	1	3
Older school age	2	1	1
Total	4	2	4

Table 3 - Distribution of blind subjects according to the type of distortion

	Type of distortion		
Age	Interdentally sygmatism	Rotacism	Lambdacisms
Younger school age	3	0	1
Older school age	0	1	2
Total	3	1	3

The above mentioned data show that 7 out of the 39 blind children included in the sample has a disturbance in the pronunciation of sounds whereby there is no essential differences in the distribution of disturbances between the children of younger and older school age (table 1). From table 2 it can be seen that all the three forms of articulation are present: omission, distortion (incorrect pronunciation) and substitution (replacing one sound with another one). The inability to pronounce a sound and incorrect pronunciation appear a little more than the replacing one sound with any other existing sound. Age does not have any essential impact on the omission substitution, while the distortion was manifested more frequently by the children of younger school age. The incorrect pronunciation is mainly manifested according to the type of interdentally sygmatism, rotacism and lambdacisms (table 3). The data obtained show that blind children have a relatively well-developed capability of articulation of sounds of Serbian language which would be in favor of the thesis on good verbal capabilities of blind persons. Beside the disturbance in pronunciation, rhinolalia has been identified in one subject of older school age.

Table 4 - Distribution of blind subjects according to the errors in writing

	Types of errors		
Age	Letter errors	Letter errors, putting words together, incomprehensible words	Without errors
Younger school age	14	2	2
Older school age	13	2	6
Total	27	4	8

It can be seen that the majority of blind children make errors in writing, regardless of the age. According to the type, the mistakes are most frequently manifested in omition or in the replacement of graphemes. By a few of the children, severe disturbances have been identified, in the sense of omition or replacement of graphemes, putting words together, and writing incomprehensible words.

The data obtained show that blind children have significant difficulties in mastering of the written form of language expression. It is possible that the cause for these difficulties is the undifferentiated approach by carrying out trainings in writing, i.e. the absence of multisensory stimulation for those children who have additional handicaps (motoric, auditive, language). Since the majority of errors are manifested as replacements and/or omitions of letters, it could be presumed that the cause for these errors are complex conditions of working memory, which does significantly influence the correct choice of a button on a keyboard, by means of which print of a letter is written or the spacing between words is made (this is just a thesis, which must be researched). These aspects should be taken into account by the organizing of teaching, which must be characterized by a proper combination of writing, reading and less strenuous activities.

By low vision children, the disturbances in writing and articulation have been identified. Writing deficits were manifested by immature handwriting and by real forms of dysgraphia (tables 5 and 6).

Table 5 - Distribution of low vision subjects in relations to the capability of articulation

Age	With disturbance	Without disturbance	Totally
Younger school age	3	3	6
Older school age	1	4	5
Totally	4	7	11

Table 6 - Distribution of low vision subjects in relation to the capability of writing

Age	Immature handwriting	Dysgraphia	Harmonious handwriting
Younger school age	5	1	0
Older school age	3	1	1
Totally	8	2	1

By commenting these data, it is to bear in mind that a small number of subjects has been examined and that the pupils are from the school which primarily works according to the teaching methods for the blind. Dikić, Eškirović, Strahinjević, after a research in the senior classes in the School for protection of sight, which primarily works according to the teaching methods for low vision children, have found that 52% of the subjects have stayed back for one year or two regarding the maturity of handwriting, in relations to their sighted peers, while 32% were at the level of their age, and 16% were over their age level, (according to Eškirović, 2002). Regarding the speech and language capabilities of low vision children, in the last time, the disturbances in reading are more and more indicated, which reflect in reduced reading speed, not only concerning groups of words and sentences, but also individually displayed words (Gompel, et al. 2003). Gompel, Van Bon, Schreuder (2004) state that the defects of central parts of vision field have the most negative effect for the reading process in low vision persons.

Our data, as well as the data from literature, indicate that visual impairment may be a significant factor in appearing some language and speech disturbances in children.

Language intervention

While trying to help a visually impaired child to overcome the deficits in language development, we should bear in mind some facts. As first, it is necessary to evaluate to which extent the language deviations mean a real problem for a child; whether the differences in communication behaviour require an intervention, or they are just an adaptive and alternative way in social interaction. Afterwards, it is necessary to evaluate, whether the problems in language development are conditioned or strengthened by any other disease or impairment, which is associated with visual impairment. In this context, speech and language pathologist should be involved in the evaluation of language capacities and in the development of intervention strategies. The intervention strategies should be focussed on more areas. First, the child should be helped to compensate for the lack of visual stimulation in acquiring the language elements, by using other sources of information. Second, parents should be helped to establish as good interaction as possible with their child, and this in a way that is sufficiently stimulative for their child, and useful for them. Third, intervention should particularly be directed to the changing those forms of verbal behaviour, which disturb successful communication and can lead to any kind of social isolation of a person. The treatment of language pathologist should be conducted in cooperation with visual educator, with the aim of the concretization of ideas and imaginations, as well as with the teacher, regarding the preparation of lexical and syntactic exercises in the teaching of mother and foreign language.

Conclusion

Beside the fact that blind, practically blind and severely visually impaired children acquire main elements of language structure, as well as sighted children, empiric data indicate certain disturbances and particularities in language development. These particularities reflect in the following:

- later acquisition of meaning of words and meaning relations among the words, which can be caused by the deficits in mastering certain ideas and imaginations
- the difficulties in using pronouns "I/you", " and of the deictic words ("I/you", "here/there", "now/then"), which can be connected with slow mastering of "the stable I", with the experience of corporal integrity and with the lack of real imagination about the position of the speaker in the space.

- Typical form of verbal behaviour, characteristic only for blind children, is verbalism, in the ground of which is the lack of clear connection of words with ideas and imaginations.

Regarding the specific disturbances of language and speech, we can extract:

- disturbances in articulation, which are above all manifested by the deficits in sounds pronunciation, by whose articulation it is easy to visually notice movements of speech organs (bilabial: P, B, M; labiodental: F,V; dental: T, D, S, Z, C,)
- Tachyphemia
- Stuttering
- Rhinolalia
- disturbance in writing

As far as non-verbal communication is concerned, the following disturbances are characteristic:

- reduction or absence of conscious control of movements and the position of body,
- lack or inadequate use of movements of the parts of body and other non-verbal signs, such as laughter, for example,
- bad facial expression (poor mimicry).

For low vision children, the following is characteristic:

- less using of the words with metaphoric meaning,
- the disturbances in writing, which vary from the immaturity of the handwriting, to the real forms of dysgraphia,
- disturbance in reading, which reflects in reduced reading speed, not only concerning a group of words and sentences, but also individually displayed words.

From the above mentioned, it can be concluded that blind children show some particularities in acquiring language and show language disturbances similar to those appearing also in sighted children. Speech and language deficits can be a serious problem for these children in mastering teaching material, and the communication disturbances can lead to the emotional and social disorders. This may produce a more disabling effect on visually impaired child, particularly if he/she is in the environment which is not sufficiently informed about the particularities of his/her language and communication abilities. It is therefore necessary to know more about the particularities of speech and language, as well as the language disturbances by these children, which can be achieved by a suitable evaluation of language pathologist and by finding out individual communication capabilities of a child. Such an approach creates presumptions for making an individual intervention programme and achieving as good results as possible in the educational work. By making such programmes, a team of experts should participate, including visual educator, language pathologist, psychologist, pedagogue, and teacher.

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99 Presentation of an action research "Lebenswege"

By: Jaritz-Tschinkel, Gerti
From: Austria

For more information please contact the author: gerti.jaritz@bonusworld.at

100 School Integration of children with visual impairment in Czech republic

By: Stoklasova, Veronika
From: Czech republic
Organisation: UPOL

Introductory

Czech Republic is a country with population of approximately ten million. According to the statistics, sixty thousand people are partially sighted or blind, about seventeen thousand of them being blind. Not every man or woman in the Czech Republic with some kind of visual disorder is, of course, considered to be partially sighted unless such disorder causes difficulties in their everyday life even after the correction. Czech Republic is not the exception in the general tendency towards growing numbers of newly born children with combined disorder and lessening numbers of newly born children with "pure" visual disorder.

Every one of those partially sighted or blind is obliged to attend a primary school. At this time there exist two possibilities as to which school to attend – a primary school for partially sighted and blind children or an ordinary primary school which the pupil with some kind of visual disorder can be integrated into under the law.

Integration is a modern social trend that enables a blind or partially sighted child to be socialized more easily – that means to become a proper member of the intact society. School integration is now supported in the Czech Republic also by the Law No. 561/2004 concerning preschool, primary and secondary education, advanced vocational training and other forms of education and by the Law No. 563/2004. The previously mentioned law adds a new term to the Czech educational terminology, the teacher assistant, the one to help the classroom teacher with an integration of pupils with special educational needs. At the same time the term of a special education teacher comes into existence but their position has not been explicitly described yet in the previously mentioned law. Each of these laws is, of course, supplemented by a public notice.

Before the clearly pro-integration Law No. 561/2004 was passed, the decision whether or not to integrate a blind or partially sighted child into an ordinary class and whether they would be allowed to have a personal assistant, had been dependent merely on the parents' abilities, good will of a head teacher and cleverness of a classroom teacher. A personal assistant was the one who was there merely for the needs of the blind or partially sighted child. To be honest we must admit that the personal assistant was not always willing to help with the work of the classroom teacher and with integration into the group of intact pupils.

Integration into kindergartens

The described process of school integration at the primary schools resembles an integration of children into kindergartens which I would like to discuss from a broader perspective. Integration of blind and partially sighted children fully began only after the year 1989 when the Czech Republic, among other things, became open towards ideas of social and educational integration of physically disabled people. Even before this date, of course, some of the physically disabled children were integrated into ordinary classes but these were more or less deviations from the rule concerning specialized education. There also existed specialized kindergartens of a boarding school type for blind and partially sighted children from three to six years of age. However, the fact that such a little child still highly dependent on their parents' care should be placed into a remote school that is difficult to reach even by car, frequently led the people working in ordinary kindergartens to allow the child to attend their kindergarten even before the year 1989. Nowadays it is more or less exceptional that the parents who apply for it would receive a letter of rejection from the head staff of the kindergarten.

Multiple factors are taking part in the process of integration of a blind or partially sighted child. As I have frequently mentioned them before I will not go into details by describing them now. The first one who determines the success of integration is the child itself – it is common knowledge that not every blind or partially sighted child is able to put up with their disorder so that they have no problems with being in a group of healthy children. What is equally important is the role of his or her parents, the way they bring up the child or their compliance with reality. Not a less important factor in the integration process are the teachers and the head staff of the kindergarten who should be acknowledged with all of what the child needs, what their possibilities and capabilities are and what equipment is suitable for the whole building and the class (leading lines, special facilities, toys,…). Integration in kindergartens is then influenced by Special pedagogic centres the function of which, among other things, is to help with integration of blind and partially sighted children. These centres offer help and advice not just for the child's family but for the school staff as well. Finally, a successful integration also depends to some extent on the group of the child's classmates and their parents which the disabled child will be integrated into. Pupils should be well-prepared for admission of the child, they should be acknowledged, for instance in the form of a game, with things they could or should help with and they should know what the disabled child is able to do by itself – that means to balance the measure of help. Parents should realize not just the fact that common attendance of the same class can not be harmful to their child but also that it can enrich them with new experiences.

In the year 2003/2004 I did the research that dealt with integration of children into kindergartens as a part of my diploma thesis. This research was done in a form of a questionnaire and was focused mainly on the experiences of the disabled children's parents with integration. It was supplemented, in addition, with experiences of people working in the Special pedagogic centres. Such questionnaire for parents included sixteen complete questions and five questions for the employees of Special pedagogic centres. Questionnaires were sent to all of the centres in the Czech Republic and only after that, for security reasons, they were given to examinants. Questionnaires were anonymous and they were filled in by twenty-three parents of blind or partially sighted children. Before I am going to talk about the results I am obliged to emphasize the fact that the questionnaire had been made and filled in before the Law No. 561/2004 was enforced.

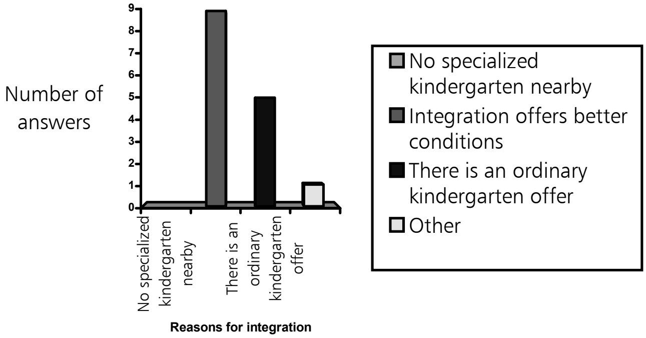
Results of the research

On the basis of the assessment of all the answers received it is possible to say that the questionnaire was filled in by twenty-three parents of blind or partially sighted children from four to ten years of age. That means that some of the parents evaluated integration on the basis of their past experience and their opinion was influenced by rather a long period of time passed which is quite positive, at least for me personally. The ratio between the two sexes was 13: 10 for the boys.

What is also interesting is the fact that education of the parents who had time to sit in the questionnaire reflects the statistical ratio concerning education in the Czech Republic – 50% of parents have secondary education with a passed final exam, 34.8% of parents have finished their secondary education and the rest of them is equally divided between those with a primary and tertiary education.

All of the examined children, with one exception, lived in a home with both of his or her parents. The only child was cared for equally by the two of the parents.

The fifth question asked the parents directly why they had decided on integration – most of the parents chose the answer “there is no specialized kindergarten nearby”

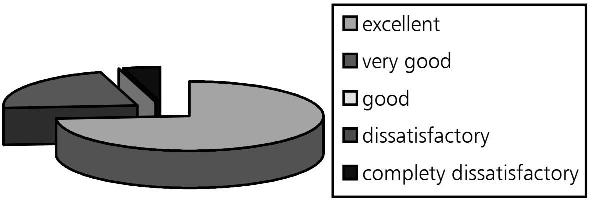


Though this fact would seem as a relatively good reason for integration of a blind or partially sighted child into an ordinary kindergarten it is not always that simple because most of the children (82%) commute to kindergartens by means of a mass transport for about twenty or thirty minutes. That means that the choice was influenced by other important factors as well, in particular those on the second and the third place.

The parents’ choice of the right place for upbringing and education of a child is free and is not limited by any law. It is wise, though, when the parents make their free decision on the basis of an advice and support of some specialized consulting centre. Parents who answered the questionnaire do so in 70% of cases. It is quite positive to discover the fact that the questioned parents turn to consulting centres for advice more frequently than to their friends or relatives (just in one case).

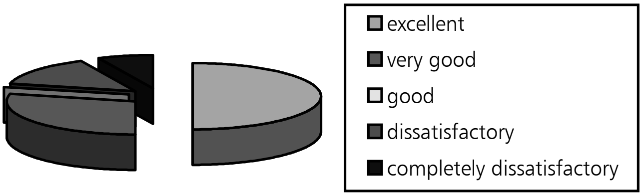
The success of the integration process, the child’s joy from attending kindergarten and the parents’ satisfaction with integration depends on the above-mentioned factors which were also analyzed in the questionnaire. The parents themselves consider it very important to discuss with kindergarten’s staff not just the problems of the child but also their successes and that is why they do so in 69% of cases more frequently than twice a week. The communication possibilities and close cooperation then reflects the teacher’s assignment in kindergarten who is in twenty-one cases willing to devote a part of their spare time to further education of the child and their needs. Unfortunately, the willingness of the teacher, their capabilities, skills and inventions could not always replace the absence of special facilities and toys in the classroom. 43% of parents state that the number of special facilities of an ordinary kindergarten is substandard but give the notion that it was possible to manage with ordinary toys and borrow the special facilities from their home subsidies and reserves. This problem, however, could not change the fact that 87% of children became a part of the collective without major problems and even built friendly relations with other children after some period of time.

The previously mentioned facts, such as willingness of the kindergarten staff, a relatively short time of commuting or a smooth integration of the child into a collective of other children, could possibly add to the result that twenty-two families see the integration positively.

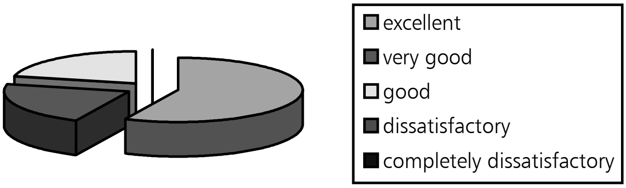


Whether the joy over the results is reasonable should have been confirmed by the employees of the Special pedagogic centres. All of them answered the question with the exception of the SPC in Prague. These questionnaires were again anonymous and they were aimed directly at the cooperation of SPC with kindergartens or families of the blind or partially sighted children. It was possible to derive from the five supplementary questions not just the fact that cooperation with family of the integrated child is in 93.5% classified as being without any problems but also the fact that 93% of the ordinary kindergartens with the integrated children turn to families when asking for advice or help. 69% of kindergartens are in contact with employees of the SPC once a month. Here I would like to emphasize that in spite of the optimistic statistics more than one third of kindergartens was classified by parents as being substandard as to the existence of special facilities. We can only believe and hope that this is going to change and that people working in the centres, which are built for this purpose, will not just be able to agree with kindergartens' staff on the way how to deal with the child but also on the borrowing of literature, facilities and toys.

The last two questions for the employees of the centers were concerning unpopular but very interesting matters. The first of them was how much the blind or partially sighted child was prepared for the compulsory school attendance – 78.5% of children were classified with the mark excellent or very good. There is no doubt, therefore, that even the integrated way of upbringing and education in the preschool age can prepare the child for attending school and contribute in this way to their future progress.



As the employees of the centres could mostly see the process of integration objectively and from the outside it was possible to ask them even the question concerning the opinion of the healthy children's parents on integration into an ordinary kindergarten. Here the results were the most persuasive and the most optimistic in the scale from one to five, the choice four or five was not chosen (the worst choices).



The Conclusion

In the conclusion let me comment on the last words of the most of the parents who sat in the questionnaire. Most of them complained on the only thing – on the problem with getting the money for a personal assistant who would be there for their child. I am really satisfied that the previously mentioned Law No. 561/2004 made legal the position of the teacher assistant and not the personal assistant. I know, on the basis of my personal experience, that a personal assistant is not just a great help for the disabled child but also something like a high wall between the child and the collective of other children.

As a conclusion I should say that the optimistic feeling I got from the assessment of the received questionnaires is possible to generalize merely on the conditions in kindergartens. Integration into primary schools is different. The school integration is a very complex process and it does not depend just on one willing head teacher who accepts the child and on a teacher willing to be further educated and to dedicate more of their spare time to preparation for the next day. It depends on the whole collective of employees, their motivation, capabilities, willingness to further education and adjustment of the usual learning methods.

All we can do is hope that the described possibility of using the two ways of primary education (ordinary and special schools) will lead to further development of services and the full integration of blind and partially sighted children into society.

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Schulgesetz 561/2004

101 Image-Consultation for Persons with Visual Impairments

By: Oertel, Ina
From: Germany
Organisation: SFZ BBW für Blinde und Sehbehinderte Chemnitz gGmbH

Allow me to introduce myself.
My name is Ina Oertel. I am 38 years old. I have a university degree in Education and I am a trained image consultant. I have been working at the SFZ Chemnitz gGmbH vocational training centre for the blind and visually impaired for more than 14 years now and had the opportunity of working in various fields. During the last 5 years I was, among other things, responsible for the job application training in the third year of training.

During the training sessions the following questions frequently came up:
What should I wear to a job interview?
How important are my looks and my appearance in today's working world?
How can I make a positive first impression?
How should I behave during a job interview?
What effect do my facial expressions and my gestures have?
etc.
Because of these questions I started to take a closer look at the subject matter and today I would like to invite you to join me on a little trip into the realm of image consulting for the blind and visually impaired.
To start I would like to carry out a little experiment with you:

(Slide 1: Pictures of two women)
I will now show you the pictures of two women with completely different styles.
The woman on the left has very eye-catching make-up, she is <u>very</u> blond with some pink streaks, has a very flashy necklace and probably wears a strong perfume. Her dialect is extremely unattractive and she uses jargon usually reserved to the young.
The woman on the right wears a suit and a turtle-neck jersey. Her make-up is subtle. And even though her hair is only loosely pinned up she looks well-groomed. She probably wears a tasteful scent. Her words are well chosen and she is very obliging.
Now, this is where you come in:
Please imagine you are renting out a luxury apartment. All the other tenants in the block are of a certain social strata and you need the rent to pay the mortgage instalments.
Which one of the two women would you chose as tenant for your apartment?
I'll give you a minute to think about it.
<u>Probable answer:</u>
Almost certainly you would pick the woman on the right. She makes a very cultivated impression which makes you believe she is a very reliable, tidy person. Your apartment should be in good hands with her.

Now a second question for you:
Please imagine you are the head of a very young and innovative advertising agency and are looking for a new advertising designer.
Which woman would you pick now?
I will give you another minute to think about your decision.
<u>Probable answer:</u>

This time you would probably choose the woman on the left. Her style is creative and hip. You can easily imagine her bringing in more new and innovative ideas than the lady on the right.
How long did it take you to make your decisions?
Usually it takes about two seconds!

(Slide 2: The first impression)
Everybody knows that the first impression is based:

- 60 % on outside appearance
- 33 % on the voice
- 7 % what you actually say

In general, we decide after just two seconds whether we like or dislike someone.

(Slide 3: The first impressions of blind and visually impaired persons)
In my work with blind and visually impaired young persons and when I asked them, I noticed that blind and visually impaired people also judge on first impressions.
They decide whether they like or dislike someone according to:

- the pitch of the voice
- the choice of words
- pronunciation
- Smell
- Handshake

also in just a matter of seconds.
Now, there are people who say:... “Well, that is a bad habit“
But it is not a “habit“, it is a primary instinct of human beings that has been preserved over the course of time.
Prehistoric man had to determine within seconds whether he faced a friend or a foe, whether he had to brandish his club to defend himself or whether he could invite the person opposite to sit down at the fire with him.

(Slide 3: A positive first impression is important)
When we meet other people for the first time, how you come across and making a positive first impression are important in

- one’s personal life
- a partnership
- working life

irrespective of whether one has normal sight and is able to choose one’s outfit oneself or not.
But what is this so-called “image”?

(Slide 4: Image?)
The English term “image“ encompasses expectations and associations that are subjectively linked to a person, a product or an organisation.
This means that the image of a person is
<u>Not the objective reflection</u> of the person as he or she really is,
<u>but</u> how that person is perceived by others.
Perception is a very subjective process. It is influenced by all our senses and is made of many little jigsaw puzzle pieces that go together to make an overall impression.
Consequently, the development of a positive appearance and image is also very important for blind and visually impaired people.

(Slide 5: Image consulting and development for blind persons)
In ADL courses blind people and those with severe visual impairments are instructed on subjects such as grooming, hygiene and care of clothes but not on issues such as:
How should I dress myself in a way that is appropriate for my body type, my proportions and is also stylish?
How do my facial expressions and my gestures come across? What overall impression do I make? What are my own body proportions? What do I have to consider when it comes choosing the right cut?
This is why we trained participants in the following aspects within the working group "Body Perception and Outfit" with just four participants per group:
- conscious body perception exercises together with relaxation exercises (an interesting German publication in this context is:
„Entwicklung und Entwicklungsprobleme blinder Kindern" *by Andreas Beelmann, Werner Hecker*)
- body proportions
- style issues
- development of colour perception
- individual colour and style consulting in the third year of training

The programme is constantly updated and expanded. Facial expressions and gestures (movement stereotypes) as well as contemporary methods of conduct play a role.

(Slide 6: Body perception)
What does this mean in practice?
Once a week after their vocational training the young people attend the classes on body perception for one and a half hours.
Each class starts with muscle relaxation exercises based on Jacobsen to leave behind the day and all other forms of stress. Afterwards, for example, stones are placed on the various muscle groups or a journey is made across the body. This helps the participants experience and work with the different regions of the body.
During the individual working group meetings the participants determine and become aware of their body proportions and discuss differences and commonalities.
I would like to introduce you to the 6 different anatomical body forms for women and the 5 that exist for men.
These body forms are crucial for:
Cuts of clothes, for the form and the length of skirts or trousers, for finding suitable fabric and high-quality material, collar and neck lines, patterns of fabric and clothing items, individual style, jewellery, accessories, hair styles and glasses.

(Slide 7: sporty / natural / romantic style with woman)
What you are seeing here on the picture the young people can understand with their tactile senses using wooden reliefs or foils that have been processed with the fuser.

- The sporty woman has a straight body shape, the waist-line is not very pronounced, it is an athletic body shape, often with broad shoulders and she is about 1.70 metres. When choosing clothes she should go for items that follow the H-line (like the letter H).

The tennis player Steffi Graf is an example of the sporty body shape.
- The natural woman also has a straight body shape without a pronounced waist-line. But she looks petite, less muscular, she has an angular face and is about 1.66 metres. She should also choose clothes with the H-line.
The German actress Uschi Glas is an example of the natural body shape

- The romantic woman has a very feminine shape regarding bum, hips, thighs and breasts. She is about 1.70 metres, has sloping shoulders and her face is oval or round. This woman should wear clothes following the X- line (like in the letter X) or the A-line (like in the letter A) for outer garments and skirts. An example is the actress Cathrin Zeta Jones.

(Slide 8: Pictures as examples)
Here you can see pictures for each type, a sporty, a natural and a romantic woman.

(Slide 9: Feminine & delicate / classic / dramatic-looking woman)
- The feminine and delicate woman has a good waist-line, is tender, delicate, petite, small and youthful. She has an oval or round face, is about 1.65 metres or smaller. This woman should wear the X-line and can wear outer garments with an A-line.

Nicole Kidman is an example of this feminine and delicate woman.
- The classic-style woman has a very well-balanced body shape, is slender, has nice proportions and an oval face. She is about 1.68 metres tall and can wear the X-line, the elegant H-line and the A-line for outer garments.

The Crown Princess Mary of Denmark is an example of the classic style woman.

- The dramatic-looking woman seems to be rather tall, skinny and bony. She has a shape like a mannequin with her long legs and good waist-line. Her face is triangular and she is 1.73 metres tall or more. Typical for her is the Y-line (like the letter Y).

Claudia Schiffer and Liz Hurley are examples of this type.

(Slide 10: Pictures as examples)
Here you can see pictures for each type, an example of the feminine and delicate woman, the classic-style woman and the dramatic-looking woman.

(Slide 11: sporty / natural style men)
Now, the men among you may feel I've been neglecting you. However, these style categories based on body proportions also exist for men. Although for men there are only 5 types. The young people can experience these proportions with the help of tactile forms as well.
- The sporty man is tall, slender, with small hips and broad shoulders. He is about 1.80 metres tall.

Athletes often have this shape, but the German TV presenter Harald Schmidt or the sports man Sergej Bubka also does.
- The natural man has a straight build with a balanced body shape and is of moderate height at around 1.70 metres.

An example is the actor Tom Cruise.

(Slide 12: Pictures as examples)
Here you can see pictures with examples of the sporty and natural types.

(Slide 13: classic / extravagant / adventurer styles)
- The classic man is slender, has well-balanced proportions, an oval face and is about 1.75 metres tall.

An example of this type of man is the German politician Gerhard Schröder.
- The extravagant-looking man appears tall, skinny and bony. He has a prominent chin and thin lips. He is about 1.75 metres tall or more.

An example of this type of man is the designer Wolfgang Joop.

- The adventurer is a nice description for a man who has a rather broad pelvis and not very well-defined shoulders (also called “pear form“). He is about 1.75 metres tall or more.

An example of this type of man is the German TV presenter Thomas Gottschalk and the acter Gérard Depardieu .

(Slide 14: Pictures as examples)

Here are some more pictures with examples for you. Richard von Weizsäcker represents the classic man, Wolfgang Joop represents the extravagant one and Thomas Gottschalk is the adventurer type.

Based on their own body perception and knowledge of the different styles, and with my help and guidance, the young people can then develop their own individual style so that they can put together outfits independently and with confidence.

The second priority in the working group “Body Perception and Outfit“

is the development of colour perception and the ability to recognize and understand which colours best suit you.

(Slide 15: Developing colour perception)

These sessions are very closely connected to the body perception classes. As a starting point we use a questionnaire on colour perception.

What do you think – are blind people able to discern colours?

Of course they are, they just do it differently to sighted persons. There is a very interesting German book on this topic: “Blinde erzählen von Farben“written by Ursula Burkhart

Blind people perceive colours in various ways, for example, based on individual experience, smells, objects, touch or through music.

To give you an example, which musical instrument do you think could be ”red”?

The “trumpet“ is often mentioned because of its shrill sound.

Or, what could be “brown“?

The answer is often “violin“ because of its sound and because it is made of wood.

To find out how the young individuals make these associations and to prepare our sessions accordingly we use the above-mentioned questionnaire.

Here are some excerpts from the questionnaire:

- A friend tells you that he bought a fantastic red T-shirt. What kind of association do you make when you hear the word ”red”?
- What about yellow, blue, green, black or white?

What kind of thoughts, associations, or ideas does this trigger (in your mind)?

- What do you think of (smells, sounds, memories, associations and thoughts) when you imagine:
    - a spring meadow
    - a summer meadow
    - an autumn forest
    - a winter landscape

The evaluation results of the questionnaires are then used for to prepare the individual colour perception exercises. The aims of these sessions are to make it possible for the young people to experience the colours and to train their individual colour perception. This is an important preliminary step on the way to an individual colour consultation, in which the most suitable colours for the person concerned are determined based on their hair, eyes and skin tone.

(Slide 16: Organisation of a colour perception class)
There is one session lasting at least one and a half hours for every colour.
Each class starts with muscle relaxation exercises based on Jacobsen to leave behind the day and all other forms of stress. We then gather the different individual associations with the respective colour.
Objects, smells and sounds (mainly pieces of music) suitable for the colour concerned have been prepared in advance. The young persons then work with them thereby using all senses. Finally, we tell a story about the colour to really bring it to life.
In the last colour perception exercises the young people get to know "warm colours" and "cold colours", their effects and the link between skin tone, hair colour, eye colour and colour of the clothes.

(Slide 17: Warm colour type)
As a short introduction here are a few pictures:
Spring type:
- pale delicate skin, reddish blonde hair and golden colour pigments in the eyes
- light spring colours should suit this type

Autumn type:
- a more robust skin type, freckles, reddish-brown hair and golden colour pigments in the eye as well
- this type should opt for autumnal, earthy shades

(Slide 18: Cold colour type)
You can see both colour types here on this picture.
Summer type:
- skin that tans easily in the summer, green or blue eyes and hair, an ash tone to the hair
- this type should opt for summer colours, pastels or mixed tones

Winter type:
- "Snow White was a winter type", this means that the winter type has either white skin, black hair and red lips (like Snow White)

<u>or:</u>
dark-brown skin all year round, black hair and blue eyes
(Mediterranean type)
- this type should choose strong, pure and bright winter colours

To enable the young people to go shopping and choose the colours that suit them on their own a "colour passport" was developed in Braille for each colour type.
All the young people receive an individual consultation on what to wear for job interviews and in day-to-day life in the third year of the training as part of the job application training.
The experiences and preparatory work of the working group are crucial for this and our experiences and results so far have proven us right.
This means that blind und visually impaired people may:
„See nothing or little, but can still look great!!

(Slide 19: Photo)
... not like the woman in this photo, who has a dramatic look but the wrong look for her type!

102 An example of Service Delivery for Children with Cerebral Palsy and Visual Impairment

By: Porto, Catarina; Poppe, Leen
From: Portugal
Organisation: Coimbra Cerebral Palsy Association (APCC)

Abstract

For more information please contact the author: leen.poppe@nrcappc.pt; catarina.porto@nrcappc.pt

Cerebral visual impairment is now the leading cause of visual impairment in very young children in the USA and most probably in Europe, a very complex problem that is beginning to be understood and dealt with. Research indicates that more than 75% of children with cerebral palsy have some kind of visual impairment (Sonksen, 1991).

In 2004, the Coimbra Cerebral Palsy Association (APCC), a 29-year-old non-profit private institution of social solidarity dedicated to prevention, detection, assessment and intervention through integrated therapeutic and socio-educational programs and specialized transdisciplinary teams, launched a research project for clinical and functional assessment and rehabilitation of vision of children with CP and other neurological diseases (80 children aged between 0 and 5). Transdisciplinary intervention will focus on helping children learn to use vision in all areas of development, contexts and daily activities, enhancing parental and professional informed participation and fostering children's global development.

The lecture describes the project's background, partnerships, goals and team, the role/participation of parents and professionals (including APCC's transdisciplinary teams and doctors), the materials and methodologies used, specific materials adapted and developed, specialized training program, individual educational/intervention programs and preliminary results (including data on main problems detected, approaches, etc.)

103 Educational resources for children with cerebral palsy and low vision

By: Porto, Catarina ; Poppe, Leen
From: Portugal
Organisation: Coimbra Cerebral Palsy Association (APCC)

Abstract

For more information please contact the author: leen.poppe@nrcappc.pt; catarina.porto@nrcappc.pt

Coimbra Cerebral Palsy Association is a 29-year-old non-profit private institution of social solidarity dedicated to prevention, detection, specialized transdisciplinary assessment and intervention through integrated therapeutic and socio-educational programs. It also has a resource centre with a long experience in developing and adapting toys for multiply disabled children with motor, cognitive and other associated problems. Here, children, families and professionals can borrow materials.

Given the great need, especially of parents and teachers, of specific resources to use with MDVI children, and the high price of the few existing ones, the CCPA launched a new project called "Learning to see and play: pedagogical and play resources for observation and stimulation of functional vision and active learning of children with CP and other neurological diseases aged between 0 and 8". The aim is to prevent functional blindness through adequate use of specific materials such as toys, objects of daily life, picture books and multimedia, which provide children with meaningful experiences, having in mind the relevant developmental stages, as well as simple instruction manuals with pictures of materials, stimulating people to make their own materials or adaptations, explaining the needs, etc.

The poster will illustrate some materials, its use with children and relevant information.

104 Communication with NCL/BSV children

By: Willers, Robert
From: Germany

B.S.V. stands for Batten, Spielmeyer, Vogt which is the name for a metabolic disease. One out of four in what is called the NCL-group. This so-called "inveniel" form shows itself around the age of 5 and one of the first signs of the disease that appears is visual impairment. More precise it starts with the loss of the central sight and with a mean of 6 to 8 years it leads to complete blindness.

Besides the visual impairment there is in course of the process report of motor degeneration, loss of daily life capacities, epilepsy and often emotional or psychological problems. These children, at last, will be completely dependent and their life expectation is, average, about 23/24 years.

Usually they die by epilepsy problems, a pneumonia or neurological problems with body-temperature or hart failure.

One of the main problems for the children as well for the surrounding people, like parents, family, friends or the coaches in school or the supporting institution, is the loss of active communication from the children. During the process of B.S.V., mostly from the age of 10 and on, their capabilities to express themselves diminishes: they have word find problems, their pronunciation is getting worse, they get stuck in echolalia, all the result of neurological, motor speech problems.

It brings, for all party's, usually a lot of frustration and disappointment that they (the children) can't express themselves and that they (the surrounding people) can't understand what the children try to tell them.

Because of this experience, we've concentrated us, for years and years, to invent and develop means with which we could deal (partly) with the problems of diminishing audibility and thus problems of mutual understanding.

A problem for us was that nearly all the communication supporting means in relation to the children, suggest sight, again in relation to the children.

I will tell you now about five different and important means that we use as a support in our communication with the children from which two are, actively, being used by the children.

First is the life book. As soon as is known that this metabolic disease is the case, it is very important to collect and to record all pieces of information in a document, a so-called life book.

All knowledge about the child, the child development, the history of the child, facts about trips, activities, holidays, persons, animals, schools, places where he's been, where he comes from, and also a rapport of the feelings and emotions with all the memories you've to collect in this life book.

Especially for people who come later on in the life of these children it is an indispensable, essential source of information to support the communication with the child.

A second support for the surrounding people is registration of information about the child on film, DVD and on soundtracks. Again it can help to get a picture, have an image of who was the child, what behaviour did he show, how did he react, what did he like, how was he when he was still walking and talking. Moreover it is nice to listen with the child to sound recording of trips, activities instead of our film and photographs, as a memory-support.

The next support in continuing the communication to and with the child is a daily communication notebook between all the people who care for the child. In our situation it is set up by the speech therapist of the school. It includes the following categories, persons, eating/drinking, my favourites, school, home and it can be extended with other categories. The notebook is always, on every place with the child, so it gives his companion in communication a quick and handy way of comprehending the child and what has recently happened and talk to him without an active role of the child himself. Where possible the child helps to fill in this book with tactile, touchable aids. Every day it is used by all the people involved.

The next mean that, at least for a few years, is used by the children is the magic box. It is a little box or case with concrete objects in it. These objects refer to all kind of memories, hobby's, preferences. By taking and feeling the objects the child is a time long capable of having influence on the subjects that can be exchanged. With every object there is a description of all the important information about that subject. We have experienced that children who began to express themselves, asked for the box so that they could make themselves more clear.

A last example of a mean that gives the children a long time influence on the communication with others is the Big Mac. It is a sort of a button, in most cases two of them with text in it, when you push the button. Mostly, there is a button for yes and one for no and by leading the conversation it is possible to get to know a lot from the children by putting the right questions. Al last some general hints that can be of use in the communication with children wit B.S.V.

- Be alert how you put your question, no abstract questions, subjects.
- Watch the body language of the children.
- Children often think in an associative manner.
- Always be familiar with some facts that belong to a particular child or make it clear with a cap or an ornament etc.
- Keep guidance in the communication. Be a kindly leader in the process.
- Give way to frustration and sometimes put the problem of audibility by yourself.
- Sometimes accept together, that it won't work that moment, that day. Another moment, we start all over again.
- Be sure that you have time, you are relaxed.
- Check if they can follow (often they can make this clear as late in the process).
- Inform yourself before the contact.
- Be honest, be nearby and make sure it is quiet, not too busy (no television, radio, lots of other people).

An Example

A girl in our institute has her 16th anniversary and during two days she tries to make herself clear to the counsellors who work with her in that day, that she wants a compact disc of a specific artist.

Nobody could understand whom she meant, what was the name of the artist and there was a lot of frustration for all of them.

The next day there was a counsellor who remembered that the girl had listened a few weeks earlier with lots of pleasure to a famous local artist. She hadn't stated it on paper, but when she mentioned the name, there was a deep sigh, a physical conformation and an emotion as if she just lost a very heavy burden off her shoulders.

The second part of my lecture concerns one crucial aspect of the content of the communication with these children.

Often I have the discussion with teachers and educators what to tell the children about their disease. They want to be honest, they say that they have the right to know and they want to tell them all about their disease. I don't agree with them; my opinion is that we are talking here about children and children have their own way of thinking. All of the children I know or have known (about 40) didn't talk about their disease in a general way, as a whole. They talk about concrete facts, consequences of their disease, in daily life, like their blindness and the consequences of the epilepsy.

Children don't think the adults do, we are in a position that we are better able to see ourselves in comparison with others, you can say that we are able to hang above ourselves, think abstract and think about the things that will come in the future, for instance due to a disease we have. We have the ability to imagine these things. Children have another way of thinking; BSV children, most of them, have a think pattern, general speaking, of a child beneath 10 years. It's about here and now, concrete things that happen with them, what them overcomes. Of course they talk about their not seeing, about the epilepsy, about the motor problems, but they don't put it in a perspective, simply because they are not yet able to think on that abstract level. They think about the future in another way than adults do. Often they think of occupations which even on that moment aren't possible anymore. They want to be a driver on a moment that they are already blind, they think about girl-boyfriends, marrying, having children, living in independence, where there is often already a great deal of dependence. Leave them their thoughts and dreams, it is their perspective and never take it from them, just adapt yourself. Don't try to explain to them that this is all impossible, think of the fact that they lack a certain level of imagination; again they have a childish view on the world and that colours and determines their look on and experiencing their life.

It is out duty to be alert on their verbal and non-verbal questions and give them answers not much further than the question. If we don't tell enough usually they will put us another question, so be careful. I think there is a risk of telling to much to the children. In the best case it won't do anything with them, it won't harm them; they won't understand and take it for granted.

But there is also a possibility, that all the information about them and about their disease, confuses them, frightens them and gives them emotional pressure. So then it works contrary, not to come at ease, but it gives stress. My advice is: reactive, not active, in talking about the disease and stay close to the question.

105 Constructivist pedagogy and interactive learning methods for the inclusion of the visually impaired students

Workshop
By: Runceanu, Laura Elena
From: Romania
Organisation: Babes Bolyai University, Faculty of Psychology and Sciences of Education, Special Education Department

Abstract

For more information please contact the author: laurarunceanu@yahoo.com

This workshop aims at:
- introducing the participants in the constructivism and constructivist pedagogy for disability studies with a focus on visually impaired students in inclusive schools
- providing examples of good practice
- presenting and experiencing interactive learning methods that promote and facilitate the inclusion of the visually impaired students in regular classes

Its content is organised as it follows:
- a general presentation
- activities in working groups
- handouts with copies of slides and articles.

In the general presentation will be introduced an overview of the constructivist paradigm, its applications in the field of inclusive education and the opinions of the visually impaired students who were involved in interactive learning contexts. (25 minutes)

During the activities in working groups the participants will experience two interactive learning methods: "I know-I want to know-I have learnt" (K-W-L, Ogle, 1986) and the semantic network. They will interact and learn together by reading an article on the constructivist pedagogy and interactive learning methods. These two methods will be described on slides. (30 minutes)

This sequence is followed by a presentation of each group activity, discussions about these methods effectiveness for the visually impaired students in inclusive settings and a feed-back for the workshop organiser. (25 minutes)

106 Joint attention.

Workshop

By: Loe, Toril; Brandsborg, Knut
From: Norway
Organisation: Tambartun National Resource Centre / Huseby National Resource Centre

This is a presentation of a project called "**Shared attention with small children who are blind**".

The project focuses on early intervention and communication. Increased knowledge about these topics may be of vital importance for blind children's development, particularly when it comes to establishing good early interaction with their parents. Shared or joint attention is an important part of this type of communication.

Our definition of shared attention: The adult and the child have their attention focused on the same object, event, experience or activity simultaneously.

We have produced a video/DVD that focuses on good examples of shared attention between some blind children and their parents.

We also show some examples of good communication between sighted children and their parents in order to demonstrate how interaction may proceed when both participants are sighted. In addition to the video we have written a booklet about this topic.

The presented material may be useful for parents and professionals who relate to blind children. The material also has relevance to children with low vision and children with an unusual visual function, which many children with multiple disabilities have.

Factors promoting shared attention:

- Physical contact
- The child noticing that she is being seen by the adult
- The use of hands during communication
- Awaiting the child's initiative
- Positive guidance
- Arranging for the situation
- Voice use
- Emotional contact

Why Focus on Shared Attention?

Infants attract attention from adults with such force that many of us simply have to approach the little bundle lying there in its carriage. We want to look at, talk to, and smile at the little one, and we feel extremely happy when the little one smiles back at us. It seems to be a profound part of human nature to feel a need to try to obtain contact with an infant.

Recent years' research on infants has shown how important the child's initiative is for social interaction and contact. The blind child does not stimulate us adults to interact as effectively as a sighted child. At the same time, we know that parents have a strong wish to create a connection with their child, and that they would do everything possible to reach a meaningful level of interaction with him/her. It is for these reasons that we have searched for clues as to how one can attain a basic level of communication with the blind infant.

107 A unique early intervention model in Sweden: support of the infants in a three generation perspective

By: Gunnel, Franck; Gabrielsson, Smaroul; Karlsson, Airi; Klint, Inger
From: Sweden
Organisation: Early Intervention and Counselling Team for Children and Youth with Visual Impairment

OH 1 Presentation of the team

Having a disabled child affect the everyday life of the whole family. In order to help the family to cope with the Situation the counselling team offers counselling and support based on our experience of visual impairment.

OH 2 We offer the families

Becoming a parent of a child with visual impairment puts most people in a new and difficult Situation, where previous experience and knowledge are no longer sufficient. Our experience is that the mother and the father seldom have the same feelings and reactions to their child's impairment due to their individual experiences of life, but almost all parents believe themselves totally alone with no other parents in a similar Situation to refer to. Often it is also very difficult for the surrounding to understand what it involves having a child with a visual impairment.

In the beginning the parents see their child in a lifelong perspective and mostly think of the limitations caused of the impairment. They feel sorrow for everything that is important for them out of perspective of the fully sighted, which their child will not be able to experience. They grieve the loss of their child's possibilities.

The parents describes it is being of outermost importance to have the opportunity to meet Professionals with experience of visual impairment and also to meet others parents with similar experience.

The counselling team is unique in Sweden. We are giving support to children and youth with visual impairment and their families. The team cover from new-born babies to nineteen years old adolescents, in the area of Stockholm.

The Counselling team, constitutes the basis in a network of different Professionals according the needs of the families. The counselling and support are given on regular basis, and we become the fix point of connection for the families.

The parents are very important for their children att all ages, but we know that it is crucial for the future of the disabled child how the parents handle the initial crisis and the subsequent prolonged process of grief and adaptation, To be able to understand the needs of one's child, to be able to stimulate it to achieve optimal progress, it is essential that the parents have the opportunity to thoroughly go trough the complex feelings evoked by the child.

During the first meetings with the parents we focus on them - their experience, thoughts and feelings.

But our experience is that the older generation go trough the same or a similar reaction and process is the parents themselves do. And in the same way we think it's very important to give the grandmothers and grandfathers (and also other close relatives) the same possibility is the parent to go trough their feelings and questions evoked by having of grandchild with a visual impairment.

And now we are going give you a view of our work by present two cases: First Inger is going to tell us about a little girl and her family and there after Airi will tell us about a teenager. In our title we are say that we should talk about infants, but we work in the same way with teenager and the families too.

Anna

I am now going to tell you about another girl, Anna and her family. Anna came to us when she was 13 years old. She had some kind om retina disease, and during a few months her Vision had grown worse very fast and in a very dramatic way. Her vision had always been slightly impaired but it had suddenly changed very much f or the worse.

Anna and her family were sent to us in the very acute phase when her vision had suddenly collapsed. The Situation around Anna was very chaotic, many Steps were already taken, started or planned and at school everybody around her was almost in a panic. There were meetings and a lot of planning with many experts involved. Al! these things were good, of course, but Anna and her parents had not had the chance to keep up in this process. It was very difficult for Anna, and maybe still more difficult for her parents and rest of the family to understand that she was now much more visually impaired than they were used to. It caused many different emotional reactions.

Annas mother comes from Sweden, and Anna has had very good contact with her grandmother. She has always supported the family in many ways. Grandfather is dead. She has an aunt who also has been a lot in the family. Anna has 3 younger siblings, one of them has the Same eye disease, another has ADHD. Annas father comes from South America, and his family is living there. It is difficult for his family to get information about what happens here in Sweden.

Most of the changes around Anna concerned her school work and technical aid. When Anna and her family came to us, we met a family in crisis, and a girl who had barely begun to understand what was going on in her life.

The most important thing for us to do was to try to calm down the Situation. We had a lot of meetings with Anna and her parents. Anna did not say anything at all to begin with, but she always wanted to come.

After some months we also had a meeting with grandmother and the rest of the family who hade a lot of questions they had not had opportunity to ask before. When Annas grandmother from South America was in Sweden offered we her is well to meet us and get some information. There was one meeting with her and Annas parents.

Annas Swedish grandmother has met other grandparents in theme evenings which we arrange for grandparents and other near relatives. There they can get Information and ask all questions they have. We separate parents and grandparents in these meetings.

The Support given to this family has varied through the years. We have had contact with them in different ways. During quite a long time Anna and her mother came to see us. After many sessions Anna suddenly started to talk. And not only with us, but with other people is well, at school and many other places. She started to communicate her thoughts, and she had now found a way to express herself.

One of the most important things in this case was, we think, that we really acknowledged Anna and her experiences. We acted is her witnesses and told her that what she went through was a very hard thing. We followed her process, and supported her parents and other relatives to do the same. We containered her and her family in a successful way.

Anna has now lost her sight almost totally. We sometimes see her. Sometimes she calls us because she wants to come and talk. Sometimes we contact her and ask if she can help us, maybe meet sotne parents to small children and answer their questions or something else.

It has been a very interesting process to follow Anna. During these years she has become a strong and independent young woman. She has friends now, and she has found her own identity.

The last we heard from her was that she was going to Spain and study there for a couple of months.

We continue to meet the family and now it is Annas sister who is in a focus. She has a lot of sight at this time, and it is another process to try to get in contact with her. She does not want to admit that she sees as badly as she does.

Louise

Louise's parents came to us when she was 6 months old. She was born four month before expected delivery. Her diagnose was retinal detachment, ROP. She had gone through several operations which had failed when we saw the family for the first time. Her parents were very worried, tired and sad when they first came to us. Louise had just come hörne from the hospital where she had been since birth and they were going for the first time to be parents in their own hörne and now this about her sight.
They were happy that Louise had survived but sad about the circumstances. When we met the parents they knew that she had a visual impairment but not to what degree. The first time we saw them they wanted to know how to get in touch with doctors abroad concerning new operations to save her sight and we also discussed questions to ask the doctor they were going to see the next day. The second time we saw them they knew that one of her eyes was destroyed and probably the other too. They then wanted to see another family with a blind child and we arranged that. We met the parents very frequently during the first year and talked about what's happened during the birth and hospital care. What does it mean to the baby not to see anything now and in the future and what does it meen to the parents. Are there special schools and day care for these children etc. We informed about the dysfunction, how to handle it and how it could affect the everyday life of the family and about the public Services A special educational teacher and myself invited the family to an open group with parents to visual impaired children that have not yet started in daycare. It was arranged a couple of hours every fortnights. Most often Louise came with her mother, once with both parents. In the group they got the opportunity to meet other parents with children in the same age and talk about common experiences, they could see other children and their behaviour, they could test different toys etc. They maked contacts with people that they still see.
Louis parents talked to the special educational teacher about now too simulate Louise pedagogically.
They also took part in evening groups with other parents around different issues.
After 6 months the mother and father wanted their own parents, Louises grandparents to get more information. We invited them to a meeting where everybody got the opportunity to talk about their own experience of Louise's birth and express their thoughts about visua! Impairment and Louis development. We informed and described what support and experience a visual impaired child may need. We met again one month later and saw two Videos about visual impaired children and discussed them and their own experience of Louise. When Louise was two years old her parents started to think about daycare. Which daycare was best, what would be important to think aboutfthe surrounding, the buildings, the group of children, time etc. We talked much about that in our meetings. They were going to move to a new home. How to adjust it. The parents had not met the low vision clinic staff. So we arranged a common meeting. The grandparents took part in evening groups for grandparents around issues of visual impairment in our centre. We saw videofilms and discussed their own experience. Another time a blind woman talked about her own experience and answered questions from the grandparents about how to do, how to react and how to stimulate their grandchild.

When Louise had started day care, the parent did not think she got the Stimulation she needed. That the staff did not understand how to do it in spite of taking a short education in visual impairment. We had several meetings in the day care to support the parents to demand the best care for their daughter. The parents had many meetings on their own with the daycare staff to change Louise's care. The parents did no longer have time to see us as often as earlier and did not need it either. The mother called us when they needed any support or to discuss any questions.

An adjustment teacher, a special educational teacher and myself started a group for six 3-4 year old blind children in that. Louise took part in. The intention were to give them the' experience of being in a group with other blind children and we wanted to describe and show how to play common games that we had seen were difficult for them in their-daycares. While the children played, a psychologist Airi and a counsellor Gunnel saw the childrens special staff and talked about their experience in the daycare etc. The mother called a couple of months ago and wanted a new meeting with the grandparents and ourselves. We saw them twice in one month. The parents described how stressed they were of all their own demands and wishes to stimulate Louise and how they did not have the time or energy to do that after work. They wanted support from the grandparents to be able to give Louise the time, experience and possibility to repeat different behaviours many times. The parents wanted the grandparents by themselves take the initiative of support and not always wait until the parents asked them.

This is a short story describing how we can support the little ones in a three generation perspective.

108 Co-operation with parents in th the process of early assistance in in child development (Expierence derived from early revalidation specialist centre)

By: Gwizdon, Krystyna
From: Poland
Organisation: Regionalna Fundacja Pomocy Niewidomym

This work has been based on the experience derived from an early „domestic" intervention, as realized on the territory of the Silesian voivodship since the year 1997, as part of the Early Revalidation Specialist Centre in Chorzów.

Early rehabilitation of a blind child, or a dim-sighted child, with an attached disability, must be inseparably linked to the granting of suitable assistance to the child's family.
In the view of humanistic psychology, of fundamental importance is the fact, that a human being expresses itself through interacting with other people, and that relationships influence human development (Rosika Z., Matusewicz Cz., 1984).
In psychotherapy, a systemic approach assumes that family is a system - a set of elements, which mutually influence one another, and which have a capacity to restore equilibrium
(Grzesiuk L., 1994).
In order to make possible the granting of aid to disabled children, it is necessary to acknowledge the importance of an early integration with their parents and with other family members, and to acknowledge the capacity of family to self-regulation.
The understanding of emotional situation within a family is of fundamental importance in the process of granting assistance to the children and their families.

1. Emotional situation of family

Maternity - sometimes planned, long awaited, other times sudden, unexpected, but always full of anticipation for the coming of a "unique", "my own" child, "our" child.
Sometimes, maternity is solitary, as it may have turned out to be too much of a "burden" for a beloved one to uphold.
Often, „endangered" from the very beginning, full of anxiety and doubt, whether our child shall be born healthy?
Always full of dreams and plans, „whom will it resemble?", "if it is a son, then I will teach him how to play football", "we will go together for a swim", "we will go together to see the sea".
At long last, "our child" is born, and tremendous joy and emotion is perturbed by a sudden and necessary medical intervention, in order to keep the child alive.
After childbirth, the mother, while finding herself in the natural state of psychophysical destabilization of organism and hormonal changes, she is faced with a first negative diagnosis - a diagnosis, which may, quite often, be communicated suddenly, laconically, and unconscientiously.
The first tears, a tremendous despair of the parents. Full of pain and sadness, they take on their shoulders their own family drama; full of rancour against fate: "why us?"
Often several weeks, sometimes even several months, have to pass, before the parents may be ready to take their child home with a diagnosis set, and having received suitable recommendations with regards to further examinations and medical consultations. The parents are left to their own devices, full of anxiety, often "terrified in their ignorance" by the set diagnosis. At home, surface the first problems, related to the meeting of the physiological needs of the child – problems with the intake of food,

and sleeping disorders. The physically and emotionally tired child, tends to cry and scream, and does not make an eye contact with the parents, does not smile.

Examinations that never seem to end, tests and medical consultations, the seeking of an instantaneous and effective method for limbal rehabilitation, sometimes the necessity for several more hospitalizations, the necessity for yet another neurological operations, or oculist operations. The ever lasting hope, the hope, that there is still more that can be done, so that "our" child may be "healthy"

The child becomes the focus of the family, the central person of the family. The needs of the parents are set aside.

Whole weeks and months pass by - the oculist, neurological diagnosis is confirmed by several specialist doctors; the child reveals insignificant developmental progress. The irregularities in the child's development are becoming to the parents, more and more noticeable.

Overburdened with their duties and the situation, both, physically and physiologically, they feel anger, bitterness, and on the other hand, guilt.

Feeling defeated and overwhelmed that „there is nothing else that we can do", they begin to feel afraid of what the future may bring for the family. The costs of treatment and rehabilitation depress the family social and material situation, and often, the standard of living, as well. The failure to accept the situation by the beloved ones and friends, leads to the isolation of the family, and to the family being left with their problems, all alone. The ever difficult, and frustration-laden situation means, that despite feeling a great need for support and mutual acceptance, the parents, nonetheless, negate the possibility of being understood. This creates feelings of being left alone, and of threat to relationship with the beloved one. The excessive concentration of the mother on her child, may lead to her withdrawing from the other members of the family, which is an "escape into self-sacrifice", and into the psychosomatic diseases. This is acting out on the self-defence mechanisms, which may aim at the restoration of equilibrium of the organism, on the part of both of the parents. They may, also, assume the form of an "escape into workoholism", forming of new amorous relationships, or an escape into addictions. At the same time, these reactions, entrench the problems of their own relationship, even deeper.

With the birth of a disabled child, the position of other children in the family - the position of the siblings - changes, too. Frequently, the expectations, which their parents have of them, change; besides, they must take on their shoulders additional responsibilities, and are forced to ignore their own needs. Sometimes, the parents give them too little of their time and attention, which is a result of the necessity to nurture the disabled child.

It is not uncommon for the family to prepare them to take over, in future, the care of their brother or sister. The parents, also, tend to assume an overly protective stand, which many a time, leads to the undermining of the social skills of the siblings.

In such a case, it becomes quite natural for the siblings, to feel the feelings of irritation, anger, and envy of the love of their parents.

They may, also, develop aggressive behaviour patterns, which may lead onto the disturbance of their social relationships with their peers. A suppressed aggression may cause them to develop somatic diseases.

The need for the understanding by the parents of the new family situation, the acceptance of the disability of the child, the need for the understanding of the child's "individual" needs, but also the need for acceptance and for the taking care of own needs, leads the parents on, to take some constructive action. A "new" equilibrium in the family is restored, one in which the siblings interact, and accept the fact of the disability of their brother or sister, and willingly participate, in helping him or her out.

1. The assumptions of an early intervention: The parents – child – therapist axis

The need for the understanding of emotions, the attitudes, and the behaviour patterns of the child's parents means that the following assumptions, relating to the granting of an early assistance in the development of blind and dim-sighted children with attached disability, should be taken care of:

- the granting of early aid, as early on, as from the moment of the diagnosis
- the child therapy should be run in the natural, family surroundings
- the child is a part of the family system – it is impossible to grant help to the child without taking into consideration the parents' and the family perspective
- the parents, or else, the guardians of the child, should be involved in the process of child therapy, and moreover, they shall set the frontiers for the early therapeutic intervention in their homes.

The early intervention therapists, while taking care of the child, they must be aware of the fact, that to help the child means, first of all, to help its family in becoming aware of, and in understanding, the feeled emotions and the behavioural attitudes in the cross-relationship, between them and their child.

During the first visits, the embittered parents present negative attitudes towards the medical staff, as they expect the therapists to confirm their opinions. Sometimes, there occurs a "projection" of these feelings onto the therapist. On several occasions, the parents expect ready-made answers to all of their questions, straight away, As early on, as during the fist visit, they ask: "Will he/she be able to see?", "Will he/she be able to walk?", "Will he/she be able to speak?".

They expect the confirmation of a positive diagnosis. It is not the role of the therapist to provide answers to these questions, during the first few visits.

We take care of children with problems resulting from being in the so-called risk group, the children, which have psycho-motoric retardiness, the deficits of which, in the sphere of sensory functioning, may be fully eliminated through compensation; but also, we take care of these children, which have psycho-motoric retardiness, but due to a permanent damage to the Central Nervous System, despite the progressively attained capabilities, in the perspective of time, they shall be mentally disabled children.

In relation with the above, once the child is one year old, a conscientious and instantaneously performed diagnosis must be subsequently confirmed, and simultaneously with the neurological diagnosis, one should consider its learning process.

The first visits of therapists are very important, because of the need to make a good initial contact with the family, and to make the discernment of the health of the child and of the emotional stance of the family, and because of the need to evaluate the social and material situation of the family.

The parents should obtain conscientious information regarding the different forms of the psychological assistance.

However, the most important of all, is to ground in the feeling that, even though the problem exists, it is possible to take constructive action, which shall bring about improvement of the situation.

This is the beginning of formation of mutual trust between the parents and the therapists, without which, common action in the interest of the child would be impossible. Early on, the expectations of the parents are related to the need for attaining more and more information regarding the possibility of treatment, both, at home and abroad. They still seek ready-made medical solutions that would eliminate the problem altogether, and not always are they prepared to commence systematic rehabilitation work. It is important, to provide them with a complete information regarding the granting of the medical and social assistance.

Sometimes, the living conditions of the families are difficult to such an extent that due to poor quality of family life, and due to the process of child treatment and rehabilitation, assistance in the obtaining of an apartment, or in the elimination of communication barriers, may be necessary.

In a number of cases it also amounts to social and material help, and boils down to the coming into contact with institutions, that grant social aid.

The most important thing in the process of child therapy is helping the parents in getting to know and understanding the reactions of the child, through the parents' own observations. It is important to make the parents aware of the fact, that they can succeed in observing the child's reactions, by themselves, and that they can react to them, in the right manner.

It is imperative on the part of the therapists, to acknowledge the self-knowledge of the parents relating to their child, whereas, on the other hand, it is also imperative for the parents to acknowledge the competence and knowledge of the therapists.

It is characteristic of these relations that the parent always relates to his or her own child, in a subjective manner. On the other hand, in order to perform a diagnosis properly, and to select the right methods and objectives of the therapy, the therapist must remain objective. The objective stance of the therapist, which requires emotional distance, enables him or her, to carry out the tasks, properly. If the parents, openly and frankly, communicate their knowledge regarding the child, whereas the therapist assists in the interpretation of the child's behaviour, and teaches, on how to respond to the child's call, then, in such a circumstance, the therapist assumes the role of an assistant, which acknowledges the fact, that the parents are well-geared towards the shaping of good relationships with their children. The therapist draws a conclusion, that due to a tremendous mobilization of resources, the family is capable of restoring the "new" equilibrium, the harmony of being together. Then, even despite the substantial emotional and physical costs, the family may obtain the joy from interacting with the child.

In the process of child therapy, of prior importance is to early predispose the parents for the process of communication with their child. It is important to explain to the parents, in what way does the blind child perceive, and how does it communicate with the environment, and to explain the importance of touch and audio communication.

The first days and weeks of the child's stay at home are of vital importance. On several occasions, the children being weakened by intensive medical intervention, and full of negative experience, have appetite and sleeping disorders, as well as, behaviour distempers – they cry, are irritative, and nervous.

The physiological needs of the child are accompanied by tremendous needs for acceptance and love. Simultaneously, due to neurological reasons, the perception disorders, and the disorders of motoric functions, the children have problems with how to communicate. All this, leads to the parents reacting hastily, as they rock the child while carrying, during the times of sleep and when the child is staying awake. It is important to focus the parents' attention on the fact, that the daily routine activities, which are related to feeding, and to the nurturing of the child, should be performed in a slow manner, at appropriate time intervals, rhythmically, and in a particular place and time. The preservation of a constant rhythm of the day, the equilibrium between the periods of the child's activity and sleep, and the equilibrium between the spontaneous and stimulated activity, give the child a feeling of safety. It is of major importance for the parents to acknowledge, just how important it is to adjust their behaviour patterns, properly, to the reactions of the child. A proper "reading" of the messages sent by the child, and the right response to them, form the basis for the creation of the child's self-worth, and for the building of the child's motivation for self-development.

The lack of understanding of the needs, and of the reactions of the child, as well as, their improper interpretation, cause disorders of the child's behaviour patterns, which further entrench the negative emotions of the parents. The parent creates in his or her mind a mental picture, which states: "I am not coping", "I am no good" (the devaluation of the competence of the parent). As a secondary effect, the parents experience a formation of attitudes of excessive demand in relation to the child, or else, a formation of attitudes of emotional rejection and passivity, thus simultaneously, developing in themselves, a feeling of guilt. Sometimes, the parents assume the attitude of problem avoidance, or denial of the problem existence.

The openness and the sincerity of the parents, the permission granted to the therapist to intervene in the disorder of the child's behaviour patterns, enable the therapist to clarify the mechanism that underlies, both, the development and the resolving of these patterns. Patience and consequence of action, on the part of, both, the parents and of the therapists, in effect, leads onto the elimination of these behavioural patterns in children.

Of major importance in the process of therapy is to make the parents aware of the fact that the basis of the child therapy rests in the adaptation of the immediate surroundings to the child's current needs, and to the child's psycho-motoric capabilities.

The adaptation of the surroundings enables the child to carry on with its own activities, which develops in the child a feeling of independence, and the feeling of own authorship of a deed. The awareness, that the proper communication with the child, and the meeting of the child's psychological and emotional needs, forms a basis for the process of self-learning, should rest with the parents throughout the entire process of therapy.

It is a mistake on the part of the parents, to expect quick results through exercising particular motoric and manipulative capabilities, while leaving aside, in the background, the emotional and volitionary development of the child.

It is most difficult to convince the parents to teach the child self-reliance in the daily routine activities. On several occasions, the attitude of excessive care, leads on to retardiness in the child's acquisition of capabilities of coping by itself, with eating, with the dressing up, washing, and with toilet training. Simultaneously, due to the lack of self-reliance, the child develops a feeling of inferiority and of dependence on other persons.

It is a mistake on the part of the therapists to suggest exercises, without taking into consideration of the emotional condition, and of the current capabilities of both, the child, and its parents, and to suggest such activities, which may cause excessive strain for the parents, at any given time. Sometimes, it takes up to several weeks, or even months, for the parents to become ready for the acceptance of particular therapeutic suggestions. The therapist must be a person, which shall hear the parents out, and which shall entertain the possibility of the commitment by the parents, while respecting the set by them, "frontiers of intervention".

1. The forms of family asisstance provision

The assumptions of an early intervention / discussed in part II / outline the forms of assistance to the children and their families, as are granted by the Early Revalidation Specialist Centre, in Chorzów, 1.Child therapy, granted in the family environment, with the participation of the parents:

The most important aim of the first visits is to grant psychological support to the parents. The therapists analyze the psychological and physical capabilities of the parents, which allows for an early assessment of the degree of their commitment in the process of therapy.

It is important to carry out an accurate diagnosis of the problems of the child, and of its developmental deficiencies, but also, it is important to assess, and to show to the parents, the „strong points" of the child. A complex diagnosis is the starting point for the preparation of the individual process of child therapy for every child. Simultaneously, the therapy puts an emphasis on the development of proper communication with the child – on the interaction between the child and the parents, as well as, on the adaptation of the environment and of the toys to the needs of the child.

During the home visits, the therapists instruct the parents – how to improve the particular capabilities of the child in the sphere of seeing, communication, movement, manipulation, and self-reliance, and how to play with the child, what techniques to apply, what methods and devices.

The activity of the therapists is to serve in the building of parents' own competence, and in showing the parents, that they are able to observe correctly, the reactions of the child, and that they are capable of setting right goals for the child to attain. The therapists grant support, provide information and knowledge, and serve with counselling and assistance.

2.Therapeutic workshops for families

The therapeutic workshops for families facilitate in the parents and children meeting with other families. The children have the chance to become part of a group. Through their participation in group play, they learn to acquire social skills. The participation of the siblings is important, too.

Group activity during play time and the related emotional expressiveness facilitate in the calming down of stresses, and allow for the integration of the families.

Simultaneously, the workshops complement the parental knowledge in the realm of the methods, techniques, and the means of therapeutic assistance.

3. Therapeutic and methodical workshops for the parents

Workshop meetings between the parents and therapists are of tremendous importance for the therapy process of our children.

The parents may get acquainted with other parents having similar problems, which makes them feel: „we are not alone".

The parents are a support group for one another, as they freely discuss their problems, their successes, and failures, while, at the same time, sharing between themselves their solution proposals.

Frequently, they communicate to one another, quite some knowledge regarding legal, social, or be it, medical, assistance.

A substantial assistance for the „new" parents proves to be those parents, which co-operate with us for a number of years. The workshop meetings enable the parents to make social encounters, which at times, with the passing of time, translate into long-lasting friendships between families.

4. Rehabilitation holiday camps

They are held once a year, and until now, they were always organized in the Rehabilitation-Holiday Resorts, situated at the sea side.

The parents with their child, as well as, the whole families, take part in the holiday camps.

The programme is run by the resort staff and includes: individual therapy for children, group sessions for the families, as well as, training workshops for the parents.

At the same time, the sessions provide an opportunity for various recreation activities, excursions, and for the availing of physiotherapy at the resort centre.

The holiday camps tie the bonds of co-operation between the parents and the therapists, and they also provide an outlet for the going through of their anxieties, but also, through their joys and sentiments by being with the children, together,

The co-operation between the parents and the therapists in the process of the early assistance in the child's development must finally consider the further life and educational perspective of the child. The therapists and the parents, together discuss the options, that they face regarding the choosing of the right and worthy place for the child, within the educational system.

On the one hand, it must take account of the developmental capabilities of the child, but on the other, the social standing of the family and the parental expectations.

The role of the therapist is limited to the presentation of offers of kindergartens and schools, on the territory of the voivodship or the whole country, to the parents. However it is the parents, that make the decision; hopefully, their love and understanding, shall lead them on in making the right decision for the benefit of their child.

109 Diverse and Common – Perspectives in Early Intervention – Central European Project Professional Development in Early Intervention – International Workshops

By: Hradiková, Terezie ,Kovács, Krisztina
From: Czech Republic, hungary
Organisation: ELTE University, Bárczi Faculty of Special Education

Dear colleagues,
we would like to introduce you the CENTRAL-EUROPEAN PROJECT ON PROFESSIONAL DEVELOPMENT IN EARLY INTERVENTION, which shows on DIVERSE AND COMMON PERSPECTIVES of present EARLY INTERVENTION in Europe.
We´d like to give an insight into the international cooperation on Early Intervention including three-year project between SENSIS (the Netherlands) and Central European Countries (Czech Republic, Hungary, Poland).
There were two workshops organized by the Czech Republic (2003) and Hungary (2004) and this year the third workhsop of this project will be realized in Poland, in Warsaw. During our presentation we would like to share with you the process and results of this project, which involved a lot the quality of EI in our countries.

Our presentation will focus on workshops in the light of their:

- backround
- goals
- partners and guests
- conditions / organization
- content - used working methods
- topics
- diversities and similarities
- outcomes
- future /publication

Background

- 20th century
- Most countries in Central Europe have developped professional EI and joined the ICEVI group in 90´s
- Bilateral contacts with Perkins/Hilton Programme and Theofaan – Sensis started 21st century
- Network within Central Europe on EI
- Multilateral cooperation
- Workshop on EI in Prague 2001

After political changes in the 90´s many new services for handicapped and disadvantaged started to develop in coutries of Central and Eastern Europe. Among them also EI for families of children with visual impairment. The reaction on the segregated institutional communistic way of education of children with visual impairment was immediate. The SENSIS (former Theofaan) has been suporting programmes in the former Eastern Europe for years. The Czech Republic, Poland, Slovakia, Hungary, Chroatia and most recently Ukraine have realised various projects on help training, funding and providing professinal services for families with visually impared and multi-handicaped children. Countries involved learned how to effectively cooperate and communicate on Hilton/Perkins (USA) projects and ICEVI meetings. At that time we were trying to draw experience from our foreign colleagues and apply them in our programs, connect them with our traditions and socialcultural conditions.

Not until 21st century – symbolically on the European conferrence ICEVI – we have all met and come to an agreement, that we make from many paralel projects one common. Very effective collaboration started when we created the network from our bilateral contacts.

Workshop on EI in Prague 2001 was the first trial step of this collaboration. With the financial support of Sensis and Perkins/Hilton program we invited representatives of European countries working in EI and participating bilateral projects of these foundations to settle down further collaboration in use.

Not only the address list of organizations providing EI services in Europe was set in, but also the form of meetings and useful sharing of experience and methods. On the world conference ICEVI in Netherland in 2002 the three-year project of workshops started which I am going to introduce you now.

Goals

- sharing experience
- learning together
- network

Which were our goals? Easily: to share each other useful experience from practise of EI, to learn together new processes and to create a network of organizations and early interventionists for sharing experience and information.

„Find the right key to the lock!"

goals were set, but how to find the right key to the doors behind which the fruition of our goals is hidden? The project of each year meetings became this key.

Partners: Netherland, Czech, Poland, Hungary.

Sensis International finances this project and also The Czech Republic, Poland and Hungary are involved as partners, as well as the Netherlands. They became the host countries for each year workshops.

Guest countries: Germany, Chroatia, Austria, Ukraine, Slovakia. Each year we were also inviting our colleagues from neighbouring countries as guests – from Germany, Chroatia, Austria, Ukraine and Slovakia.

Conditions / organization

- motivation
- partners
- finances
- capacity
- experience

As I mentioned in my introduction we had already good conditions for organizing workshops. We had a motivation – we wanted to meet henceforward and we considered the sharing of experience as very useful. As with the support, programs of EI were only rising and still there is a lack of early interventionists. International collaboration is therefore very inspiring for us. Herman Gresnigt, our long-time teacher and mediator of international contacts taught us this. We had partners – long-time colleagues, who we knew from Theofaan (now Sensis) and Hilton/Perkins programs and from ICEVI group. You all know how difficult it is to realize even the best plans without enough money. For the realization of our idea the essential condition was that Sensis International financed the whole project. In this moment I would emphasize the financial efficiency of such meetings. In former times we were bringing together information, stages and literature each organization separately and so we were burdening the capacity of our organizations much more than now, when we all meet and train together.

During framing the project was also important that participant countries had enough capacity for organizing such meetings. We had programs of EI enriched enough, theoretical and practical knowledge and routine in leading of international projects.

And last but not least: experience from former period - meetings, stages in Sensis and Perkins School for the Blind and discussions at ICEVI conferences helped us a lot as to partners of this project. Krisztina Kovacs from Hungary organized ICEVI conference in 1995 in Budapest, Grazyna Walczak from Poland organized ICEVI conference in 2000 in Warsaw and I organized first workshop on EI in Prague in 2001. And of course Carina Poels, the director of international projects of Sensis, has a lot of experience.

Conditions / organization

Algorythm of organization

- planning schedule
- address list
- responsible country representant
- budget
- annoucement and asking for topical
- interests and themes
- guests invitation
- program + timetable of the workshop
- topics and methods
- evaluation and recommendation for next

From our experience from the first workshop, from framing meetings about the projects and gradually from our practises we created a steady process – algorythm of organizing the workshops. It is very useful for you – if organizing business meetings in different countries – to pursue the same process and not to learn everything again. And also it is helpful for other colleagues – participants at workshops, so that they can imagine the course of workshops and they can prepare for it well with playing an active role.

So how do we do it then? First we plan the schedule: when, where and for how long the meeting will be taken. It is very important to have update address list of organizations providing services of EI in our countries and for which such a workshop could be useful. Each workshop had its representant in a host country, who undertook the responsibility and organization of the workshop. He or she with Carina Poels set up a budget using also experience of his (her) predecessor.

Then first announcement follows - invitation letter, a request of assignation the main themes, points of interest. From those most important are chosen, participants elaborate each a presentation and present it on the workshop.

As I already said we invited to each workshop guests from neighbouring countries who would have liked to enrich their programs of EI or who might enrich us by their interesting programs.

The organizer then has a target to set up the final program and it´s timetable, which is very difficult, because there are always more themes to solve than time allows. I suppose you all know it.
Program must be made also with regard to topics and methods of presentation. A lecture needs different time than a discussion, even when facilitated.
The evaluation is also very important in the longt-term and repetitious projects. That´s why at the end of each workshop there is special time for evaluation of the workshop course and themes. And so we got very valued recommendations for the next. It may help to an organizer of a next meeting, because she can read what she should repeat and what she should change. The recommendations also help to participants so that they can actively participate not only on the course of one meeting but on the whole conception of the long-term project.

„Do not be afraid doing things the same way… be effective doesn´t mean to be rigid!"
This method prooved to be good in the algorythm of organizing and in fact we have already the course and preparation process of workshop turnkey.
That´s why I allowed this slogan.

Content - used working methods

- Presentation
- Intervision – case studies using video and prepared questions
- Facilitated discussion – in plenary or in working small groups
- Exhibition – toys, literature, brochures, photos, assessment material, videos,
- Workshop – active listening, playing roles
- Sharing – recommended literature, articles, contacts, …
- Study visit – half a day during the workshop

The workshops are intended mainly for sharing practices so we used methods not frontal – like lectures, but methods suitable for small groups and discussions. To enable those methods – "works"- there are "only" about 20 – 25 participants in each workshop. During the presentation and after it there is time to answer the questions, to discuss. One of fundamental methods is an intervision. Two participants from each country can bring their own case study and present it on the workshop. They prepare a video case and questions to put them to other participants. This proceeds in small groups of 5 - 10 participants and each of them has time to give ideas and advice how to solve the case. In these small groups discussions are given on themes chosen by participants.
An exhibition is very popular on each workshop. It is a real bazaar of ideas, photographs, literature, assessment material, videos and all what early interventionists can use.
There are also workshops – where different methods of work with families and children are shown, roles are played or experience is transmitted, for example simulation of visual impairment during a common game or during a simulated seminary for parents.
During such a meeting we thus learn not only to bring new ideas and information to others but also to listen actively and toleration to different techniques than we use.
Like on every professional meetings we also here expect sharing of experience, discussions, exchange of literature and contacts during informal part (lunch, …). We

endeavour to create an informal atmosphere and include such breaks to timetable. Nobody has to leave with the feeling she didn't say or hear something important.

One afternoon on the workshops is devoted to a visit of EI centre in the host city (country). Participants can see a concrete workplace and make their acquaintance with the practice in certain country.

Topics

The workshops had followed the same route according to the main topics. In the frame of country reports, case studies and key topics each participant could choose the actual content she wanted to present and share with others.

- Country reports were dealing with: legislation, service providers, team, minimum requirements, forms of services, approach, financing, structure, etc.
- Case studies were dealing with: introducing the case, show it on video, questions, discussions, offering solutions
- Key topics were dealing with: role of the state and community; staff training; assessment; family support; increasing social competence; perspective of the child's education; different parents – different approaches; courses for parents

Diversities and similarities (outline of the comparative study)

On the basis of the information we gained through the workshops, it became clear that even in these few countries there are lots of variations and similarities concerning early intervention services. I am going to give you the summary of a comparative study we made after the two workshops in the following fields:

- Legislation
- Service provider
- Approach
- Age of children
- Type of program
- Form of services
- Number/frequency
- Team members
- Prevention of burn-out syndrome

Legislation

All countries have law on early intervention, except of the Czech Republic. These laws belong to either the educational sphere, like in Hungary and Poland or under the social sphere or health care, like in the Netherlands and Austria.

Service provider

When analyzing the different types of service providers, there we found three main categories: NGO-s, state or private organizations. The service is provided by only civil, non-governmental organization e.g. in the Czech Republic. All the other countries have multilane provision with the leading institutes belonging to the state, like in Hungary, private organizations, like in the Netherlands and Austria or with equal presence of the three types, like in Poland.

Approach

Looking at the approach of services by means of whom the service is directed to primarily there are two main principles in our countries. In the Czech Republic, the Netherlands and Austria the service is parent focused which means that the priority is supporting the family. While in Hungary and Poland the priority is stimulating the child's development. However, these two approaches are not controversial, but overlapping as the main difference between them is the given priority. Both types can be found, of course in all countries.

Age of the children

One important criterion in eligibility of early intervention services is age of the child. There are slight differences in age limitation in our countries. If the child is visually impaired without additional impairments, the service can be given to children: 0-3 in Poland, 0-4 in the Czech Republic, 0-5 in Hungary and the Netherlands and 0-7 in Austria. Children with multiple disabilities are eligible for the service from 0 to 7 years of age in most countries.

Type of the program

The type of early intervention services is very much determined by the philosophy and financial conditions of the service providers. The early intervention program is purely centre-based in Hungary except of those cases when the child is in foster homes. Austria, the Czech Republic and the Netherlands offer home-visiting service with the provision of assessment and some therapies in the centres. In Poland both types of programs can be found as there are many kinds of service providers.

Forms of the services

In the studied countries the forms of services show a colourful picture with including

- Assessment
- Home-visits
- Home-based therapy/stimulation
- Centre based therapy/stimulation
- Centre based small group activities
- Centre based consultation
- Distance consultation (phone, e-mail, internet)
- Parent groups (meetings, club)
- Family programs (weekends, camps, courses, rehabilitation camps)
- Baby sitting services
- Seminars for parents on specific topics
- Bulletins, newsletters, guide books, leaflets
- Toy, special aid, literature, Video and CD library
- Accompanying parents to institutes
- Supporting transition

Number and frequency

The ratio of clients per interventionists and the frequency of their meetings seem to be predictive indicators of quality of services. In our case these data are as below:
10 children is given service by 1 full time early interventionist in Austria with a weekly home visits.
12 children come to 1 full time early interventionist in Hungary on weekly bases.
1 full time early interventionist is responsible for 25 children in the Czech Republic with home visiting once in two months.

Team members

The direct service providers are early interventionist in all countries with different educational background. They can be teachers or therapists of the visually impaired, general kindergarten teachers, social workers, ergotherapists, or speech therapists. The other kind of profession, which is represented in all early intervention teams is psychologists. There are other professionals who are alternatively belonging to the teams, like physiotherapists, ophthalmologists, optometrists, social workers or neurologists. These experts are employed in three levels: they are full time staff members, hired experts or external consultants.

Prevention of burn-out syndrome

Those who work in our field have realized the importance of preventing burning-out systematically. There are different solutions for the prevention in our early intervention programs. There are e.g.

- On-site training of staff
- Further training of staff
- Supervision
  - Intervision
  - Supervision
  - Team supervision
- Case meetings (video, „Balint-group", open discussions)
- Evaluation of the service (interview, questionnaires to parents)

Outcomes „Family Jewellery"

Outcomes from workshops and from the whole project became very valuable material for our partner organizations. Let´s call it the "family jewellery".

- Network
- Used experience
- New resources
- Toleration for diversity
- Partnership for similarity
- Intervision on international level
- New methods, different approaches and forms innovative for our countries
- Self-confidence as a professional early interventionist
- Knowledge of efective cooperation
- Implementation of good practises

And what are the results of the workshops, or in „Brussels language" – outcomes of the workshops? At least the wide network of contacts and organizations, which may help each other. We use experience of the colleagues in our projects, so that we can bring new possibilities to children with visual impairment and to their families in our country. Workshops enable extend the bank of resources of each organization. Participants bring to their own organization new methods, ideas, literature, contacts, sometimes even friendship. Toleration for diversity and partnership for similarity – common discussions and presentations of national methods learn us to be tolerant for diversity – we are able to discuss without thrusting forward the only one our view, to offer and to collaborate regardless of borders or organizations.

I consider the method of intervision videocases on international level to be one of the most important outcomes. People speaking so many languages from so many different backgrounds assumes a way how to consult one concrete child or parents and their problems. Workshops enabled us to know new methods, which had not been used in our country before and now we can implement them to our programs. For example in

The Czech Republic there are no more than 50 professional early interventionist. About 30 of them work with visually impaired. It is not a great group to create professional selfconsciousness. That´s why for us it is very valued and supporting, that we belong to the professional group on international level, that people in Nijmechen, Warsaw, Prague, Budapest do the same work and have not only the same experience but also the same problems. Maybe thanks to it we have learnt to collaborate effectively and make the best of the four days of workshops. I would resume all my words as a defence of the new project – the main outcome of workshops is the implementation of good practises.

Future
- bilateral practical cooperation
- publication
- International workshop on EI Grave 2006
- European conferrence on Early Intervention?

What is going to happen further? Some international activities among organizations already proceed. For example in the Czech Republic we have learnt of our Austrian colleagues how to organize a professional association and we had found The Association of workers in EI.
Our Austrian colleagues took part in our week course for families.
We prepare a publication at the end of the project, where we will present the outcomes and exhibits from workshops. And of course we would like to continue in the project of organizing these workshops. The next one in 2006 will be organized by our colleagues from Sensis. And what else for the future? Who knows, maybe we could organize a European conferrence on EI, focused more on theory and sources. But we are not able to manage it alone. You would have to join us and help us.

110 Co-operation with families

By: Walter-Klose, Christian
From: Germany
Organisation: Blindeninstitutsstiftung Würzburg, Therapieabteilung

Introduction

The cooperation with families especially with parents is a very important element in educating children with visual impairments. Parents and the social institution create the educational environment for the child and influence its development. Education can be fine-tuned through cooperation leading to better long-term results.

The Blindeninstitutsstiftung Wuerzburg cares children, youths and adults with both visual impairments and mental, physical or psychiatric disabilities. It offers special need schools, day care facilities, boarding schools and homes. Additional mobile services like the Fruehfoerderung and the Mobile Sonderpaedagogischer Dienst [“MSD”] help children to develop their competencies at home or at their regular school. Cooperation with parents and families is an important element for each of these social services.

In the last two years the interaction with families came into greater focus in the Blindeninstitutsstiftung. On the one hand professionals complained about difficult relationships with the families and stressed the need for improved cooperation. On the other hand, positive experiences with successful relationships between professionals and the respective carers have highlighted the significant power of cooperation. As a result, a working group has been established to develop an conceptual framework for the cooperation. This framework has since been approved by the management of the Blindeninstitutsstiftung Wuerzburg.

Elements of this concept are presented in this paper. It outlines a framework for a systematic interaction between parents or carers and social services and suggests a model for enhanced customer relationship management.

The power of cooperation

Why do parents get in contact with the Blindeninstitutsstiftung? They are looking for a competent educational service that provides their child with the best conditions for its development. The social institution shares this goal as the professionals also aim to provide the best education for the child. Both parents and professionals reach their goal if the child develops well.

Since the child shares its life with its family (whether living at home or through regular visits), an institution can teach and educate the child better, if it has the support and approval of the family. The effectiveness of pedagogical interventions is enhanced and all possibilities of education can be fully exploited. So cooperation plays a vital role in successful education. The following findings clearly highlight the power of cooperation.

- Education and care are improved, if parents actively participate and share educational goals with professionals. The child benefits from a consistent approach, as it does not need to adjust to different educational environments.
- Tensions between parents and professionals are reduced. The child does not feel the need to find a balance between parents and professionals while trying to remain loyal to both sides.
- Interventive measures can be designed and adjusted much more accurately, if the parents’ insights about the nature and background of a child are considered appropriately.

- The effects of interventions can be reviewed with the help of parents. Both positive and negative feedback is helpful for professionals and helps them to adjust their educational measures and strategies. This ultimately leads to improved education of the child.

Economical reasons of cooperation are also very important. With the help of parents a social institution can better adjust their services to the needs of its customers. Furthermore parents have important influence on the reputation of a social institution since they communicate with others about the services that they experienced. And last but not least, parents have competencies and resources an institution may not have, such as certain special knowledge, creativity, ideas which they could contribute to the institution. The participation of parents can therefore broaden the currently available care.

There are many additional arguments for the importance of close cooperation between parents and social institutions. Some can be found in Bernitzke and Schlegel (2004).

What does cooperation with parents mean?

For our purpose we define cooperation as the effort of the Blindeninstitutsstiftung to closely work with parents. Cooperation comprehends both aspects of actions and aspects of relationship between parents and the institution. Referring to Bernitzke and Schlegel (2004) the actions can be differed in actions of participation, information and counselling, and education.

In educational matters parents and the institution share a common goal of providing the best learning environment for the child. Their relationship could thus be described as a partnership.

However, the definition of the relationship as a partnership is not fully correct. Parents and families are normally used to being regarded as customers in other service contexts, e.g. with respect to trade services. They expect a similar attitude and relationship in social services. Therefore the parents can be regarded as customers. Furthermore institutions tend to have different goals than parents. For example, they need to ensure that all children in their care get the appropriate support, while parents tend to have only their individual child's benefit in mind. Furthermore an institution must take economical aspects into consideration.

Therefore, any institution may not be able to satisfy all of the individual requests of parents. There are clear limits.

Interaction as partners

Jochen Schweitzer has published 1998 a paper outlining conditions for good cooperation structures in psychosocial settings, to name but a few:

- Responsibilities must be clearly defined and accepted by both partners. It needs to be clear who is in charge for the different aspects of care.
- Close contact and personal communication between the cooperation partners must be established.
- The professional should try to obtain a good understanding of the family background.
- The professional should respect the efforts made by the family and should try to understand the reasons behind certain behaviour.
- The professional must respect the parents in his personal und occupational identity.
- Struggles of power if parents or helpers are the real experts must be avoided.

Schweitzer stresses that cooperation works, if all participants can benefit and reach their respective goals. Therefore cooperation does not take place, if significant conflicts of interests exist or if the formal conditions of cooperation are experienced in a negative way.

The aspects mentioned above can be sorted with the help of 5 dimensions. These dimensions are taken from Manteufel and Schiepek (1989) and characterize cooperation.

1. Definition of Goal and Offer
   This aspect looks at the way an institution discusses possibilities and limits of a service with the parents, adjusts its offer to personal needs and uses information received from parents effectively.
2. Competence
   The dimension of competence includes aspects of equipment, knowledge and educational standards. Parents' participation in the service can be defined.
3. Communication and interaction
   Both content and underlying attitude in communication and interaction are captured in this aspect. Mediums and settings of communication can be characterized. Schweitzer emphasizes the importance of clear defined responsibilities and personal communication.
4. Cooperation
   Acts and media of cooperation can be defined at point 4. Offers of participation, information or education may be described.
5. Emotional dimensions
   Emotional aspects are very important for parents. Respect and confidence are essential elements of interaction between parents and professionals.

The cooperation with families and parents as partners can be organised with the help of these 5 dimensions. Structures can be created guarantying that all partners can profit.

The relationship between social services and customers

What satisfies a customer? Stahl (1998) emphasizes, that customer satisfaction is based on the relation between the utility of the service and expectations about the service. According to Homburg (1988), the "What" and the "How" of services are central. The "What" means the utility and the costs of a service or product. The "How" means the way the service is performed. With respect to the "How", Parasuraman's et al. (1986) empirical study demonstrates that service quality is judged in 5 dimensions:

1. tangibles
2. reliability
3. responsiveness
4. assurance
5. empathy

"Tangible aspects" of service quality refer to the appearance of the institution, its buildings and equipment perceived by the customer.

The perceived "reliability" affects customer's feelings of safety and confidence towards the service. It describes the ability of performing the promised service reliably and accurately and, of course, the competence of its employees.

"Responsiveness" means the motivation of its staff to help the customer.

Aspects of staff competence, obliging behaviour and the ability to invoke a customer's confidence are captured by the fourth quality dimension "assurance".

The final, yet very important aspect is the perceived empathy of the institution and its employees towards its customers, their individual needs and personal situation.

How can these aspects be applied towards cooperation between parents and professionals in a social institution? They may help to structure acts of cooperation and the relationship between an institution and its customer.

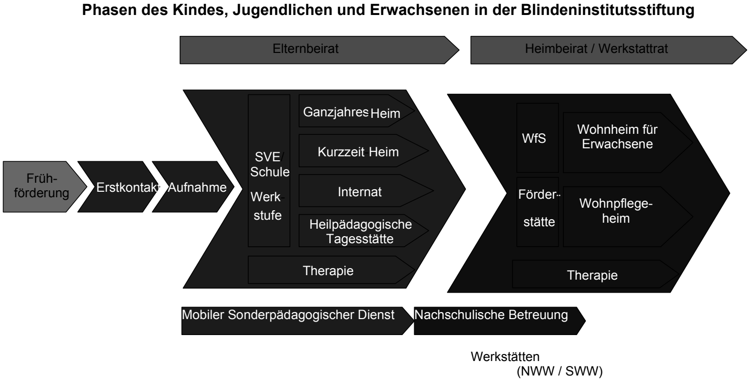
Parents' different needs

The third an the last important aspect of cooperation concerns the different needs of parents.

In the real world cooperation often does not take place, because parents do not want to cooperate, because other needs are more important. They, for example, do not always attend special rounds of talks at their child's school. Obviously, they have additional roles and functions in life. They have a job, the care of siblings or a partnership requiring sometimes more attention than the education of the child with visual impairments. Remembering Schweitzer (1989) it became obvious, that cooperation takes not places because parents cannot reach their goals in cooperation. Especially when parents are comfortable with the institution, its service and its quality, they can afford to reduce their cooperation activities.

Furthermore the needs of parents differ over the course of the time that the social service is provided. Our colleagues in the Blindeninstitutsstiftung in Munich stressed the different needs of parents at different times and therefore suggested a phase model. This model was the base of the conceptual framework shown in illustration 1.

Illustration 1: Phases of interaction between parents and the Blindeninstitutsstiftung



The cooperation with parents at the first contact ["Erstkontakt"] is very important. The base of future interactions is built. Most importantly, parents have to determine whether their child can profit from the social service offered. Parents assess the tangible equipment, competence and atmosphere. Food and affectionate interactions are very crucial indicators for parents' perception of an institution's competence.

In this case parents decide whether they want to take use of the educational service. They are customers.

Aspects of cooperative education as partner became important, when the child visits school, for example. Now aspects of planning pedagogical interventions get central. Parents want to feel sure, that the child still has best conditions for its development. The possibilities of special education services, therapeutic support and aspects of participation and information are now more important.

The company and support of parents is especially important when the child changes the field of education. Parents need information and support for example when the child first visits school or enters boarding school.

Relationship management in social service

In a well organised relationship management possibilities and limits of cooperation acts can be described concerning the three central elements of the relationship with parents:

1. Parents are partners in the education of the child.
2. Parents are customers.
3. Parent's needs differ

Remembering the phase model descriptions of the cooperation as partners and the relationship with customers can be made at every relevant "phase" in the Blindeninstitutsstiftung. Parents have different needs at the first contact, when their child visits school or when he visits the home for adults.

The interaction between social institution and customer can be described with the help of the 5 dimensions relevant to service quality mentioned above. Having in mind that customers compare the expected service quality with the service quality experienced, the professionals must outline relevant expects. Therefore it is important to show parents the tangible equipment in the cooperation. During the school service information brochures must present special equipment. In rounds of talk professional can present the use of special therapeutic material. In the Blindeninstitutsstiftung Würzburg parents get to now the tangible equipment of school service at parent-teacher meetings.

The satisfaction of customers facilitates cooperation. Both aspects of the relationship depend on each other. Referring to the cooperative partnership it can be organised with the help of the 5 aspects relevant to cooperation.

When goal and offer of the social service are defined, in school for example, parents and professionals can adjust their individual activities. Participation of parents can be organised. Therefore parents in Würzburg are involved in the planning of educative interventions. Possibilities and limits, expectations are discussed at parent-teacher meetings. Referring to customer satisfaction it is important to name tangible equipment, demonstrate competence and behave in an empathic matter, for example.

The cooperation with parents and families takes places all the time. Like Watzlawick you can say, *that one cannot not cooperate*. All actions influence the relationship between parents and professionals. But the positive effects of the cooperation for the institution both in pedagogical and economical matters suggest a planed approach to interaction.

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Contact: christian.walter-klose@bli

111 Support of parents of visually impaired and blind pupils at mainstream schools

By: Burger, Christine
From: Germany
Organisation: Blindeninstitutsstiftung Würzburg

Abstract

For more information please contact the author: christine.burger@blindeninstitut.de

Visually impaired and blind pupils at mainstream schools are living and learning with none disabled children of the same age in an environment, which, to a great extent is focused on vision. Therefore not only the pupils by themselves but also their parents are confronted with various challenges. To cope with these challenges they need support, which exceeds the academic field. Already when the child starts school many parents are very insecure Helga Naumann. They worry if the child will be able to meet the demands of a mainstream school. Concerning their education they wonder how they can support their child without expecting too much. How much autonomy can they allow their child without exposing it to too many risks? How can they support their child with its visual impairment in the leisure time? Which career prospects will it have after school?

To support parents in all these areas the itinerant teachers, the social workers and the psychologists have to work closely together.

In this lecture contents and forms of cooperation with the parents and with groups of parents will be presented.

112 Family: Contributing to personal growth of children with visual impairment

By: Gastón López, Elena; Lucerga, Rosa, Rodriguez de la Rubia, Emilio
From: Spain
Organisation: ONCE

Purpose

The intent of this paper is to report on the author's experience with groups of visually impaired children – between the ages of 4 and 6 – and, in parallel, their parents. This scheme, first adopted in October 1999, continues to be used at present as part of the programme implemented by the Early Intervention Team for Visually Impaired Children in the Community of Madrid.

Theoretical grounds

Visual impairment conditions personality development not only from the standpoint of the total or partial deprivation of the perceptive function itself, but from the social vantage as well, in the way children with such disabilities are viewed by others and in particular their parents.

As many theorists sustain, our self-concept has to do with what we are and what others see us to be.

Each family group copes with visual impairment differently and the disability acquires a specific meaning for each parent.

Our experience has shown that the significance the disability has for parents produces a latent effect on children throughout their lives that may be a help or a hindrance to their development.

Objectives

Building on the foregoing theories, we felt that it would be important for visually impaired children to join a group where they could share their individual experiences in their interactions with their sighted peers. Children do not generally express their feelings in words, but through play. We therefore believed that encouraging a group of playmates to express their emotions through games would be a way of helping these children to later verbalize and understand their condition and contribute to their acceptance of certain impairment-related issues and to the construction of an identity in which this particular disability would be assimilated into their abilities as a whole.

We also thought it would be meaningful for parents to have a reference group with whom to share and analyze experiences and feelings, since that would help them accept their condition and process their own identity as parents of children with a disability.

Ultimately, the two groups are an attempt to reduce subjective malaise among children and parents and further the youngsters' growth and independence.

Groupes of children

Desciption of the experience

This project began in the 1999/2000 school year with a single group of five children, some totally blind and some visually impaired, who had finished an early intervention programme and who, we felt, could benefit from the experience. Although the group was somewhat small, the experience proved to be so successful that we decided to include children with low vision as well in future editions.

After a number of changes in successive years (separating blind children from or integrating them with youngsters with low vision; separating and combining ages, from 4 to 6), we concluded that the best results were obtained with groups with different degrees of visual disability, but in the same stage of development. The awareness of the disability and its consequences and the construction of an identity in which these limitations are placed in the context of each child's capacities, are processes that necessarily depend on each person's developmental maturity. In this last school year, we formed two groups, one with 4- to 5-year-olds and the other with 5- to 6-year olds.

The general objective pursued with the group of younger children was their socialization and integration in group dynamics: recognizing others as peers - similar but not identical -, learning to negotiate, understanding the session structure, accepting rules and so on.

Most of the children in the older group had already participated in the first level the year before. In addition to socialization, this group pursues the experience of belonging to another group, favouring analytical capacity and critical thinking about their own and others' conduct, learning to intellectualize and verbalize feelings…

We found that the most appropriate size for groups ranges from 6 to 10 children. Groups with fewer than 6 members are scantly operational, due to absenteeism. Moreover, since the children have such varied personal traits, when in smaller groups they tend to establish special relationships with one of the adults or another child, making group bonding more difficult. Conversely, if groups are overly large, the adults are unable to pay specific attention to each child's particular circumstances.

In the first year that children participate in the group, they need adult mediation to organize and develop the games and understand the session structure and rules. In the second year the adults are less involved in organizing games and more in containing and helping children to express and formulate their feelings.

As mentioned earlier, these groups are not intended to be merely recreational, but aim to enable children to take stock of their situation, share it with others in similar circumstances and relate to this group as a separate reference, in addition to their class at school or other communities. For this reason, activities are not geared solely to movement and socialization through body language: rather, a substantial part of the time is spent in dialogue prompted by the children themselves wherever possible or the adult monitor, and moderated in any case by the latter. A wide variety of feelings have surfaced in these groups, covering the entire range of childhood emotions. The ones found most frequently are listed below:

- Being different.
- Impotence, frustration or anger for not being able to do things the way others do.
- Guilt associated with aggressiveness.
- Jealousy and envy towards siblings and/or classmates...
- In addition to these feelings, we observed certain defensive behaviour that hinders children's adaptation and satisfactory personal growth.
- Reluctance to grow up, associated with a fear of separation from adult care-persons.
- Uninhibited behaviour in the group in parallel with submissive behaviour in other environments.
- Difficulty to accept the disability, particularly in its social dimension (being less than or unlike others), compensated by self-conceit.

Methodology

Generally speaking, the sessions are divided into four periods: an initial period including reception, ascertaining the subjects that the group members want to discuss and organizing session activities; a second period for games involving motor skills or rules, when the children express themselves by playing; a third, free play period, subject to certain pre-established rules, in which the adult adopts an observant attitude, intervening only as necessary; and lastly, a closing period to analyze session developments, review the subjects discussed and close the session.

Groups meet once a week from October through May, inclusive.

The groups are led and co-ordinated by team teacher-therapists, two or three per group depending on the number of children, the proportion of totally blind children and the proportion with motor limitations, who need more direct support to participate in group activities. Sessions, or modules, are led by only one of the adults. The others have a supportive role, in keeping with the group's or a given child's needs. Except where appropriate to the case, it is important to prevent children from developing dependence on a particular adult, as this hinders their integration in the group.

When selecting group participants, each child's specific circumstances must be previously evaluated. Individual therapy may be more appropriate in some cases (children with personality disorders or in a stage of development very different from the group average) and in others it may be advisable for them to join the group somewhat later (children whose impairment has been recently detected or who have recently lost their sight). Some children may even be found to be inappropriate for the project (certain children with severe personality conflicts do not benefit from group interaction and may disrupt the work with the others. And yet removing them from the group after they have joined may have harmful consequences for the child. Hence the need for a careful selection).

Obviously, for intervention in the successive working sessions to be effective, each child's personality traits and specific problems must be determined. Consequently, although the group is monitored by three team professionals, the supervisory meetings with the rest of the team or mental health specialists, if necessary, are very important both prior to and throughout the school year.

It takes time to prepare each session:

- Subjects to be discussed if the children suggest none or subjects (the growing up conflict, jealousy over a new-born sibling, anger during recreation at school…) that are too important to be overlooked.
- Way to approach different subjects: stories, dialogue, how to prepare a game…
- Specific activities to be conducted, taking account of each child's circumstances: what games are to be played depending on how the session unfolds, time to be allowed for free play (and the support some children need to position themselves spatially, find toys...), songs and circle games (and how to involve the shyer children)...
- Ways to solve possible conflicts (child that refuses to participate, child who cries, child who strikes his/her playmates…): directly (removing the child from the activity), talking it over at the end of the session…
- Reporting to parents. Although the confidentiality of what children say in the groups must be respected, their attitudes, participation… are important to parents. For that reason, in addition to specific information that can be provided routinely, an initial meeting is organized to explain the objectives pursued and a final meeting to evaluate the group. This is done in a general manner, except in cases where the severity of the conflict calls for some other type of intervention (in such cases, after analyzing the issue with the team, the most relevant alternatives are proposed,

which may include individual therapy for the child or any other additional treatment outside the group).

Parent groupes

Parent groups are designed to favour encounter, reflection and analysis in an environment in which group dynamics plays an essential role. Two team psychologists act as group moderators, clarifying or raising new issues, summarizing participants' comments and posing any questions they believe to be relevant to group progress.

Generally speaking, the sessions begin – after the customary greetings – with a summary of the issues dealt with in the preceding session or sessions (if subject matter is carried over) by one of the psychologists. This briefing covers the opinions expressed by the various participants, attempting to set them in an interpretative and meaningful context that contributes to an understanding of their latent significance and the importance of each participant's remarks on the specific subject matter. Sometimes the question is left open, to continue formulating the content discussed. The summary is not a mere ideographic narration of events, ideas, experiences, etc., but rather relates this suite of elements to their underlying content: mental, emotional or action-related.

On occasion an event, incident or personal concern gives rise – for its depth or special significance – to supportive remarks on the part of the members of the group who try to shelter and aid the person bringing the issue to the discussion.

Participants' contributions are guided by the group psychologists, taking account both of the basic personalities of the group members and the emotional and mental reactions that may be behind their comments; they extract the core content for fuller understanding by all group members; ask participants to pay particular attention at particular times and so on. They attempt to avoid lecturing to the group in their delivery, and to make their interpretations and opinions as down-to-earth as possible.

Sessions end with a brief review of the ground covered or a simple suggestion to reflect openly on the meeting content for future discussion.

The successive groups have dealt with a wide variety of questions from very different standpoints, since situations and opinions are very specific to each family. The most recurrent subjects are listed below, in the acknowledgement that the wealth and complexity of the actual discussion are necessarily forfeited in any such summary.

- Most parents feel sorrow for the children and themselves; guilt for having caused them harm; anger or impotence over the inevitable; uncertainty or insecurity about the future. They also acknowledge being overwhelmed or strained to the limit when dependence is prolonged or excessive…
- There is general concern about children's social integration in school, particularly during recreation when there are no supervised activities.
- They allude to reactions that visual disability prompts in others: pity, discomfort in the face of something unknown and sometimes mockery.
- One very common concern is about when and how to talk to children about their disability when they become aware of it.
- General child-rearing issues are also discussed:
  - The difficult balance between making demands and being tolerant or protective. In this regard we observed a general reluctance to set and enforce rules.
  - Complaints about some problematic behaviour in children: passiveness, recalcitrance, demands…..
  - The need for consistency in the couple, the difficulties encountered in this respect and in differentiating the respective roles.

Conclusion

The intense and very painful feelings that blindness or severe visual impairment prompts in children and their parents are a direct cause of stress.

Such situations trigger a variety of defence mechanisms that are not always adaptive and may even obstruct the child's progress or jeopardize the entire family's well-being.

Verbalizing these feelings and being able to share them with persons undergoing similar processes in a therapeutic environment afford subjective well-being, help to modify certain attitudes and contribute to acceptance.

The following list of a few of the comments made by the children themselves at the end of the year is provided by way of conclusion:

"I learned to think"
"I learned to talk"
"I met friends"
"I could read stories. I like the scary ones best."
"The ones I liked the best were about growing up."
"I liked the one about a boy who beat his friends in a race".

Some of the parents' remarks were:
"Listening to others helped me realize certain things"
"Without the group I would never have talked that way about my son's disability or how we're bringing him up".
"Now I'm able to talk more calmly about things I couldn't mention a year ago".
"Feelings surface here..."
The group is like a game of dominoes: you move one and all the others follow.

113 Early attention and family adjustment with blind and/or visually impaired children

By: Losada.Martínez, Mª José; Gonzales-Benito, Carlos
From: Spain
Organisation: ONCE

Visual loss can significantly affect the life of a person; but not only that particular person, but also his family, and of course, the family dynamics. In the event that said loss occurs in a child, the effect of the Adjustment on the family life is **particularly serious,** due to the fundamental function of the family in his development.

Let us see now, what we understand and what differences are established in the terminology of adaptation, acceptance and adjustment:

While **adaptation** refers to "adapting or accommodating" to a new situation, and **acceptance, refers** to "admitting" the new situation, when we talk about **"adjustment"**, we are referring to the successful conclusion of the process of adaptation to a new situation, in our case, a situation of blindness or visual impairment; in contrast with adults, in children, the duration of this process is usually longer and in most of the cases, more complex.

During the first years of the life of a blind child, it is the family with their **attitudes, beliefs and expectations,** the one to define the process of adjustment to the child's visual impairment. The blind baby will have a good adjustment or not to his situation, depending upon the process carried out in the heart of the family; in other words, if there is a good adaptation, the necessary resources will be adopted for the ideal development of the child, that is, an early intervention.

Furthermore, the visual loss will represent a **stressful** situation for the family (Lázarus and Folkman, 1984, define this stress as the specific relationship between the person and his surroundings, whereby the subject perceives that he is exceeding his recourses and endangering his well-being), due to the repercussions which it will have on their lives. In the case of the family, it is a situation of almost permanent stress; the visual impairment –which is **irreversible**- constitutes a chronic, stressful experience which will require major efforts in order to deal with the situation. The reciprocal relationship between the family system and the adaptation can be explained, taking into account the fact that development is a dynamic process in which the child and his family feel influenced by the surroundings, and their environment can exercise an influence, in turn, on them. The person and the environmental factors change continuously in response to one's adaptation.

The child learns most of the things at home and so it is necessary for the child's family to form an integral part of the programmes. The participation of the family is considered a fundamental factor not only in the initiation of the learning process, but also to conserve and maintain what is learned, for they are the ones in daily contact with the child. Both directly and indirectly, the family transmits to the child their own perception of the visual impairment, and so, it influences the experiences that are presented to the child as to what he is expected to achieve (Westbrok and Legge, 1993).

Even though a large part of the first investigations on adaptation (Schipper, 1959) centred only around the children, the work carried out in the last few decades contemplates as well other members of the family, such as the parents (Turner and others, 1994), siblings and the interactions between all of them.

When we evaluated the emotional responses of the parents, certain specific characteristics were discovered: in the first place, the parents are **two individuals** although they interact closely with one another, and in the second, the affected party is the child, and so there may not always be a willingness to receive psychological attention on the part of the parents. Furthermore, in the parents' process of adjustment, a positive evolution is not always found. Feelings of guilt, negation, etc., may persist which may justify inappropriate behaviour in some cases, which would affect the emotional development of their children.

Let us consider **certain aspects which may interfere in the adaptation to the visual impairment**:

The adaptation is difficult because frequently, the parents do not have a clear **diagnosis** as to the visual impairment of their child for months or years after his birth, even in the event of congenital visual impairment (Nixon, 1991). This initial confusion creates, in turn, a feeling of uncertainty as to the prognosis, resulting in continuous and unexpected maladjustments in the family and in the child, which may lead to an interruption in the programme initiated and in the process of adjustment, due to a fear of what will happen to the child.

The **seriousness** of the child's visual impairment will have an important effect on the adaptation between the child and his parents (Dyson 1991). Research and actual practical experiences show that the situation is qualitatively different in the case of a congenital or an early initiation of the visual disability (first year) in regard to the general psycho-social development and to sensor-motor and sensor-spatial development in particular; as regards the adaptation of the family, it seems that it will be more problematic when the impairments are adventitious than when they are congenital (Bragg, Brow and Berniger, 1992).

We have to always bear in mind the **characteristics** of each family in regard to: attitudes, home environment, how they deal with the situation, social support and socio-demographic variables (income, marital status, etc.)

Fortunately, in recent years, there has been a greater interest shown in families with children with certain disabilities; in the same way, the importance of an early intervention with the child in his family environment is absolutely recognised. We find that a large part of the favourable prognosis for the evolution and development of the children will depend to a great extent on the emotional adjustment of his parents.

As of the notification of the diagnosis and during the child's entire development, the family will go through certain **critical moments** in their adjustment and adaptation to the new situations which will depend on the changes taking place in the child in relation to this environment and surroundings. Based on our own experience, we can say that certain critical moments will arise in which we have to be more alert: the moment of the diagnosis (if we are given this information), the first birthday, starting nursery school, starting Primary School, adolescence, etc. Consequently, each change demanded by the child's environment will imply a continuous readjustment.

What will be the family's initial reactions once the diagnosis is received?

From the very beginning, the parents tend to "reject" or refuse to believe it. A feeling of incredulity appears. They think it is impossible; the doctor must have made a mistake. They do not want to accept the diagnosis and so they initiate a "medical pilgrimage", of variable duration, depending upon the case -it can even last for months-, and so, there is frequently a delay in the intervention and we do not begin as early as we would like, even though we are aware that the first thing the family will do is seek a second or third opinion.

Very often, the medical staff are blamed, as a strategy for dealing with the problem: "Something more could have been done", or "It could have been avoided". They often

feel defenceless: "We cannot do anything". Crying becomes, for them, an emotional outlet…
On occasions, they try to avoid the situation and may avoid even physical contact with the child. In some cases, the father spends more time at work, trying to stay away from the home as much as possible (conflicts may arise between the couple, due to the extra burden placed on the mother, etc.).
There can be a manifest or secret rejection (the diagnosis may be hidden, even from other members of the family …)
However, the reactions are not the same in every case; there are families which assume the situation in a more positive way and seek the support and the necessary resources at their disposal in order to intercede with their child.

Differences in the family adjustment: congenital visual impairment / adventitious or acquired visual impairment.
As we mentioned before, there may be certain differences in the family's adjustment to children with congenital and adventitious visual disability and we will now describe some of these reactions:

In the congenital visual impairment, there are several causes by which a person is born with this permanent impairment; all of the expectations which were invested in the child appear to be frustrated they change entirely. The situation has a great effect on a psychological, physical, social and family level:
On a psychological level, there is an emotional maladjustment, due to the effects of the unpleasant surprise; the level of anxiety increases due to the fact that they do not know what will happen, how they will handle the situation; feelings of guilt and low self esteem appear.
On a physical level, it results for the most part in a greater burden for the parents and in an excessive focus of attention on the child.
On a social level, the family might isolate itself from others and abandon their social relations; they might feel that they are not understood and they make comparisons with other children. They feel socially vulnerable and under attack.
On a family level, as we have said, the family members may not want to accept the reality and try to hide the impairment from the rest of the family. Negative repercussions on the family dynamics may be expected, which would affect in turn the emotional and evolutionary development of the child.

In the case of adventitious visual impairment, in general, the causes are often medical: detached retina, viruses, etc. The adjustment depends on the age, the younger the child, the greater the influence of the parents on the child's adaptation.
In the case of these children, -in contrast with the congenital visual impairments –, the parents have already established a highly important affective bond which has conditioned and influenced the child's development. The strategy for dealing with the situation usually involves a confrontation with the medical services; they are blamed because the family thinks that the problem could have been avoided.
On a psychological level, the families experience a high level of anxiety due to the loss; they need an emotional outlet, and all of this produces an immense physical distress.
On a social and family level, they feel more supported or sheltered by their family.
In this case, the parents' adjustment to the situation, depends fundamentally on their children's adjustment and vice versa; there is a feed back between them.

Psychological intervention with the families

The intervention should be carried out as early as possible and in a **preventive manner**, in order to reduce the family's level of stress from the very beginning so that it does not have a negative effect on the child's development. As we said before, the family's failure to adapt to the situation, will influence the child's adequate adjustment to being visually impaired. From the very beginning, our attitude should be that of listening to the parents and informing them as to the visual impairment of their child. We should emphasize the importance of establishing an affective bond with the child and assure them of **their competency** as parents and our role as collaborators in their child's education. We will accompany the parents throughout the child's evolutionary development in which critical periods will arise and we will try to anticipate the information and orient the family to achieve the most effective responses which will help them towards a better adaptation.

Therapeutic interventions include different systems of response:

-*On a physical level*: by trying to reduce the tension and anxiety which are produced as a result of the situation of stress.

-*On an emotional level*: by changing their attitudes, beliefs and expectations which may interfere with the adjustment process

-*On a socio-family level*: by encouraging their participation in family groups with similar family circumstances so that they do not feel like "the only ones", encouraging them to resume their social life once again.

Our work in Early Attention is carried out within the context which we feel is "most natural " for the child, that is his home, for it is there where the parents have to deal on a daily basis with the challenge of educating their child and he, in turn, finds himself in a familiar and friendly environment.

In addition to the individual intervention with each family in its own environment, a group intervention will be arranged whenever possible, bringing the groups of parents together so that they can share their and emotions and, above all, have them realise that they are not the only ones facing this situation, and that they are not alone in this very important process of Early Intervention, which requires the collaboration of parents and professionals.

We have already spoken of the importance of the family and of the concept of family adjustment, as a fundamental aspect of the work involved in Early Attention in order to make sure that these interventions prove effective.

We are now going to talk about several characteristics corresponding to the visual impairment which would determine the methodology of the work aimed at the child and his family, but before doing so, we have to say that our **population is characterised**, in the first place, by its **heterogeneity.**

<u>Heterogeneity</u> which is determined by the following:

- **The nature and quality of the visual remnant** (we have observed in our professional history that children with the same diagnosis, do not always show a similar visual efficiency).
- **The moment of the loss of vision**, that is, if the impairment is congenital or adventitious.
- **The presence or absence of associated impairments**. We have to say that a large part of the people which come to our Service present associated impairments and that in many cases the impairment which we can classify as "predominant" is not the visual impairment (we encounter children with severe neurological affectations, and with generalised functional implications).

We also want to mention the concept of **evolutionary risk** in blind and visually impaired children as something to bear very much in mind in regard to the vulnerability which we find in the blind child.

We are speaking, then, of **evolutionary risk** in the blind or visually impaired child for different reasons:

1.-Due to the lack of vision, there is a reduction in the flow of information. Most of the information reaches us through our vision and even though many stimuli reach us through other sensorial modes as well, vision carries out the globalising and integrating function of our experiences.

2.-Due to repercussions which the lack of vision might have on the child's environment and on the relationship he establishes with it.

The environment produces responses and the blind child will have to make longer trips in order to reach the same place as the sighted child. The blind child has limitations in his learning through observation and through spontaneous imitation.

3.-Due to repercussions which the visual impairment might have on the family and social setting.

In this sense, we may encounter difficulties in establishing human bonds. The lack of vision implies the adoption of a different form of communication on the part of the family which is often unable to make this adaptation due to their initial emotional state (Lehonhardt, 1985).

We are going to mention now certain aspects of the blind child's development taking into account of some of their unique **characteristics:**

1-The blind child, at birth, has the same amount of reflexes as the sighted person. It is as of the third month that we begin to encounter differences between the blind child and the sighted child which are related to **the coordination of the vision and the grasping**.

The ear – hand coordination in the blind child will be achieved with some delay in regard to the eye – hand coordination in the sighted child.

2- There is a **slower acquisition of the concept of permanence of an object in the blind child**, due to the complexity resulting from having to produce mental images of objects and their location in the space when there is no vision. It is also due to the limitations of the senses of hearing and touching for recognising the world.

Several authors have studied this aspect of the child's development (Fraiberg 1977, Bigelow 1986...). According to these studies, it seems that the blind child elaborates the idea of the "permanence" of the social objects earlier, that is, of the persons and in particular of the figure of affection; than the "permanence" of the physical objects.

3-The manipulative development of the blind child, from the point of view of grasping, also presents it own characteristics.

The blind child tends spontaneously to prolong the phase of sucking the objects instead of handling them with his hands in a coordinated manner. We will have to work on certain absolutely necessary skills for the bi-manual coordination and the acquiring of more complex manipulative skills .

Tactile perception presents specific characteristics (Lucerga 1993) which have something to do with the active touching, a differentiated use of the dominant hand in regard to the non-dominant hand, touching movements, etc. The identification of objects is carried out bearing in mind the analytical and procedural nature of the sense of touching.

4-There can be difficulties in the intentional movement.

This does not mean that it is necessary to carry out a specific programme of mobility with the child. If there is a good relationship with the mother or main figure of affection, the blind child can have the opportunity of experimenting with many body positions and his relationship with the world around him will become interesting to him; then he will begin to be aware that there is "something more" beyond the scope of his hands which will encourage him to move about.

5-Difficulties for establishing affective relationships and bonding.

The adult may find it very difficult to interact with the baby if it is unable to see. For the human species, the look is the main route for contact with the other person until the language appears. Therefore, it might happen that the parents of the blind child may attend to his physical needs, but they fail in the affective aspects of communications as they do not know how to interpret their primary interactive behaviours. We therapists have to help the parents understand the signals coming from the blind child so that the paternal-filial interaction can be produced.

6-A limitation arises in the experiences with objects and situations which make up the representative intelligence.

It is not possible to evoke and reproduce in mental images, symbols or signs, objects and situations which are not present, if they are not constructed based on experience. The experiences tend towards representation (Piaget and Inhelder) and it is difficult to separate the intellectual and affective aspects from the psychological development of the child.

In the case of blind children, we find that the lack of vision results in a knowledge and familiarity with a fewer number of objects, which, in addition, have to be placed directly in their hands. Furthermore, it is necessary to awaken their interest so that he can be able to talk about them afterwards.

7-Difficulty in acquiring the "I" concept, as the self-representation of themselves; That is, in acquiring the "I" as a concept within a world of objects which are also "I" (Fraiberg 1977). The blind child has to find his self-representation, without being able to count on the only sensorial organ which is especially adapted to carrying out the synthesis of all the perceptions and of the data corresponding to the "I".

8-There is a delay in the symbolic playing.

There are aspects in playing which can be conditioned by the visual impairment (Lucerga and others, 1992) such as affectivity, space, role identification …

The evolution of playing is conditioned by the development of the thought processes.

Early Attention extends to situations pertaining to the initial schooling and so we will now refer to what are the **bases for the integration** of the blind and / or visually impaired child in the school as of Early Attention:

1-Nursery school represents the very first contact with the educational system for the children and their families.

2-For the child, schooling represents a separation from his mother and from the safety and sense of security which the family provides, but it also represents the opportunity to live new learning experiences.

Therefore, integration in the nursery school calls for special attention in each case, taking into account both the child as well as his family, and bearing in mind aspects of an emotional nature.

As regards the child, we must mention certain "requirements" which will facilitate his incorporation in nursery school:

1. **He must have an emotional and social maturity** which will make his integration possible.
2. **The process of blindness should be completed or in an advanced state of acquisition.**
3. **That the child has developed a language for communication** (oral or with gestures)
4. **That he has had prior experiences of separation and in contact with other children.**

Going to nursery school should be progressive and it is necessary to "accompany" the parents in this process in which they may be plagued by feelings of anxiety and many doubts. The parents generally find this experience very painful. They encounter in this situation permanent elements of comparison and the limitations and difficulties of their child are clearly evidenced.

Furthermore, in this process the teacher may have many questions; questions which produce a sense of insecurity and anxiety, and so it is necessary to collaborate with the teaching community who will be working with the child.

In conclusion, we want to say, as a means of **summarising the main points**:

l –**The current theoretical contributions** which support the practical application of the programmes for Early Attention **emphasize aspects such as**:

family adjustment,

psycho-social support to the family,

different aspects related to the child's health etc.,

The attention should not be directed only at the child, but rather the actions should be aimed at the child, at his family and at the community in general.

Focusing only on the child would imply simply instructions in skills which would make the child a "robot-like" subject, furnished with mechanical learning processes and with a very limited personal development.

2-Early Attention has a **multi-faceted focus**, in which the work to be carried out with the parents stands out, both on an orientative level as well as a source of support so that they can interact effectively with their child.

Also within this context is the necessary **support for the child's integration in the school**, when it is considered the right moment.

3-The attitudes, thoughts, feelings and behaviours which the parents maintain with their children determine the history of the relationship between the child and his parents.

4- Experience confirms with us the importance of working with the family. The parents are the only ones who can give their child a real, symbolic, physical and affective space in order to awaken in him the desire to live, discover and love the world around him.

5-What is important is to work with **"the here and now"**, without losing sight of the dynamic nature of the families, the evolution of the child, and, on many occasions, the uncertainty which accompanies the different visual situations of the people we attend.

6-The professional of the Early Attention programme must **avoid** becoming an **"expert"** who tells the parents what they have to do and how to do it; he should try to develop a **cooperative relationship** in which each one furnishes the other with valuable information and skills.

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114 The application of new technologies in the education of students with blindness in early ages / resources and experiences

By: Corbella Roqueta, M. Teresa
From: Spain
Organisation: ONCE

Purpose

Faced with the need to provide education and in the pursuit of optimum achievement in that endeavour, this paper intends, firstly, to show **how** and **why** we should **initiate blind toddlers and pre-and primary school pupils in the use of ICTs**, not only to ensure their competence in the Information and Communications Society of the future, but to provide them with the same opportunities as their sighted classmates; secondly, to show **which resources** should be used to achieve this objective; and finally to discuss the results obtained when these techniques are deployed.

ICTs in the education process. Innovation and creativity

If we define **quality** to mean qualitative transformation or change in our pupils, during the education process or experience we must enhance their knowledge, aptitudes and skills. These are the tasks generally performed by ordinary schools; it is up to us, teachers at educational resource centres, to enhance this experience by providing **working methodology, technological resources (adaptations) and our experience** in the field of visual impairment. These efforts are geared to ensuring that our blind pupils, at the end of the education process, are able to fully participate in social and occupational environments deeply committed to the use of new technologies, as well as in the Information and Communications Society.

Preliminaries

No-one questions the importance of computers and ICTs in today's society. Computers are fast becoming a basic tool for the population as a whole to access information, and are particularly important for blind pupils inasmuch as they are essential to their education and personal development, constitute a means of communication and enhance their employability.

A cursory surf of the web reveals that, compared to the resources available for blind adults, there is a dearth of resources to cover the needs of blind pre- and primary school age pupils. As a general rule, ICTs are not introduced until pupils can learn to use a keyboard, work with software designed for people with visual impairments, read a Braille display and so forth. Whilst many efforts are being made to narrow the digital gap for adults via internet accessibility, accessible e-learning and so on, still far too few are geared to blind pupils in early childhood or pre-school.

In light of these needs and in the wake of the educational policy initiated in Spain to introduce toddlers and pre-schoolers to ICTs, the ONCE has undertaken efforts to enable blind pupils to access ICTs, along with their sighted classmates. Like them, blind children mainstreamed in ordinary schools begin to use computers in a recreational context to acquire basic information and communications technology skills.

Line of research

The ONCE purports to respond to these needs not by adapting the environment, which is a task for experts in aids and appliances for the visually impaired, but by seeking software and hardware resources for the general public that may be useful in this regard. In this process of continuous improvement, the idea of transferring adapted

technology for adults (Braille display, Jaws and so on) to pre- and primary school children is implausible; rather, we need to **innovate, be creative and discover alternative ways** for very young blind children to access computers.
In this line of research, and stressing in particular the use of ICTs with toddlers and pre- and primary schoolers, our chief working objective is to use computer tools with such children, lowering the age for blind pupils to access technology and favouring their integration with their sighted classmates.

Response to needs

Hardware/software requirements for blind pupils to access ICTs

1) An **easy-to-use** tool for initiation in the use of ICTs for readier familiarization with computers.
2) Accessible recreational materials providing for **independent** play so blind pupils can share computer play with their sighted classmates.
3) Software that helps develop **basic computer skills** (use of cursors, space bar, numeric keyboard, and so on).
4) Resources that **reinforce other** necessary and specific **aspects** of blind pupils' education such as **auditory discrimination or haptic perception.**
5) Edutainment tools: i.e., tools that provide for the **recreational** use of computers while **reinforcing curricular content**.

Objectives in the use of ICTs by blind pre- and primary school pupils

1) Afford our blind pupils the same **opportunities** as their sighted classmates to acquire **basic Information and Communications Society skills** (adapted to their aptitudes).
2) Establish a **basic new technologies curriculum for blind** toddlers and pre- and primary school pupils.

Resources that provide blind pupils access to ICTs

Since very young blind pupils are unfamiliar with keyboards, we need peripherals and software that either replace the keyboard or simplify its use.
The hardware chosen to access computers includes, essentially:

(Dance pad) and/or Joystick.
Concept boards.
(Touch screen).
Keyboard (basic keys: enter, cursor arrows, space bar, etc.).
Braille mouse (VTPLAYER).
Digital "pen & paper". (under study)

Dance mat, dance pad

The chief characteristic of this recreational peripheral is that it can be used standing up - stepping or dancing on it - or on all fours. It is sold with Playstation or PC dance games that come with music and instructions on dance steps. It takes the place of a joystick.

Description

Physically, it is square, approximately 1 m wide, and divided into nine 30x30-cm cells or press buttons. The player stands in the inactive centre cell, while the other eight represent the four cardinal points and four corners.

Characteristics

Together with "Toca-toca" (touch-touch: action-reaction) and "Tswin" (concept keyboard manager) software, the dance mat teaches very young blind children to dance.

Advantages for toddlers and pre-schoolers:

- Different objects with different textures can be placed on the mat to be touched, played with and so on.
- Explore and investigate.
- Play to teach the action-reaction concept.
- Pupils can crawl across it, touch it with their hands and so on.
- Work with spatial orientation, encourage motion and so on.

Examples of games used to work with pupils:

SOFTWARE	ACTIVITY	PUPIL INVOLVEMENT
TOCA-TOCA TSWIN	1. Children's songs. 2. Orientation. 3. Laterality. 4. Farm animals	• When a cell (button) is pressed (action), a sound or music is heard (reaction). • Listen to instructions and press the right button. Positive or negative reinforcement.

Concept keyboard

A keyboard replacement, this communications peripheral accommodates real objects, raised line overlays and similar on its surface. When the cells in the grids into which the boards are divided are pressed, they display images or words on the computer screen or activate sound files. Concept keyboards are used to work with blind pupils with special education needs in areas such as play, handling objects and oral and written expression: http://www.xtec.es/~jfonoll

Characteristics

It is flexible and helps adapt software to each pupil's aptitudes; since it can be reset, its operation can be designed and configured to individual pupil needs; and with its multi-purpose features it can be used to implement software and simulate different types of keyboards.

Description

Its touch-sensitive overlay recognizes positions by contact. It has a 32-cm square surface with 14,400 sensitive points in a 120x120-point interior web. This digital matrix can be activated by finger touch or optical pencil contact, eliminating the need for a mouse.

Examples of worksheets designed for pupils:

AREA	ACTIVITY	PUPIL INVOLVEMENT
MUSIC	1. Song book. 2. Characteristics of sound: intensity, direction, tone, volume, duration. 3. Animal sounds. 4. Animal memories. 5. "Sac de Gemecs" – sundry sounds.	• General overlay description • Tactile exploration of overlays.

AREA	ACTIVITY	PUPIL INVOLVEMENT
MATHEMATICS	1. Association (numbers 1-10 with objects). 2. Association (mathematical operations and results. Numbers 1 to 10). 3. Calculator: numbers, dictation, addition, subtraction, multiplication, division, word problems.	
READING-WRITING	1. "Confegir" (forming words from certain letters of the alphabet) 2. ABC. Sheet with the full alphabet for writing with a word processor. 3. Dictionary (relates tactile pictures to words in Braille, sound). 4. Write (introduction to word processing for building sentences). 5. "El-la" (associates masculine or feminine article with nouns).	
SCIENCE	1. Catalonian and Spanish geography. • Catalonian boundaries, rivers, counties. • Spanish provinces. 2. The human body. • Respiratory system, mouth, digestive system	

Touch screen
The magic touch
Description
This program works with a touch screen divided into screen into four quadrants. If the screen is duly marked, blind pupils can play the game by following the instructions received, and exploring the four quadrants: http://www.puc.cl/sw_educ/catalogo/html/toque.html

Examples of activities designed for pupils:

SOFTWARE	ACTIVITY	PUPIL INVOLVEMENT
THE MAGIC TOUCH	Numbers, letters, space, sound and time	• Divide the screen into 4 quadrants. • Explore the screen. When touched, it makes noise. • Follow instructions and listen to questions. • Respond by touching the right quadrant.

Microsoft PowerPoint games
Description
As above, the screen is divided into two or four cells, and Microsoft PowerPoint is used to formulate touch screen games.

Initiation in the use of the keyboard.
Listen and play "stories".
Description
Series of traditional multimedia stories in Spanish and English designed for interactive listening, with a play option that calls for following instructions and responding to the questions from the keyboard: ftp://ftp.once.es/pub/utt/tiflosoftware/06_Juegos_Cuentos/

Examples of stories used to work with pupils

SOFTWARE	ACTIVITY	PUPIL INVOLVEMENT
STORIES Listen Play	Sleeping beauty. Snow White and the seven dwarfs. Little red riding hood. Cinderella. The three pigs. Diablotin. The pied piper of Hamelin. Cat 'n boots. Hansel and Gretel. The hare and the tortoise. The ugly duckling. Pinocchio. The steadfast tin soldier.	• Listen to the story and turn the page with the left or right cursor. • Play and answer the questions from the keyboard (numbers or letters)

Strategy and skill games

Description

Multimedia interactive programs for use with the keyboard. In strategy and skill games users must help the character in the story reach a specific objective, for instance, or drive a car through a circuit guided by sound and oral instructions; other options include chess or the hangman game.

Characteristics

These sound-guided games involve the use of the keyboard cursor keys.
ftp://ftp.once.es/pub/utt/tiflosoftware/06_Juegos _Cuentos/

Examples of games used to work with pupils

SOFTWARE	ACTIVITY	PUPIL INVOLVEMENT
Strategy and skill games.	Hangman. Chess. Alien invasion. Adventure. km2000.	• Use of the keyboard. • Use of cursor arrows. • Knowledge of basic keys: ctrl, enter, backspace and so on.

Microsoft PowerPoint stories

Description

Microsoft PowerPoint functionalities are used to narrate stories with pictures and sounds. The left and right cursor keys are used to interact with the story.

The "Calcwav" talking calculator

Description

Calculator software with built-in voice synthesis. It can be installed in Catalonian or Spanish. The blind child user interface is the number keyboard. Initially it helps pupils learn how to use a keyboard and subsequently to do programmed exercises (addition, subtraction, multiplication, division, number dictation and word problems).

Learning Braille with "Cantaletras" (letter singing)

Description

This program teaches pupils Braille with the numeric keyboard and practice drills with system elements: dots, letters and so on.

http://www.puc.cl/sw_educ/catalogo/html/toque.html

VTPLAYER Braille mouse

Description

Larger than the conventional device (13x8x4.5), this lightweight mouse has two touch-sensitive Braille cells for touch control. http://www.adaptivetech.net/products/vtplayer.htm

Characteristics

This program is for working on sensory co-ordination: hearing, touch and action. Orientation: right, left, centre, up, down. Diagonal movement. Laterality. Stimulus-response. Reinforce aspects such as strategy, patience, organization.

Examples of games used to work with pupils

SOFTWARE	ACTIVITY	PUPIL INVOLVEMENT
BRAILLE MOUSE (has two Braille cells and two keys, one on each side)	• "BullsEye": hit the target following outlines and working on spatial orientation. • "Hide and seek": find hidden elements in a small area by following clues in Braille cells about the direction to take (motion pins) • "Duck Shooting Gallery": shoot at different elements (ducks and wolves), co-ordinating touch (left or right cell), sound (order to shoot) and action (upper or lower button).	• Receive tactile information from 2 cells. • The tactile information includes the direction of motion, type of object on the screen and so on. • Pay attention to auditory information • React by pressing the upper or lower key on the mouse, as appropriate.

Digital pen & paper

Description

The HP digital ball-point pen has an ink cartridge and a tiny camera that captures the pen strokes and puts them into digital form. These data are automatically uploaded into the system when the pen is docked in its cradle. www.hp.com/go/fas

Under study

A proposal to use the digital ball-point to create templates and learning games for blind pupils. The lines under study include:

- Materials used in Braille and the special digital ball-point pen form. The possibility of using Braille and raised line printing (Minolta) must be reviewed, together with the special digital ball-point form (pasting labels, plastified paper and so on) to design simple graphics, series drawings, and so on.
- Stencils for correcting tests, mixing Braille and the special form.

Working methodology

Pupil population involved

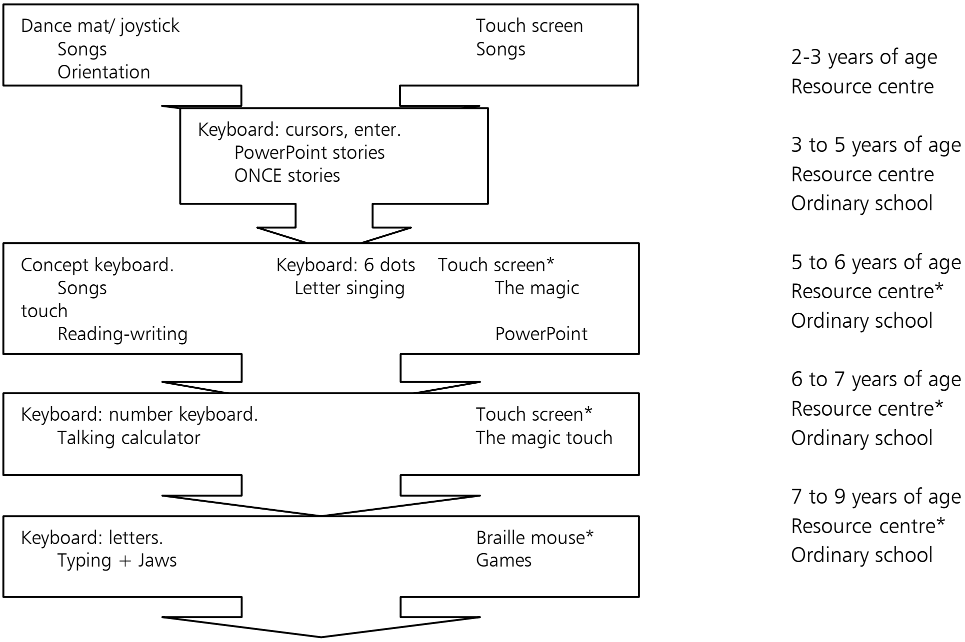
The experience was conducted with very young children periodically attending the Joan Amades Resource Centre (2-3 years old). When pupils begin pre-school at the age of three, they receive attention in the ordinary school where they are enrolled through the classroom teacher and the ONCE itinerant teacher's aide. From time to time these pupils also attend extra-curricular sessions at the Joan Amades Resource Centre.

These techniques are also being used with special education school children of different ages.

Working method, choice of resources

The choice of the appropriate resource for a blind pupil depends on a number of different variables – the pupil's maturity, learning aptitudes, timing (when ITCs are introduced), priority for learning Braille and other skills, availability of technical resources in the classroom and so on. Nonetheless, teachers should consider and capitalize on the aspects of ITCs that entertain and encourage, contribute to classroom integration and reinforce learning through play. At this age, ITCs should be viewed as a means, not an end.

The chart below shows the logical order that peripherals and software should be introduced, based on our working experience in the resource centre and ordinary schools.



For the tiniest tots the dance mat can be used to play with three-dimensional objects and adapted to different textures: an action-reaction game that encourages motion and tactile exploration even when crawling.

The use of an action-reaction touch screen with songs or sounds (farm animals, musical instruments and so on) that catch their attention also works wonders with these children. We would stress, however, that there is definitely a learning process involved in touching the computer screen.

Since haptic perception continues to be essential at this age, the concept keyboard is a basic tool for accessing ITCs. Two- and three-dimensional adaptations with elements relevant to the concept being taught can be attached to the surface of this peripheral, which is ideal for working with blind pupils beginning their schooling (5-6 years old), since it reinforces haptic skills, action-reaction areas and basic curricular concepts. For instance, an animal overlay might contain a cat's whiskers, a chicken's feather, and so on, elements that attract children's attention. Such methods may be enhanced with music, traditional songs or animal sounds.

With any of the peripherals mentioned, pupils first receive explanations on the procedure to follow to explore them, the concepts displayed and the way they work. This enables them to access tactile and auditory information from the outset. Subsequently, each child works at his/her own pace.

The dance mat, concept keyboard and touch screen reinforce learning in areas such as spatial orientation, trailing and action-reaction play.

Keyboards are introduced beginning with the basic keys (cursors, enter) through multimedia stories or PowerPoint games. Then children are taught to use part of the numeric keyboard (pupils are asked to press 1, 2 or 3 in the play section of some multimedia stories): the Braille reinforcement program "Cantaletras" (letter singing) teaches them to use the keys 1, 2, 4, 5, 6, 7. Later, with the talking calculator they learn to use the entire number keyboard. From the age of 6-7 they are taught to use the entire keyboard with word processing software and the Jaws screen reader.

The Braille mouse, used from the age of 6-7 on, serves as a playful preliminary to the introduction of Braille displays.

Conclusions

Our experience with the use of ITCs in blind toddlers and pre- and primary school education leads to the following conclusions:

1. Blind pupils are encouraged by simply being able to work with a computer: they are anxious to investigate and understand what they are shown on the dance mat, concept keyboard or touch screen. Their enthusiasm grows with screen displays and what they hear over the loudspeakers.
2. The age for introducing ICTs to blind children has been lowered. It is no longer necessary to wait until they have a command of the keyboard.
3. Children learn to play and have fun with computers.
4. Classroom teachers in ordinary school find that, like their classmates, blind pupils can reinforce curricular content with educational and recreational play. Learning is favoured by interaction, self-correction and independence.
5. The use of these resources in ordinary schools enhances integration, since blind pupils can use these materials to share classroom experience and objectives with their sighted classmates.

Annexes

PERIPHERAL / SOFTWARE	SUBJECT	AREA
Dance pad or joystick	Space Sound Music	• Spatial orientation • Auditory stimulation • Attention
Concept board	Music and song Mathematics Reading.writing Geography Science	• Orientation. • Tactile reinforcement. • Action-reaction • Curricular areas
Tactile screen - The magic touch - PowerPoint games	Numbers Space Letters Sounds and time	• Spatial orientation. • Auditory stimulus. • Curricular concepts.

PERIPHERAL / SOFTWARE	SUBJECT	AREA
Keyboard In Spanish/English - Listen and play. Interactive traditional stories. - Strategy games: Km 2000 - Words: hangman In Catalonian - PowerPoint games - Touch-touch: songs, words, etc. - Talking calculator: Calcwav	Mathematics Spanish/Catalonian Logic Amusement Sounds, music, readint-writing, accion-reaction Mathematics	• Concentration. • Attention. • Auditory stimulation. • Curricular areas • Strategy. • Concentration • Attention • Auditory stimulation • Mental calculation
Keyboard - Jaws - word	Writing	Typing
VTPLAYER Braille mouse for playing. SOUND-MOTION-TOUCH	Recreation	• Auditory and motor co-ordination. • Spatial orientation. • Ability to respond. Strategy. • Attention. • Auditory stimulation.

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115 Training of blind children with complex structure of defect in family

By: Belyakova, Nataliya
From: Russia
Organisation: Moscow School for the Blind

Recently in Russia the tendency to increase of number of invalids of the childhood on sight with complex structure of defect is traced.

They are children, except for infringements of sight, have diseases which do not allow them to be trained in conditions of the class system in educational establishments for children with infringement of sight. The percent of blind and visually impaired children with a children's cerebral paralysis, tumours of a brain and other organic diseases of the central nervous system has raised.

These of pupils demand an individual approach to the organization and the maintenance (contents) of their training.

One of the forms of organization of education of the given category of children is the training in-home.

Teachers of special schools for blind and visually impaired children come to the child home, and carry out individual educational employment, and also consult the members of family.

All children pass inspection at physicians, psychologists, teachers. During consultations prospects of development of children, forms of training, the contents of education are defined.

The practice of education in-home of children refused to visit educational employment at school on a status of health, exists many years.

The organization of educational process of blind and visually impaired children with a complex pathology in conditions of home individual training strongly requires the special manuals, differentiation not only purposes, receptions and methods, but also contents of the educational process.

For efficiency learining of visual impairment children with complex structure of defect necessary to teach them according to a status of health, level of intellectual development and level of availability of the child to training. It is necessary to adapt methods and training tool with allowance of individual features of the trained child.

The individual educational schedule is developed for him.

The main purpose of employment with children in home is the creation basic knowledge of main sciences and skills directed on social adapting.

Earlier in operation with this category of children was only one form of education - education in family.

However at home form of obtaining of education there are rather serious problems - absence of contact with the classmates, impossibility of usage of special equipment, special visual material.

Children, learning in family, could not receive additional education, which receive children, learning at school. About it spoke both parents of children, and children.

Therefore other forms of education were switched on in practice of training of children with complex structure of defect.

Now in operation with children, learning in family, the diverse forms of employment are possible depending on a status of health of the child, wishes of the parents, studied material, purposes and tasks of concrete lessons.

The individual lessons with the child, according with wishes of parents, can be conducted as in home conditions, and, if it allows health of the child, is partial at school in the educational cabinets with usage of special equipment and visual manuals.

Often these two forms of training are combined.

Being trained in family, at periodic visiting of school on individual employment the child can receive additional education, for example, musical.

At will of child and choice of the parents he can visit various courses circles: drawing, chess and other.

The visiting of school also allows the child to communicate with other children and whenever possible to participate in various school actions.

The educational process in family cannot be presented without most active involvement of the parents.

Training of blind and visually impaired children in conditions of family assumes regular training members of family, formation at parents of the adequate attitude to defect of the child, belief in his opportunities.

Only at close co-operation of the members of family and experts it is possible to achieve good results in learning process of the child in family.

116 Painting as a part of emotional discovery of the world

By: Nasibulova, Elena
From: Russia
Organisation: Rehabilitation Center

Abstract

For more information please contact the author: nasibulova@mail.ru

When should you start teaching blind child to draw, to feel by his fingers the beauty of this world and the variety of colours?
The basement of this practical course is the joint of: colour - warmth (temperature) - tactile senses - emotions - imagination - concrete thing.
Blue and white colours tubes are in the refrigerator. First I shall take out the blue tube. You put your fingers into cold blue depth. We shall paint deep river. I give you smooth wooden piece. This surface is like water's.
How can you join the smell and colour of dry herbs? We shall take dried grass and breath deeply it's smell - it will be warm yellow colour, calm green colour and a little bit of "dead" colour - black, because this grass is dead.
I heat yellow - white sand and we touch it. We are going to paint the seashore. It'll be real warm yellow colour, the attempt to touch the summer.
At first we paint the paper only in one colour. Gradually we use more different colours and every lesson becomes a multicoloured fairytale, multicoloured emotions.
We paint the whole world with your fingers!

117 Early intervention services for children with visual impairment and their families in poland - the past, present state and perspectives

By: Walczak, Grazyna
From: Poland
Organisation: Academy for Special Education

Introduction

First of all I would like to introduce myself. I have been working as a research worker and a teacher in M. Grzegorzewska Academy of Special Education in Warsaw (It was called M. Grzegorzewska College of Special Education;.

The Academy for Special Education in Warsaw is the continuation of the State Institute of Special Education, which was established by Professor Maria Grzegorzewska in 1922.In this way teacher training for special education in Poland has therefore an eighty year history.

Maria Grzegorzewska Academy for Special Education is an independent education faculty responsible to the Ministry of National Education in Poland. Currently, the Academy trains teachers, hörne teachers and other specialists to work with children and the youth who have impairments and/or problems in emotional and social adjustment Students can choose from among the following specialisations: education of the deaf and auditory impaired (of various degrees of retardation), education of the blind and visually impaired, education of the chronically ill, Speech therapy, prevention of social mal-adjustment and social workers.

After completing the programme subjects, vocational practice and writing the thesis, the graduates get Master's degree of Special Pedagogic. Studies for Doctor's degree are carried individually. Generally, in our academy there are approximately 6000 students participating in all available forms of studying, including 5-year stationary studies for secondary school graduates, extramural and postgraduate studies for working people. The academy has also its own Publishing house, which among the others issues monographies and scientific publications dealing about different specialisations. More Information about the Academy you can find in this brochure.

Now I would like to tell you about the development of early Intervention in Poland from the nineties up to now.

The idea of early Intervention has been known in Poland for many years. Maria Grzegorzewska, the founder of Polish Special Pedagogic, pointed out in her publications, the significance of supporting both a child's development and helping his family.

Analysing the early Intervention of visually impaired children, I can say that more and more children and their families are supported but still there is no System that would guarantee such support for all those who need it.

Up to 1990 the rehabilitation of small, namely 0-6 years old, visually handicapped children in Poland was mainly institutional and referred to those over 3 years old. Those children could attend special kindergartens.

The younger ones, at the age of 0-3 years, were mostly left to themselves, at home without any Professional support. Only a few families, mainly froni big eitles, tried to find any kind of professional help for their children, /The picture with the map /

In the eighties the Polish Association of the Blind- the independent Organisation supporting visually impaired people- tried to arrange aid for small, visually handicapped children and their families. The association organised the rehabilitation camps for small partially sighted children and their parents. The object of such camp was:

- to define the salubrious and rehabilitation needs of a child

- to elaborate and initially apply the individual programme of a child's revalidation
- to acquaint parents with the means of the programme realisation after the camp

The assessment of a child's ftinctioning and rehabilitation activities were carried by different specialists. The parents just observed the actions and after the camp was over they were given instruction how to handle the child in his home environment.

In those years the camps became the vital form of help for visually impaired children however, they were not systematic and did not apply to all those who needed such support.

The next attempt to solve that problem was founding the Central Early Intervention Clinic in the Centre of Child's Health in Warsaw.

In this clinic children were diagnosed and their parents were instructed how to work with their off-spring, after a while they came back for consultation to evaluate the efficiency of their activities and to get further instructions. The hardships of often a long journey and the unfamiliar environment made a child behave unnaturally and not truly to bis possibilities, which finally hindered to diagnose him properly and select the adequate training.

The Associations of parents of visually impaired children were a new form of rehabilitation activities, which was developing in the eighties. Depending how active were the parents, the associations helped to realise various, current needs of their members, for example they established the consultation points.

At the beginning of the nineties there started radical socio - political changes in Poland.

It was also the period of fast development of many forms of support for the handicapped in Poland, including the visually impaired. The initiative to apply these new forms of help was undertaken both by the state institutions, for global scale, but mainly by social circles locally.

Their activities included mainly:

1.Organising local consultation points of early intervention teams
2.Collecting and publishing foreign resource materials dealing with different aspects of early intervention
3.Research carried out
4.Professional staff preparation S.The legislation's base of E.L

1. Organising local, regional consultation points of early intervention teams.

It was only possible thanks to the financial and substantial help frorn foreign institutions and owing to the direct contact with the specialists frorn various foreign centres.

In 1992, for example, the specialists from Theofaan Institute fiilly supported and contributed to the foundation of early intervention team in The Centre for the Blind Children in Wroclaw.

Currently, thanks to different Sponsors, there are 20 such working teams in Poland.

2. Collecting and publishing foreign resource materials dealing with different aspects of early Intervention. Here, especially active was the Academy of Special Pedagogic and The Polish Association of The Blind.

3. Research carried out / mainly in The Academy of Special Education in Warsaw.

For example the carried research aimed at:

elaboration and verification of the education programmes for home teachers - defming the efficiency of rehabilitation programmes of children in their home environment All the above research is still in progress.

4. Professional staff preparation

Organising the courses, seminars, Conferences with the participation of Polish and foreign specialists, for example:

- a course organised by The Polish Association of The Blind in which the Professionals from Wurzburg took part,

the Conferences:

- **in 1995,1999, 2004** organised by The Academy of Special Education with the participation of specialists from Holland, Germany, Norway, Ukraine,
- **in June 2003** organised by The Association of Parents "Rainbow" in Warsaw with participation dr Lea Hyvarinen,
- **in November** 2003 organised by the Supporting Association for Deaf - Blind in Bydgoszcz with cooperation with specialists from Perkins School USA,
- **in December 2003** organised by the Local Foundation of Help for the Blind in Katowice with cooperation with German specialist from Wurzburg and Chemnitz
- **stationary and postgraduale studies.** From 1993 in The Academy of Special Education were organised firs postgraduale studies and next stationary studies of early intervention for visually impairment children. The programme for these studies was developed basing on the experience from the research referring to problems of. early intervention and on long cooperation with specialists of Theofaan Institute / now SENSIS / in Grave.

From 2003 in the Academy for Special Education is new Department of Early Support to Development Children. In this department the problems of early intervention visually impairment children are also included.

5. The legislation's base of early intervention

Still to 2004 year, according to our law, only children at the age of 3-6 are entitled to such education and rehabilitation. From a lot of time we were trying to change the legislation referring to early intervention of children from 0-3 years of age. During few years the relevant documents have been submitted to the government and parliamentary commissions. **Now in 4 of April** 2005 **the** Minister of Education with Minister of Health and Minister of Social Political were signed the Decree according to organize the early support of development the children with special needs. .

From January 2005 year started also the government program of early intervention.

As you can see early Intervention of visually impaired children in Poland has signifycantly developed for the last 15 years. Please see on this picture. The early intervention grows like flower with support of different things. The picture of flower The picture with the maps

It has been possible due to hard work of many Polish specialists, but mainly thanks to vast co-operation with foreign institutions and Professionals working in this area.

I have already thanked many times for this support, let me once again express my gratitude to for all people who help us in realising different forms of early intervention in Poland in the past tinie. I hope that in the fjjture we also find the people who will help us and will cooperated in the field of early intervention The picture with thanks Ladies and Gentlemen, thank you for your help

118 Developing an Educational Framework for Children with MDVI aged 4 years upwards in the irish context

By: Farrelly, Audrey
From: Ireland
Organisation: St. Joseph's School for the Visually Impaired

The following paper is based on the views of parents and the educational framework they would like to see implemented, as being the most suitable in meeting the needs of their children.

I would first like to thank the organisers of this conference for allowing me to present this paper and secondly to the parents of children with MDVI from St. Joseph’s Pre-school and Primary School for the Visually Impaired (Drumcondra, Dublin, Ireland) for sharing their ideals and aspirations for their children with me in making this paper possible.

St. Joseph’s Service for the Visually Impaired sees partnership with parents as a vital component in the education of children with a visual impairment. It was this insight that led to the formation of the Family Resource Service. Through this service families are offered support and advice on all aspects of visual impairment. One of the most important aspects of the Family Resource Service is in bringing families together with children of a similar age, to share their experiences and difficulties. It was from one of these groups that the request to develop a Pre-school Service was aired and in 1999 St. Joseph’s Pre-school Service was founded. This has grown rapidly and now includes an Early Intervention Service. Twenty children are now catered for on a daily basis and the Pre-school also provides an information and consultation service to eighty-eight children nationwide. Eighty-five percent of the Pre-school population fall into the MDVI category.

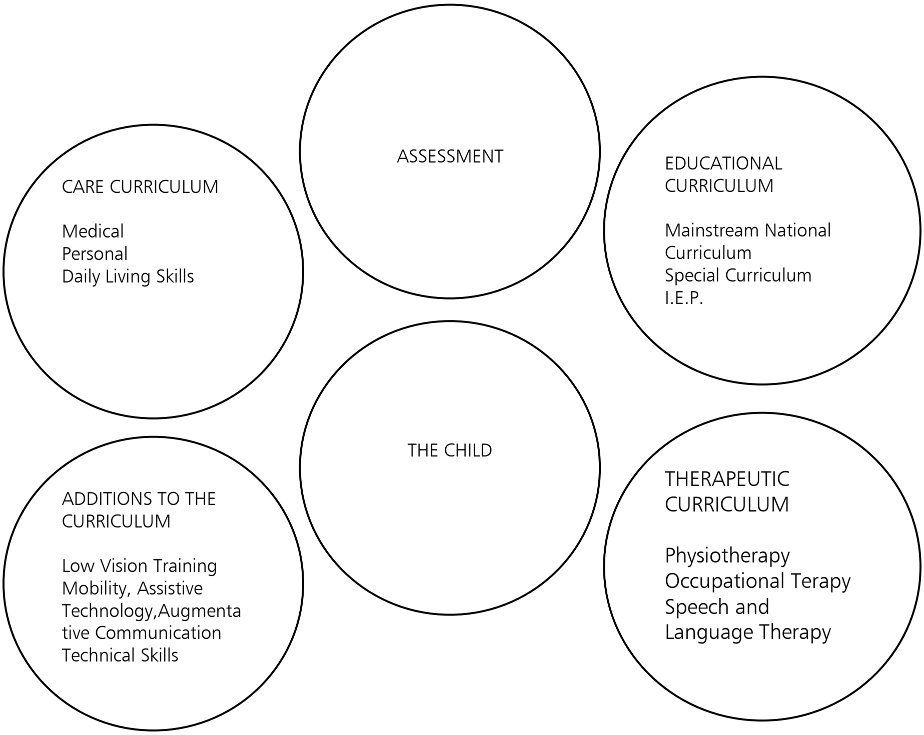
In Ireland integration into mainstream schools for children with disabilities and special needs is possible, however it still largely depends on the resources available to the school and the disabilities of the child.

Many of the parents of children with MDVI within St. Joseph’s Pre-school have a limited choice of appropriate Primary education for their child. This will greatly depend on their child’s disabilities. Parents often have to choose between St. Joseph’s Primary School for the Visually Impaired, a school for children with learning disabilities or a designated school that specialises in a physical disability. In the case where a child is placed within the severe to profound range of MDVI, parents have little choice but to place the child in a learning disability service.

When a child has multiple disabilities, it is often difficult for the parents to choose which service will offer their child the best education. As parents find components in each service that would benefit their child, a combination of all three would fit their ideal educational framework, i.e. an educational framework designed exclusively for children with MDVI.

The following is a representation of the ideal educational framework for a child with MDVI according to the ideals of a selection of parents from St. Joseph’s Pre-school and Primary School.

Diagram of the ideal Educational Framework for children with MDVI as recommended by parents of St. Joseph’s Pre-school and Primary School.



As you can see it is a holistic approach to education, with each section given equal importance. The child is central to all the other sections and his/her needs and abilities must be the driving force behind the framework. All aspects must integrate with the child's needs, capabilities and learning style. The child does not adapt to the framework; rather, the framework is adapted to suit the child.

I will now discuss the main issues, which concern parents within each of these five sections.

Assessment

All parents I spoke to indicated the need for each child to have a full assessment prior to an Individual Educational Plan (I.E.P.) being developed. The assessment should take place within the first few weeks of the school's new academic year. The assessment team should consist of all professionals who are involved with the child and if possible all assessments should take place over the same time period. This would ensure that the educational goals set out for the child, would then be aimed at the appropriate level for optimal learning. Many parents felt that a Functional Vision Assessment should be an integral part of the assessment and should be one of the first assessments carried out. The assessment team should then have the results of the assessments ready to be presented at the child's I.E.P. meeting, which should be held shortly after the assessments.

A liaison person, who would interpret the findings of the assessments and put all recommendations into practise within the child's daily school life, was a vital component. This person would also forward all the necessary assessment information on to other professionals working with the child and ensure they were made aware of the recommendations made by the assessment team along with the implications they would have, on their work with the child. The liaison person would then be responsible in ensuring that all the recommendations were adhered to throughout the year.

Parents also felt that a review should then take place half way through the school year and at the end of the school year. If there were any difficulties encountered during the child's schooling then an assessment should be carried out as soon as possible to try and establish the source of the problem and hopefully rectify it.

Curriculum

Within the area of the curriculum, parents felt that the educational curriculum should be challenging and include a wide variety of subjects or experiences. However it should be aimed at the child's developmental level, while maintaining age appropriate activities.

There should be a flexible approach to the curriculum so that each child's unique abilities and needs can be accommodated.

[22]"As children with MDVI possess a wide range of learning characteristics that are so unique to them, curricular planning, preparation and delivery should be individually tailored to their specific need"

Teachers should have the appropriate knowledge and training and be aware of the various teaching strategies suitable for children with MDVI. The curriculum should also offer an extensive selection of software and adaptive technology, which is currently available. Teachers should be aware and be kept informed of any new technology that becomes available and have the necessary training to enable them to use the devices accurately with the children.

Opportunities should be provided throughout the day so that the children can learn by themselves, in conjunction with directed learning. One to one assistance, which parents realised as necessary, should only occur after every possible avenue for the child to perform a task independently has been exhausted. Each child regardless of their disabilities should be offered opportunities to be as independent in learning as possible.

Therapeutic Curriculum

Wherever possible parents felt that any therapeutic input should take place within the classroom and children should only be withdrawn from the class when necessary. Ideally a small area of the classroom could be isolated and be used when a child needs one to one therapy.

Additional therapies the child receives should be seen as part of his education and not as a separate unrelated section.

Teachers should consult with the therapist to ensure the child's position is correct for optimal learning and to avoid fatigue. This will also ensure the appropriate method of communication for each child is being used.

Additions to the Curriculum

As with the therapeutic interventions all the additional curriculum activities should be delivered as much as possible from within the classroom.

Low vision training in particular should be done with the materials and from the position the child usually works from in the classroom.

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[22] 1- Discussion Document to Examine the Implication of Educational Services Provision for Students who are MDVI within St. Joseph's School.

If a child uses any augmentative communication devices or needs assistive technology, then both teachers and assistants need to be trained in its' use and more importantly , in the preferred way the child uses the device.

Ongoing Functional Vision Assessments should be carried out within the classroom setting to ensure the medium being presented to the child is always in the correct format.

Care Curriculum

This area included the medical and personal needs of the child. Parents feel that any level of independence that their child can achieve is of the upmost importance in particular reference to personal care. Therefore attaining even a small level of independence should be the goal within this area. Parents felt that this area was often not considered as educational but was one area of their child's life that they would always be involved in. Therefore personal care and activities in the area of Daily Living Skills are as much a part of the curriculum of the child with MDVI as any other subject.

When a child has medical needs or interventions which are required throughout the day, the nursing staff should be consulted and advice as to when the child requires rest or what effect medication may have on the child's abilities to learn. When a child needs to be withdrawn from the class for a medical intervention, then it should only be for the shortest possible time. Parent's felt that if possible an isolated area within the class where such interventions could take place would be useful, if it reduced the child's time spent outside his class.

When planning the timetable for the child with medical needs, advice must be sought from the medical team to ensure the child is alert and able for the activities or learning which will be planned.

Conclusion

The educational framework preferred by parents as discussed in this paper involves all areas of the child's life receiving equal importance in their education. For a child with MDVI all aspects of their lives are learning experiences. What is required is for all professionals to work in collaboration to ensure that the highest level of intervention, assistance and education are available to each child, regardless of the level of their disabilities.

Overall a parent's view of an ideal educational framework is no different from our own as educators, which is to help each child reach their full potential is all aspects of their life.

119 A Unique Guidance and Stimulation Program for Parents and Infants with Visual Impairments.

By: Ovadia-Stuker, Elenoranora
From: Israel
Organisation: Eliya (Israel Association for the Advancement of Blind and Visually Impaired Children)

Abstract

For more information please contact the author: eliya-il@eliya.org.il

The ELIYA center, which has three branches throughout Israel, operates a unique "Parent/Infant group" in its branches in the Tel Aviv and in Beer- Sheva. For the past 18 years, parents with their visually impaired infants arrive once a week for a morning of guidance and support. The group numbers up to 10 visually impaired children, 4 to 18 months of age, some of whom have additional disabilities.

The professional team working with those families includes a physiotherapist, low vision teacher, a special education teacher and a clinical psychologist.

Parents actively learn how to stimulate their baby in all areas of development. They join in the "dark room" to improve their child's functional vision, and they become active partners in shaping an individual learning program for their child.

Part of every morning is devoted to a support group under the guidance of a psychologist. Parents try to learn to cope with the enormous change incurred in their family following the birth of their visually impaired child. Learning to deal with this trauma helps them become more receptive to guidance.

The weekly gathering with all its practical and emotional challenges give the parents the opportunity to meet other parents, observe other children and to become the very best parent for their special needs child.

120 Parents

By: Ravenscroft, John
From: Great Britain
Organisation: Visual Impairment Scotland

Abstract

For more information please contact the author: john.ravenscroft@education.ed.ac.uk

Children and young people with sensory impairment and their families need relevant and useful information when their child has been diagnosed with visual impairment. This paper will explore the relevant and usefulness of this information. Currently, the information parents receive at the time of diagnosis is fragmented and varies depending upon location throughout Scotland. 'A postcode lottery' some parents have described it. Some parents receive excellent information whilst others receive little or none and consequently do not know where to seek additional support. As yet, no research has been conducted on a national scale to determine what information is given to parents at diagnosis and more importantly no research has been conducted to look at the quality and value of the information, if any is given. This research aims to readdress this and to identify what information is given and to seek out its value and usefulness amongst parents at the critical time of diagnosis. The paper will report on the results of over two hundred and fifty replies which were received from a detailed questionnaire to parents whose children have a visual impairment.

Final Plenary Session

121 A personal appreciation of the IVEVI European Conference; "Education – aiming for excellence"

By: Buultjens, Marianna
From: Finland

Dear colleagues, thank you for giving me this opportunity to share my thoughts on the conference with you. There will be two parts to my overview.
First of all, what attracts someone to apply for a place at a professional conference? For myself, I can say that, first and foremost, both the topic and the expected quality of the presentations are the deciding factor. The title of this conference: **Education – aiming for excellence** must certainly have raised expectations! When the European committee chose this title, we did so in the belief that that is what most colleagues in the field of vision impairment are aiming for in their professional work. As a committee we did not discuss what is meant by 'excellence'. Nor should we have done so, because the conference itself: that is, the Keynote speakers, the presenters, the participants and the whole process and experience of working, discussing and enjoying together, are the means by which we will come to an understanding of what this term must mean to us and for us.

Throughout this conference, Keynote speakers and the presenters in the different theme areas and poster sessions worked together on defining what 'excellence' might mean for us. In the opening Keynote address Sven Degenhart told us that excellence can only be achieved by teamwork and networking and only by those who care about what they do. We must build on existing strengths, prioritise the challenges facing us and consistently pursue solutions to these challenges.

On Monday Michael Brambring in his Keynote address on Assessment, told us how he and his team of researchers had clarified why young blind children achieve some developmental norms at a later or earlier age than sighted children. By analysing the complexity of the tasks and the environmental conditions in which they had to be carried out, rather than the seeming deficits in the children, they identified the tasks that involved increased conceptual and sensory demands for children who cannot see compared to those who use sight to carry them out.
Gordon Dutton talking on Low Vision, demonstrated how vital it is for us to know the visual thresholds of children with whom we work, so that we can ensure appropriate pedagogical and environmental learning experiences for them. Keeping up with research outcomes and new medical and psychological developments must form part of our search for excellence.

On Tuesday Natalie Lévi-Dumont gave us an overview of the range of provision in Europe for the professional preparation of teachers of the visually impaired and the challenges faced by the training providers in fostering and developing Professionalism. Natalie told us that ICEVI Europe has supported these training providers through the four Teacher Training Workshops which offered an opportunity for collaborative working towards excellence in this field.
Kevin Carey challenged us in his Keynote on ICT by suggesting that we may well have the wrong priorities for educating blind and visually impaired children and young people. We should be thinking of today's world as a 'communications network' and

ensuring that our students are involved in content creation not just content reception. These young people can only compete and succeed through teamwork, or as Kevin put it, they need 'syndicate not solo learning'. Kevin also suggested that as far as ICT is concerned, some of us need to make the leap from 19th to the 21st century, by-passing the 20th! In pursuit of excellence this may be a necessary leap!

On Wednesday Mira Tsetkova took us through the history of Orientation and Mobility. There were many surprising revelations including the fact that O & M was introduced to Bulgaria, her country, by two Bulgarians who came to study O & M in Chemnitz! Mira told us that 'excellence' has many faces and the road to achieving it demands research, dedication, care and a balance between old and new.

Nina Hummel illustrated for us the current struggle of professionals involved in the field of Activities of Daily Living (ADL) instruction. They are involved in defining their profession and getting it recognised in Europe through achieving the European Quality in Rehabilitation Mark. This recognition will be a benchmark for these professionals in their pursuit of 'excellence' in enabling young people with vision impairment and blindness to develop problem-solving skills and 'to thrive – not just survive!'

This morning, Sytske Brandenburg, on the topic of Social Competence, started on a high note: being socially competent sets you free and promotes positive relationships. She then took us through the competencies necessary for the professionals involved stressing the importance of positive expectations in shaping a child's capabilities. Once again we heard about the importance of learning cooperatively as this model promotes 'social cooperation'. Sietske recommended that we bear in mind that of all the knowledge, skills and attitudes necessary for a teacher of VI in the pursuit of 'excellence', attitude is the most important and the most difficult to change. To help us she offered the mantra: 'social competence sets you free; competent professionals set you free!'

It was fitting that the final Keynote Address was on 'Family'. Renate Walthes posed some direct questions: are we as 'excellent' in dealing with families as we are in O&M? Families are a special social system, defined through their tasks of providing care, well-being, love, strong bonds, common history and managing the diversity of daily life. Is there a standard of family 'excellence'? By means of images of families relaxing, playing and discussing during holidays organised by and with professionals and quoting thoughtful reflections from parents and from research done on the helping strategies, Renate showed how only families themselves can decide what excellence means for them. She suggested as a way forward: families making this 'excellence' available to professionals in order to strengthen it.

In the parallel sessions, poster sessions, videos and exhibitions we were able to see and share in examples of research and practice, carried out with care and reported and evaluated honestly and openly. The process of reporting to colleagues, is in my view, as much a part of the pursuit of excellence as the work itself. Ultimately, each one of us has to examine where we are in our pursuit of excellence and to where, and in which way we wish to make progress. This conference will have been a success for us if it has helped us in this process.

One thing missing from the conference was enough time for in-depth discussion after each Keynote and parallel presentation. It is a sign of how the ICEVI European conferences have matured, that there was a palpable and expressed need for this form of intellectual exchange. It is no easy matter to provide this in a conference with so much content and so many different languages! Perhaps in planning future conferences, our new ICEVI-Europe committee will consider a range of models of programme where more in-depth discussion is possible for those who wish it.

Now to the second part of my appreciation of this conference! As one of the important messages of this conference has been teamwork, it would have been remiss of me not to have had help from colleagues for this overview. Many of you have contributed to my thoughts, knowingly or unknowingly, through discussions we had, or comments I overheard! Throughout the conference, Francis Boe has been busily photographing participants, places, events and moods to provide a happy retrospective for us. The photographs go beyond what I am able to express in words! Thank you Francis!

What else makes us give up holidays and spend money to come to a conference? Catching up with old friends (many of us now share a life history of meeting at conferences!) - and making new ones? Visiting new countries and cities like Chemnitz, Dresden and Meissen? The chance to see the latest technology and resources in the exhibitors stands? Enjoying good food, good wine, beer and the occasional mineral water? Happy evenings spent at SFZ? Personally, I love all these things and an added spice is the ‘Tower of Babel’ aspect – 34 countries represented and nearly as many languages! All these experiences have been provided here in Chemnitz, safe in the TLC (tender loving care) of 50 members of the Sächsisches Förderzentrum (SFZ) staff. Karsten, you are lucky to have such charming, helpful and patient staff – but maybe they are a reflection of their boss? Finally, to sum up for myself, and I hope for all of you, this conference has been a friendly and joyful exchange of news, information and mutual encouragement so that together we can continue to pursue excellence.

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www.sfz-chemnitz.de
zentrale@sfz-chemnitz.de

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