Embracing Diversity: Toolkit for Creating Inclusive, Learning-Friendly Environments
Specialized Booklet 3

Teaching Children with Disabilities in Inclusive Settings



Inclusive Learning-Friendly Environments

UNESCO

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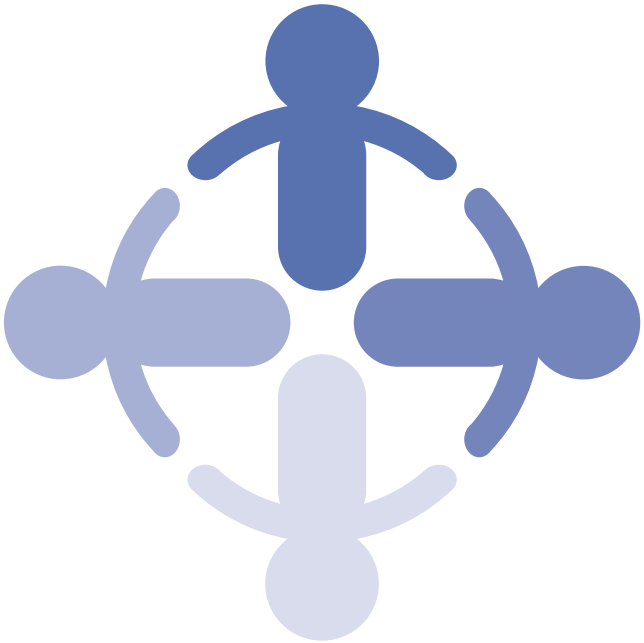

Inclusive
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Preface

The right to education is universal and extends to all children, youth, and adults with disabilities. This right is enshrined in the Convention on the Rights of the Child (1989) and the Convention on the Rights of Persons with Disabilities (2008). It is also addressed in several significant, international declarations, including the World Declaration for Education for All (1990), the UNESCO Salamanca Statement and Framework for Action (1994), and the Dakar Framework for Action (2000).

Ensuring the right to education is at the very heart of UNESCO's mission, which is also affirmed and recognized by its Member States. Such education must also be a quality education. Thus, UNESCO emphasizes not merely the right to education, but also particularly the right to quality education for all.

The majority of children with disabilities in developing countries are currently out of school, while many of those enrolled are not learning. Removing barriers to accessing education and to learning for persons with disabilities are prerequisites for the realization of Education for All. To ensure that all children have access to quality education, education policies and practices must be inclusive of all learners, encourage the full participation of all, and promote diversity as a resource, rather than as an obstacle. Inclusive education for all will pave the way to prosperity for individuals and for the society, at large. This prosperity will, in turn, lead to a more peaceful and sustainable development of humanity.

The UNESCO publication *Embracing Diversity: Toolkit for Creating Inclusive, Learning-Friendly Environments (ILFE)* offers a holistic, practical means to make schools and classrooms more inclusive, learning-friendly and gender-sensitive. This guide, which supplements the UNESCO ILFE Toolkit, focuses on the specific issues that need to be addressed when teaching people with disabilities. The booklet provides practical guidelines to successfully teach children with disabilities without compromising quality. The guidelines emphasize the use of learning-friendly practices that help children with disabilities achieve their full potential.

This guide is truly a cooperative product. It was first drafted and then revised by Mr. Terje Watterdal of International Development Partner, who has also served as a UNESCO consultant on inclusive education, as well as an inclusive education consultant to several development organizations in Asia. It also benefited from the comments and suggestions of educators around the world. UNESCO Bangkok would like to thank all of them for their contributions. Johan Lindeberg, Assistant Programme Officer at UNESCO's Asia and Pacific Regional Bureau for Education, coordinated the project, and the UNESCO publishing team, Caroline Haddad and Pongsuda Vongsingha, crafted this resource for the printed page.



Gwang-jo Kim
Director, UNESCO Asia and Pacific Regional Bureau for Education



Foreword

I became blind at age five due to an illness, and was sent to a special school for the blind at age nine in 1960. The school was in Bandung, about 80 kilometres away from home. I spent the first few days in the special school crying because of the separation from my parents, my siblings, my childhood friends, and my home village. If I could have gone to school in my home community, this painful experience would never have happened to me.

Nevertheless, the rest of my schooling life was good. Specially-designed learning tools for blind students were available. The teachers could give individualized attention because the class was small. The social environment was friendly since the community consisted mainly of blind people and sighted people with proper understanding about blindness. The physical environment was accessible, as it was generally designed by considering the orientation and mobility of the blind, and we were given orientation and mobility (O&M) skill training. Another aspect that greatly helped us was that we could readily find successful blind adult models.

However, when it was time for me to leave the exclusive community of the special school for the blind, I found the real social life in the mainstream community shocking and frustrating at first. On the one hand, there was a lack of proper understanding about the nature of blindness among most members of the society; and on the other hand, I had not been prepared to cope with the social hazards.

In another case, I know of a student who went to an integrated education programme during the 1980's. When he was enrolled in the first year of a regular junior high school, the integrated education project finished and the programme died out. Although he was still socially welcomed in the school, he did not receive the learning support that he needed. His special education teacher discontinued his collaboration with the class teachers. Consequently, he did not have Braille books, his class teacher did not know how to teach him mathematics, he was not actively involved in sports lessons, etc. His parents decided to put him back in the special school for the blind.

The case examples above show us that a good school for students with visual impairment – and for students with any disability – is one that not only facilitates academic learning, but most importantly facilitates learning to live in a social world – a world with diversity. An inclusive school is the best place for preparing young people to live in a diverse world. In order for students with disability to learn together with their peers in a meaningful and fruitful way, a support system must be in place. This support system makes sure that there is equal access for all students to all the learning resources available in the school. This way, students with disabilities can fully participate in all the learning activities together with their non-disabled peers. This book shows educators how to promote equal access and full participation of students with diverse abilities in an inclusive setting, and thereby fully acknowledge their rights.

Didi Tarsidi
President
Indonesian Blind Union
(PERTUNI)

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Introduction

We have designed this booklet so that readers can identify and successfully remove barriers to learning, development, and participation faced by many children with disabilities. We are not ignoring all the abilities children with disabilities have; however, our main focus within this booklet has been to offer comprehensive information about different disabilities, as well as how parents, teachers and education planners can respond effectively to the needs these children have. After most sections, we have listed a number of practical tips on how to teach children with different disabilities in inclusive settings. Children with disabilities are not a homogeneous group, where "one solution fits all." It is therefore important that we try out different strategies to find the ones that work for us, and for the children in our classrooms.

We all know that every child is unique and different. They have different abilities, learn in different ways, and at different paces. Inclusive, learning-friendly, and barrier-free environments should therefore be created in every school and community throughout the world so that ***all*** children will be enabled to develop to their full academic, social, emotional, and physical potentials. It is important to remember that a child's academic potential can not be developed separately from her/his social, emotional and physical potential, as they are interdependent aspects of a child's development.

Without access to a comprehensive support system, many children with disabilities will never enrol in school, will drop out, or will stay in school, yet be prevented from reaching their full potential. Individual support should primarily be given by the class teacher. However, s/he may also need assistance from school-based and itinerant resource teachers to ensure that the children concerned receive quality support that is based on their individual learning needs.

The ideal support system would offer school-based resource teachers, community-based specialists, and a supply of assistive devices. Books in Braille, wheelchairs, hearing aids, and communication boards would be supplied for free or at affordable costs. A comprehensive support system would also offer medical assessments and services. Many children

with disabilities would benefit from operations that could reduce or even remove the effects of their impairment. Children with cataracts are one of the groups that would benefit from quality paediatric eye-health care. Unfortunately, these services are rarely found in developing countries and, when available, are expensive and only accessible for a privileged few.

The majority of children with disabilities in developing countries are out of school, while many of those who are in school are enrolled in special schools away from their families, friends, and peers. However, more and more children with disabilities enrol in regular schools where they play, learn, and grow up with their non-disabled peers (inclusive education). To ensure that all children have access to quality education in a regular community school, we should look critically at school policies and practices to make sure they encourage and facilitate the development and participation of ***all*** learners.

Many teachers, school administrators and parents are worried about the consequences of enrolling children with disabilities in their schools. They are concerned about how this may affect the performance of the other students in their schools, since they find themselves in competition with other schools for student enrolment, funds and support (this is the reality for many schools throughout the world). However, if ***all*** schools became inclusive and learning-friendly, and would welcome ***all*** the children from the surrounding communities into their schools, these fears would be much less relevant because all the schools would compete on a more equal footing. Inclusive and child-friendly education should therefore be seen an approach to school improvement: inclusion is about making quality education available to ***all***.

There are many *examples* of how implementation of inclusive education, and the enrolment of children with disabilities and other special educational needs has helped improve the quality of education offered to ***all*** children who attend school. An inclusive primary school in the City of Payakumbuh on the island of Sumatra, Indonesia, improved its average rate of academic performance (measured according to national tests) after children with disabilities and other special educational needs started enrolling in their school. In 2003, the school decided to welcome ***all*** children (without exception) from the community that surrounded

the school. Teachers soon became more sensitive and responsive to the needs of ***all*** the children in the school, and community participation increased. Currently, about 20% of Payakumbuh's school students have a disability or another special education need. As the result of these efforts, the number of children dropping out of school decreased from eight in 2004, to four in 2005, to zero in 2006 and 2007. The goal of the municipal government in Payakumbuh is therefore that ***all*** their schools become inclusive, child-friendly and welcoming. They have realised that an inclusive school is a quality school.

Early detection, identification and intervention are essential for children with disabilities to reach their full intellectual, social, emotional and physical potential. Parents of children with disabilities will in many cases need support from child-care, education and health professionals, as many feel insecure when raising a child with a disability. Parents should be encouraged to look at their children first and foremost as children, learning to discover and value their abilities, rather than focusing on the disabilities. They should be empowered to trust their instincts as parents, while they also may need to learn some basic techniques and skills in order to better communicate with their children and support them in their development. This booklet addresses some of the many issues that parents and teachers find challenging when raising and educating children with disabilities.

We have already established that children with disabilities are not one homogeneous group. Just like other children, children with disabilities have individual needs, and experience different barriers. Some of these are linked to their disabilities, while other barriers are not.

It is important to remember that this booklet is merely an introduction; more information will be needed. In the back of the booklet, we have therefore added a list of web-based resources that can be downloaded for free. Unfortunately, most of these are only available in English.

Furthermore, there are very few good books and other print material available for free related to education of children with disabilities in inclusive settings. Most will have to be purchased in bookstores or ordered over the Internet. UNESCO may also have material available. For further information, please contact the UNESCO Asia and Pacific

Regional Bureau for Education (the address is listed in the back of the booklet), the nearest UNESCO office, or your National Commission for UNESCO.

If you have a child with a disability in your classroom, or in your school, and you would like to know more about disabilities than you will be able to learn from this booklet, please contact your nearest teacher training/ education college or university. Many colleges, universities, government departments, and non-governmental organizations offer short courses, as well as graduate programmes, in inclusion and special needs education.

The newsletters and discussion groups of the Enabling Education Network (EENET) – both the one that is based in Asia, as well as those in Africa, Brazil, and Europe – offer practical information-sharing between teachers, parents and education planners about how to successfully implement inclusive education. For more information, contact asia@eenet.org.uk or write to EENET Asia in Jakarta at the address listed in the back of this booklet.

Most importantly, trust your instincts, focus on all the abilities and potential that children with disabilities have, observe and listen to the children, allow them to teach you, and use your creativity.



Defining "Disabilities"

Defining what disabilities are remains problematic as there are many different groups of disabilities, and within these groups there are vast individual differences. Therefore, attempting to define disabilities is complex and often quite controversial. Many people with impairments do not define themselves as having a disability. Some people with hearing impairment who use a sign language as their main form of communication, will not define themselves as having a disability, but as a member of a language minority (sign languages), suffering the same form of discrimination as many other language minority groups. Others prefer the term "difabled" or "differently abled."

The term disability is often associated with more "visible" forms of disabilities. However, regardless of how the term "disability" is used, it is important to remember that children are first and foremost children, whether they have a disability or not.

The International Classification of Functioning (ICF) defines "disability" as the outcome of the interaction between a person with impairment and the environmental and attitudinal barriers s/he may face.[1]

Therefore, following the ICF definition, a child with physical impairment who depends on a wheelchair for mobility and who goes to a school without ramps and/or accessible sanitation facilities clearly has a disability as a result of the environmental barriers s/he faces. However, a child who is blind and has access to books and other learning material in Braille, educational support through itinerant resource teachers, and a school that is welcoming, inclusive and accessible for all children has impairment, but not necessarily a disability because s/he faces no environmental and attitudinal barriers.

There is confusion and disagreement (also among educationalists as well as among organizations representing people with disabilities), regarding

1 Disabled People International. (2005) "DPI Position Paper on the Definition of Disability" page on URL: http://v1.dpi.org/lang-en/resources/details.php?page=74 [15 Nov. 2007].

the terms "impairment," "disability," and "handicap," as well as when and how it is appropriate to use each of these terms. By many, disability is broadly understood in a continuum as shown below[2]:

Impairment -> Disability -> Handicap

Impairment can generate a disability, which in turn can lead to a handicap. A handicap will often lead to further social and economic exclusion. The more the exclusion, the less aware and concerned the community will become of the needs of persons with disabilities and the barriers they face. This alienation leads to a widening gap in the understanding of children with disabilities and their needs.

The World Health Organization (WHO) has defined impairment, disability and handicap[3] as the following:

- Impairment

  Any temporary or permanent loss or abnormality of a body structure or function, whether physiological or psychological. An impairment is a disturbance affecting functions that can be mental (memory, consciousness) or sensory, internal (heart, kidney), or external (the head, the trunk or the limbs).

- Disability

  A restriction or inability to perform an activity in the manner or within the range considered normal for a human being, mostly resulting from impairment.

- Handicap

  This is the result of an impairment or disability that limits or prevents the fulfilment of one or several roles regarded as normal, depending on age, sex, social and cultural factors.

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2 n.a. (2004) Understanding Disability: Attitude and Behaviour Change for Social Inclusion. Ahmedabad: UNNATI - Organization for Development Education and Handicap International, p. 4-5.

3 Barbotte, E. / Guillemin, F. / Chau, N. / Lorhandicap Group. (2001) "Prevalence of Impairments, Disabilities, Handicaps and Quality of Life in the General Population: A Review of Recent Literature," in Bulletin of the World Health Organization, Vol. 79, No. 11, p. 1047. URL: http://www.unnati.org/pdfs/books/research-eng.pdf [11 Jan. 2008].

The above definitions are still being used and referred to by many governments and organizations. They continue to be preferred to newer definition(s) by some key stakeholders. The term "handicap", however, is seen by many as discriminatory and dated.

Many of the disabling effects of impairments can be reduced if children have the opportunity:

- To interact with friends, peers and adults in their community.
- To experience a range of environments that minimise the impact of impairment, for example buildings that have no steps.
- To be taught by parents and teachers who help them to learn new skills.[4]
- To meet and learn from other people with disabilities who can become role models and sources of inspiration.

I also met my role model in junior high school. He was a blind university student who was also educated in a regular school. He met my parents through a network of parents with blind children in regular schools. He was recruited as a home teacher for me and helped with mathematics and chemistry because these subjects required special Braille codes. He and I shared some special concerns that would not be understood by my sighted friends. For example, we talked about how hard it was to start talking in a big group, or to recognise people only by their voice. When I took a train with him, I learned how to ask for help at the station.[5]

Kentaro Fukuchi

4 UNESCO. (2003) *Understanding and Responding to Children's Needs in Inclusive Classrooms.* Paris: United Nations Educational, Scientific and Cultural Organization, p. 23.

5 Fukuchi, K. (2008) "How Do We Learn Together? A Practice of Inclusion in Japan," in *EENET Asia Newsletter No. 5.* Jakarta, Indonesia: EENET Asia, pp. 22-23.



Barriers to Learning, Development and Participation and How to Overcome Them

What are Barriers to Learning, Development and Participation?

The barriers to learning, development and participation children face will vary from one child to another. It is important that we realise that all children – both children with and without disabilities - face barriers. If these barriers are not addressed properly, children will not be able to reach their full academic, social, emotional, and physical potential. Barriers may therefore be experienced temporarily or permanently depending on how effectively these are addressed and removed.

Children with disabilities face both environmental and individual barriers[6] – these two forms of barriers are closely interrelated. Combined they create a set of barriers that need to be reduced, and if possible removed by schools, homes and communities in order for the children concerned to be able to develop to their fullest potential.

Environmental (and Attitudinal) Barriers

- **Limited or no access to early intervention programmes** – the disabling effect of impairment will be multiplied unless there is access to quality early intervention programmes (support systems)
- **Teachers, school administrators and school inspectors** - if they discriminate against children who are perceived to be different from the majority of their peers
- **Legal and regulatory systems** - if these are discriminating, segregating and excluding

6 Johnsen, B.H. /Skjørten, M.D. (2001) Education – *Special Needs Education – An Introduction.* Oslo: Unipub Forlag, p. 31.

- **Curricula** – if these are rigid and do not respond to diversity of abilities, needs and circumstances amongst learners
- **Teaching approaches and teaching/learning material** – if these are not learning-friendly, nor responsive to the diversity of needs and abilities among learners
- **Assessment and evaluation system** – whether these exclusively or primarily assess the academic level of children according to general standards, rather than individual progress - ideally the academic, social, emotional and physical development should be assessed and evaluated
- **School and classroom environments** – when these are not inclusive, learning-friendly, or even physically accessible
- **Social, economic and political conditions**

Individual Barriers

- **Communication** – if a child has a different first language than the majority of their peers, their teacher, and/or the learning material available in the school (this includes children who have sign language as their first language as well as those who use Braille as written language)
- **Poor motivation** – if children have little or no motivation for learning, due to many different factors, often related to the environmental and attitudinal barriers listed above
- **Insecurity, low self-esteem and lack of self-confidence** – (this is likely to be the result of a combination of environmental, attitudinal, and individual barriers – some of which are listed above)
- **Abuse** – children suffering from psychological, physical, and/or sexual abuse are likely to experience serious barriers to learning, development, and participation. These can be avoided if there is comprehensive intervention from schools and families, as well as a support system (education and health professionals). Children with disabilities (especially those living in segregated education institutions) are particularly vulnerable to abuse.

> *Sixty-five percent of school-going children reported facing corporal punishment (…) More than 50% of children reported having faced one of more forms of sexual abuse (…) Children on the street, children at work, and children in institutional care reported the highest incident of sexual assault.*[7]

- **Gender** – girls with disabilities experience many of the same barriers that non-disabled women and girls face, but their social isolation and dependence on their families often magnifies these barriers, and their consequences. Women and girls with disabilities fare less well on most indicators of educational, professional, financial, and social success than their non-disabled female and disabled male counterparts.[8]

> *There is a general lack of awareness and acceptance towards the deaf. Many deaf children often feel isolated, even in their own families. Deaf girls and women in Afghanistan often times feel doubly disadvantaged because of the lack of proper education facilities and because of their poor marriage prospects.*
>
> *Abdul Ghaffar (2005)*[9]

- **Lack of social competence** – many children experience social difficulties, difficulties that may create barriers to learning, development and participation, and ultimately marginalization in, and exclusion from, school. Other difficulties include: interacting and playing with other children; communication; behaving in ways that are seen as socially and culturally "acceptable," as well as; difficulties in accepting boundaries (some of these are related to environmental and attitudinal barriers, as well as to impairments).

- **Temperament** – if a child has moods and rages, is introvert and has difficulty communicating with her/his peers (as well as

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7 Kacker, L. (2007) "Study on Child Abuse: India 2007," in EENET Asia Newsletter No. 4. Jakarta, Indonesia: EENET Asia, pp. 15-16.

8 Human Rights Watch. (2007) "Women and Girls with Disabilities." URL: http://www.hrw.org/women/disabled.html [4 Aug. 2008].

9 Ahuja, A. / Watterdal, T. M. (2006) "EENET Asia Interview: Sign Language Development – An Inclusion and Rights' Issue," in EENET Asia Newsletter No. 2. Jakarta, Indonesia: EENET Asia, pp. 34-35.

parents and teachers), finds it difficult to adapt to new and changing situations, is easily distracted, has a short attention span, and reacts very intensely on positive as well as negative experiences (many of these temperament/behaviour patterns are related to environmental and attitudinal barriers as well as to impairments)

- **First-generation learners** – if the child is the first in her/his family to go to school; additional support (support system) may be needed to prevent barriers to learning from emerging
- **Cultural, language and religious minorities** – many children belonging to a minority group will face enormous barriers to learning, development and participation. Without targeted support and an inclusive, learning-friendly environment, the barriers these children face may become permanent in nature. Children with disabilities from a minority background will often face additional barriers, and the consequences of the barriers they face will often be more severe than for their non-disabled peers.

> *I was very worried when two girls from this group joined my class (…). They looked thin and a bit "dirty" and "wild". I wondered what would happen. Could they really be included? Would they be able to follow my teaching? Would the other pupils accept them? These were my big worries. However, when I met them, I was impressed by their pro-activeness and innocence. They greeted me with grace and told me about their experience from the previous school. It was their "innocence" that "calmed me down" and brought them close to the other children. And the other children offered to help these girls to. I was extremely happy when one of the parents asked if they could also do something to help these girls.*[10]
>
> *Comments of a Teacher in Viet Nam*

10 Hanh, T. (2007) "Inclusive and Rights-based Approaches to Education: An Example of Good Practice from Ho Chi Minh City in Viet Nam," in *EENET Asia Newsletter, No. 4.* Jakarta, Indonesia: EENET Asia, pp. 30-31.

- **Impairment** – many children with impairment will face specific barriers related to their impairment such as: difficulties in communication because teachers and children in the school do not know how to use sign language; the lack of books in Braille, or toilets that are not accessible for wheelchair users.
- **Health conditions** – if a child is infected and/or affected by HIV, has epilepsy (a health condition as well as a disability), re-occurring malaria, or any other health condition that may lead to discrimination or keep the child away from school (ill at home or in hospital).

These are just some of the many individual barriers faced by children in schools and communities throughout the world. Being born into a single parent family, belonging to a lower caste, being homeless, having experienced and suffered through war or natural disaster, having to work to earn a living before and/or after school, and being a refugee will also lead to often insurmountable barriers to learning, development and participation. It is therefore of vital importance that we as teachers, parents and education planners create environments in our schools and communities where all children feel welcome, are valued and shown respect – regardless of their ability, background or situation – in order to reduce and remove these barriers for the children concerned.

As teachers, parents, education planners or teacher educators, we may feel that we will not be able to reduce or remove all the barriers that are listed above. Our influence over the curriculum or the social economic conditions in our communities may be very limited. However, it is important that we are aware of how these barriers affect the children in our schools and communities, and influence their ability to develop academically, socially, emotionally and physically. If we manage to create inclusive and learning-friendly environments in our schools and communities, we are often able to reduce the consequences of environmental (or systemic) barriers.

Identifying Barriers to Learning, Development, and Participation

Early detection (identification) of barriers to learning, development, and participation is essential for later interventions to succeed.

Children with poor grades are consistently classified as having a learning disability, often without any proper assessment of why these children experience barriers to learning, development and participation. Some of these barriers may instead be caused by cramped classroom conditions, inflexible curricula and examination systems, learning material that lacks relevance to many children, or the lack of child-friendly and child-centred teaching approaches. Therefore, labeling of children based on unqualified and random assessments is a major challenge to inclusion and education for all.

The list of barriers found above can be used in identifying the environmental, attitudinal, and individual challenges that children with disabilities face in our classrooms, schools, and communities.

The way we have taught children with disabilities in the past was often determined by their medical diagnosis. We thought that children with similar diagnoses were all supposed to be taught the same way. Today we know that learning is influenced by many factors other than the impairment the child may have.[11]

Practical Tips for Removing Barriers to Learning, Development and Participation

- Create an environment in which all children feel equally valued.
- Children should be allowed to communicate in their first language, even when this is different than the language of instruction used in school, whether sign language or another minority language. If you or none of the other teachers in your school speak the child's first language (mother tongue), try to find someone who does, such as someone from her/his family or community.

11 Johnsen / Skjørten, p. 31.

To learn in school is difficult, because I don't know how to speak the national language.

If we were taught in our language first, then we would learn.[12]

Comments of Bunong Children from Cambodia

- Children should be allowed time to express their thoughts and opinions. Many children with disabilities will need more time than other children to express themselves.
- Try to ask questions to children (especially those who are struggling with academic learning) that you are confident they will be able to answer. This will build confidence and motivate children to continue their learning.
- Be generous, genuine and honest with praise. This will help children to build confidence and to develop a healthy self-esteem.
- Children should be encouraged to state their opinion, and we should try to use their suggestions wherever this is possible.
- We should encourage both boys and girls to become involved in all curricular and extra-curricular activities.
- If a child suddenly changes behaviour or acts differently from the way s/he used to, we should try to find out why. If we suspect that this may be caused by abuse (verbal, emotional, physical or sexual), we should seek advice and help from organizations that work with child rights and child protection. These organizations are found in most communities throughout the world. The nearest Save the Children and UNICEF offices may also be able to help.
- We should evaluate the academic, social, emotional and physical development (progress) of children, instead of just measuring their performance in comparison to others. The progress children make should be evaluated based on their individual learning plans. These plans should be developed paying close attention to

12 UNESCO. (2007) *DVD on Promoting Mother Tongue-based Multilingual Education.* Bangkok: UNESCO Asia and Pacific Regional Bureau for Education.

possible barriers to learning, development and participation the child may face.

- Organize the classroom and seat the children to optimise opportunities for communication, interaction and learning for all the children in the classroom – with special focus on those children who experience barriers to learning, development and participation.

> *In our classrooms we work together in pairs, small groups and clusters. We use a lot of time developing activities and interactive games. Now I do not worry about my lessons as much as I did before. In my group I have children with disabilities. I say that all children can learn, every one of them is talented, …"*[13]
>
> *Comments of a Teacher from Kyrgyzstan*

- Make sure that you let all the children in the class know that you care about them and their needs.
- Identify at least one good quality that every student has demonstrated over the past month – see the List of Qualities and Virtues in the following box.[14]

13 Torobekova, F. (2006) "Practice and Do Not Be Afraid," in *EENET Asia Newsletter No. 2.* Jakarta, Indonesia: EENET Asia, pp. 20-21.

14 Astani / Watterdal, pp. 1-4.

Action Activity

Write a short letter to the parents that praises their children.

It is important that the praise is truthful and not for academic performance, as this is already done through exams, grades and performance reports. Teachers could use the following list of qualities and virtues:

Qualities and Virtues: The Gems and Gifts Within

- ☐ Assertiveness
- ☐ Care
- ☐ Cleanliness
- ☐ Compassion
- ☐ Confidence
- ☐ Consideration
- ☐ Courage
- ☐ Courtesy
- ☐ Creativity
- ☐ Determination
- ☐ Diligence
- ☐ Empathy
- ☐ Enthusiasm
- ☐ Faithfulness
- ☐ Flexibility
- ☐ Friendliness
- ☐ Generosity
- ☐ Gentleness
- ☐ Helpfulness
- ☐ Honesty
- ☐ Honour
- ☐ Humbleness
- ☐ Idealism
- ☐ Innovativeness
- ☐ Joyfulness
- ☐ Justice
- ☐ Kindness
- ☐ Love
- ☐ Loyalty
- ☐ Mercy
- ☐ Moderation
- ☐ Modesty
- ☐ Obedience
- ☐ Orderliness
- ☐ Patience
- ☐ Peacefulness
- ☐ Prayerfulness
- ☐ Purposefulness
- ☐ Reliability
- ☐ Respect
- ☐ Responsibility
- ☐ Reverence
- ☐ Self-Discipline
- ☐ Service
- ☐ Solidarity
- ☐ Steadfastness
- ☐ Tact
- ☐ Thankfulness
- ☐ Tolerance
- ☐ Trustworthiness
- ☐ Truthfulness
- ☐ Unity

The letter to the parents could read as follows:

Dear Parents,

During the past month, Raheela has been very helpful both to me and to her friends in class. This has been appreciated by all of us. We are looking forward to discovering more of your daughter's qualities in the months and years to come.

Kind regards,
Teacher

What do we want to achieve with this activity:

- Explore the positive qualities of every child. This will reduce the frustration many teachers feel when teaching children who experience barriers to learning, development and participation. This frustration can sometimes even lead to verbal, emotional and physical abuse of children. In spite of the Convention on the Rights of the Child, and child protection legislation (which is present in most countries), many schools continue to practice physical punishment of children.
- Increase the respect for the child regardless of her/his abilities.
- Give children an opportunity to succeed and feel appreciated. This will increase the self-esteem and self-confidence of ***all*** the children in the school, and increase their motivation to learn and perform.
- Motivate children to do good deeds to others, behave well and develop self-discipline.
- Improve communication between schools and parents, and thereby create increased ownership and participation.



Accessible School Environments – Universal Design Principles

According to the UN Convention on the Rights of Persons with Disabilities, universal design means the design of products, environments, programmes, and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. "Universal design" shall not exclude assistive devices for particular groups of persons with disabilities where this is needed.[15]

The first thing that meets us in most public buildings is stairs. These must be climbed before we can enter the building. Stairs are often the first barrier for many children and adults to access schools or other public buildings and enjoy the services these facilities have to offer. Sometimes there are just two or three steps; other times, there are many more. Some stairs have hand railings on the side to give support, but most do not.

All public buildings should therefore offer alternative ways to enter. Ramps are in most cases easy and relatively inexpensive to build (at least in 1-story buildings) and will benefit many. Ramps should therefore be added on to all existing schools and other public buildings. When new school buildings are being planned, and designs are being developed, we need to make sure that they are equally accessible for all. Ramps and walkways should be incorporated into the design, in such a way that they do not become separate features for children/ teachers/ parents with disabilities, women who are pregnant, and the elderly, but will present attractive, alternative access-ways for all users.

15 United Nations. (2006) *Convention on the Rights of Persons with Disabilities - Article 2.* New York: United Nations.
URL: http://www.un.org/disabilities/convention/conventionfull.shtml [11 Jan. 2008].

> *Space, light, materials, and even colour affect the way we experience education. Schools can make excellent use of these elements in creating buildings and grounds which reflect the needs and desires of their students and staff, but unfortunately, schools are often designed and built without fully considering the needs of the community who uses them.*
>
> *Ian Kaplan (2007)* [16]

Universal design is therefore not "just" about access, but also about creating a more inclusive and learning-friendly environment in school. Schools that are built based on universal design principles will therefore be more effective because these schools will enable children to learn, develop, and participate, instead of "disable" children by creating barriers to their development and participation.

> *Thnoeng Sokha from Samlot District in Cambodia has been paraplegic since she was five years old. She never thought she would be able to go to school because she could not walk to school on her own. Her house is 3 km from school and the condition of the road to school was very bad. However, she got two wheelchairs from an international organization - one is kept at her home and the other is kept at school. The wheelchairs have given Sokha freedom. Her younger sister or friends help to push her to school. At first, she had to cross a stream that didn't have a bridge. This was especially difficult with all the slip and mud during the rainy season. Now her journey to school is made easier because the community has built a basic wooden bridge to cross that stream and the road to her school has also been repaired. Her primary school facilities have improved recently because a ramp has been added to improve access to the classrooms. A new toilet block with ramp has also been built. Sokha is much more confident now and hopes to continue her education at lower secondary school. A new secondary school is being built closer to her house – this should be fully accessible according to the new Ministry of Education standards.*[17]

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16 Kaplan, I. (2007) "Inclusive School Design: Lombok, Indonesia," in *EENET Asia Newsletter No. 4*, Jakarta, Indonesia: EENET Asia, pp. 18-19.

17 Sophal, K. / Fox, S. (2006) "Physical Accessibility & Education," in *EENET Asia Newsletter No. 4*, Jakarta, Indonesia: EENET Asia, pp. 14-15.

The 7 Principles of Universal Design[18]

◆ Principle 1: Equitable Use

The design is useful and marketable to people with diverse abilities (people both with and without disabilities).

Equal access for all children to schools and school facilities can be implemented with simple and relatively inexpensive solutions.

Guidelines:

a. Provide the same means of use for all users: identical whenever possible; equivalent when not.

b. Avoid segregating or stigmatizing any users.

c. Make provisions for privacy, security, and safety should be equally available to all users.

d. Make the design appealing to all users.

The design for latrines in schools participating in the WASH (Water, Sanitation and Health Education) programme in Tajikistan is currently being redesigned to ensure improved accessibility for children with disabilities. The new design will make the latrines more user-friendly for all the children in the school as they are more spacious, there will continue to be separate spaces (and entrances) for girls and boys, and the new design will continue to be based on the same low cost philosophy as previous designs.[19]

18 The Center for Universal Design, North Carolina State University. (1997) "The Principles of Universal Design" page on URL: http://www.design.ncsu.edu/cud/about_ud/udprinciplestext.htm [16 Nov. 2007].

19 UNICEF. (2008) "Guidelines for Universal and Energy Efficient Design," Dushanbe: UNICEF, p. 11.

◆ Principle 2: Flexibility in Use

The design accommodates a wide range of individual preferences and abilities.

Guidelines:

a. Provide choice in methods of use.
b. Accommodate right- or left-handed access and use.
c. Facilitate the user's accuracy and precision.
d. Provide adaptability to the user's pace.

A new school building with access ramps, colour coding on walls and doors, colour marking and tactile patterns on the floors was constructed in Lombok (Indonesia). The building was planned and designed by the teachers in the school and the headmaster monitored the construction process to ensure that the work was done according to specifications and remained within the budget, which was developed according to Indonesian government standards for school buildings.[20]

◆ Principle 3: Simple and Intuitive Use

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

Guidelines:

a. Eliminate unnecessary complexity.
b. Be consistent with user expectations and intuition.
c. Accommodate a wide range of literacy and language skills.
d. Arrange information consistent with its importance.

Using traditional designs that are adapted to the needs of children with disabilities helps to create buildings that are accessible, and familiar, to ***all*** the children in the community – even to those with little or no schooling experience.

20 Kaplan, I. (2007) "Inclusive School Design: Lombok, Indonesia" in *EENET Asia Newsletter No. 4.* Jakarta: EENET Asia, pp. 18-19.

In the O.B. Montessori School in Manila (Philippines) crafts, and health education is taught in a "Bahay Kubo" a traditional Filipino village house. The traditional environment reduces the barriers to learning and participation for all the children, but especially for children and youth with disabilities and other special educational needs. Because they are taught in a traditional (and familiar) environment children find it easier to link what they learn in school with what thy experience at home.[21]

◆ Principle 4: Perceptible Information

The design effectively communicates necessary information to the user, regardless of ambient conditions or the user's sensory abilities. It is important that school books are made available in regular ink print as well as in Braille. The ink print should be of good quality and with good contrast colours. A minimum font size of 12 should be used. If books are printed with smaller font sizes, they need to be made available in large print for children with low vision.

Guidelines:

a. Use different modes (pictorial, verbal, tactile) to present essential information.

b. Provide an adequate contrast between essential information and its surroundings.

c. Maximize "legibility" of essential information (i.e., make it understandable for all users both in wording and design).

d. Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions).

e. Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

21 Soliven, P. (2008) "Helping People, Help Themselves" in *EENET Asia Newsletter No. 5.* Jakarta: EENET Asia, pp. 8-9.

I spent an exciting childhood in Osaka, fully supported by teachers, parents, local volunteers as well as friends. Passion, flexibility and faith in diversity are the words that can describe my teachers. Even though it was the first experience for them to teach a blind child, they tried a variety of ways to include me in the classroom. They learned Braille and taught me Braille because this is the most effective medium of instruction for me. I was assigned an assistant teacher for classes such as arithmetic, science, and physical education. In arithmetic class, for example, the assistant teacher explained figures and charts on the blackboard, using special paper called Raise Writer. You put a special paper on the board and draw lines with a pen. With some financial support from the local education authority local volunteers produced textbooks in Braille. This environment enabled me to learn effectively.[22]

Principle 5: Tolerance for Error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

Guidelines:

a. Arrange elements to minimize hazards and errors: most-used elements, most accessible; hazardous elements eliminated, isolated, or shielded.

b. Provide warnings of hazards and errors.

c. Provide fail-safe features.

d. Discourage unconscious action in tasks that require vigilance.

22 Fukuchi, K. (2008) "How Do We Learn Together? A Practice of Inclusion in Japan," in *EENET Asia Newsletter No. 5*. Jakarta, Indonesia: EENET Asia, pp. 22-23.

The flowers and bushes in our school yard used to be framed with decorative stones and tiles. When we started implementing inclusive and child-friendly education in our school, we realised that these stones might harm the children if they fell on them or stumbled over them during play and sport activities. We have therefore removed them, and we are no longer so worried about our flowers, but more concerned about the safety of our children.[23]

◆ Principle 6: Low Physical Effort

The design can be used efficiently and comfortably, with a minimum of fatigue.

Guidelines:

a. Allow users to maintain a neutral body position.

b. Use reasonable operating forces.

c. Minimize repetitive actions.

d. Minimize sustained physical effort.

Practical Tips for Making Classrooms Accessible:[24]

- Doors that are easy to open and do not require too much strength should be installed (gradually replacing old doors).
- Doors without thresholds should be installed to allow unobstructed access for wheelchair users.
- Doors should be wide enough for wheelchairs to easily pass through.

23 Watterdal / Tahir, p. 2.

24 Watterdal / Tahir, pp. 4-5.

- Ramps for wheelchair users (these should not be too steep – ideally 1:12 with 12 cm length for every 1 cm height increase).
- Tactile foot-markers should be placed in the hallway to warn for doors (as they may open and hurt children who are walking in the hallway, especially if they have visual impairment).
- Light switches should be placed within reach of children of different height.
- Sockets and electrical outlets that are installed at the same place in every classroom and ideally at table height (next to light switches) for easy access, particularly for children with visual impairment as well as motor/mobility impairment.
- Child protection features should cover electrical sockets, preventing children from putting their fingers in the socket and being electrocuted.
- Contrast colours should be used to create learning-friendly and accessible environments.
- Sound / noise levels should be reduced by using curtains, textile wall decorations, and other sound-dampening materials.
- Colour coding should be used to identify different classrooms to ease orientation for children with low vision, as well as for children with developmental impairment. It will also make the school more cheerful for all.
- Braille or other tactile symbols should mark every door to ease orientation for children with visual impairment.

Principle 7: Appropriate Size and Space

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

Guidelines:

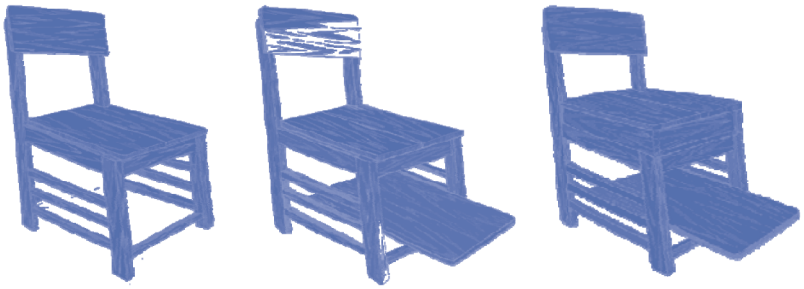
a. Provide a clear line of sight to important elements for any seated or standing user.

b. Make the reach to all components comfortable for any seated or standing user.

c. Accommodate variations in hand- and grip-size.

d. Provide adequate space for the use of assistive devices or personal assistance.

Specially-designed furniture should be made available for those who need chairs and tables that differ from standard classroom furniture. This does not have to be expensive. Chairs that enable children who have different body sizes to read and write comfortably could be designed based on local models, as was done in the example illustrated below[25]:



Regular chair for primary school children

Adjusted with a removable foot-rest

Adjusted with foot-rest and higher seat

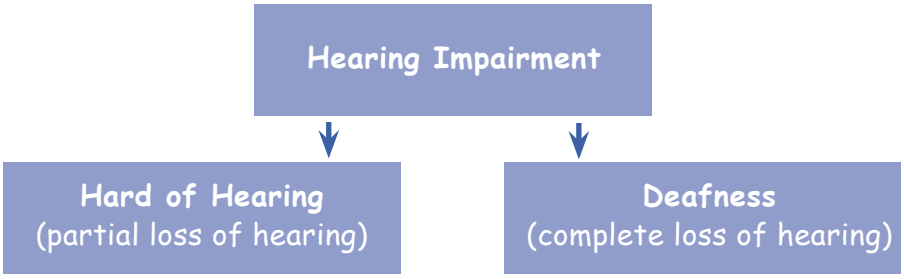
Source: IDP Norway

25 These chairs were designed by a resource person from Braillo Norway in connection with their "Quality Improvement of Education for Children with Visual Impairment" programme in Indonesia (1998 to 2005).



Hearing Impairment

Hearing impairment is a broad term used to describe the complete or partial loss of hearing.



Hearing impairment can be difficult to identify early because all babies – also babies who are born deaf – will use their voice. Their gurgling or babbling will often be synchronised with their caregivers as a result of facial expression, body tension and movement.[26]

The greatest challenge persons with hearing impairment meet is difficulties with communication because the majority of the population focuses on oral communication methods. Even as teachers and parents, we often forget that communication includes movement and facial expression, as well as sound. It is therefore important that we as parents, caregivers, and teachers communicate in ways that seem natural for us, using all modes of communication: movement, facial expression, sound and words.

In the United Kingdom, 1 in 1,000 children are classified as profoundly deaf at the age of 3.[27] In the United States, 1 in 1,000 children are born profoundly deaf with another 2-3 out of 1,000 children born with partial

26 Skjørten / Sletmo, p. 5.

27 Royal National Institute for the Deaf. (2008) "Statistics" page on URL: http://www.rnid.org.uk/information_resources/aboutdeafness/statistics/?ciid=214722#baby [4 Jan. 2008].

hearing loss.[28] These figures are likely to be considerably higher in many developing countries, amongst others due to poor access to quality health care services. In some parts of rural Pakistan, it is estimated that up to 1 child in 12 is suffering from hearing loss (this is partly thought to be caused by genetic defects related to marriages between close relatives).[29]

Importance of Early and Appropriate Intervention

When children with hearing impairment are not identified early and given appropriate assistance, additional support services (special needs education) beyond what would otherwise have been required will have to be offered during their schooling years (and, perhaps, later). Even children with mild hearing loss can miss much of the spoken information and discussions in the classrooms unless we are aware of their hearing loss and make changes to the way we teach and interact with them. Many children with hearing impairment are inappropriately labelled as having "behaviour problems" or "learning difficulties."

It is important that we realise how difficult it is for many children who have profound hearing loss to develop a language (even sign languages) unless they have access to early intervention programmes, sign language instructors, and personal tutoring (ideally by another child who has severe or profound hearing loss, but good sign language skills).

Modes and Means of Communication

People with hearing impairment use oral or manual means of communication, or a combination of both. Oral communication includes speech (vocal communication), lip-reading and the use of residual hearing, while manual communication includes sign language and fingerspelling. Total communication is a combination of oral and manual communication.

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28 American Speech-Language Hearing Association. (n.a.) "Facts on Hearing Loss in Children" page on URL: www.asha.org/NR/rdonlyres/3CDA7F66-0F0C-4BB2-8E57-85D7F7391401/0/HrngLossChldrn.pdf [4 Jan. 2008].

29 Elahi, M.M.; Elahi, F.; Elahi, A.; and Elahi, S.B. (1998) "Paediatric Hearing Loss in Rural Pakistan," study conducted for the Department of Otolaryngology, McGill University Teaching Hospitals, Montreal.

Sign Language and Fingerspelling (Manual Communication)

Sign language is the first language for children who are profoundly deaf, as well as for many children with moderate/severe and severe hearing loss. We often tend to forget that movement is the first means of communication for most children.

Every language should have their own sign language, and there are also sign language dialects within languages. (See the illustrated example on page 31 from the 'Yogyakarta Dialect' Indonesia.)

The grammar and sentence structure of sign languages are quite different from spoken languages, with their own rules for phonology, morphology, syntax, and pragmatics. Here is an example from American Sign Language:

- American Sign Language (ASL) has its own grammar system, separate from that of spoken American English. In general, ASL sentences follow a 'topic,' 'comment' (or 'predicate') arrangement. When discussing past and future events, we tend to establish a time-frame before the rest of the sentence. That gives us a 'time,' 'topic,' and 'comment' structure. For example, the sentence: Last week I washed my bicycle (spoken American English), becomes 'week-past' 'me' 'wash my bicycle' in American Sign Language.[30]

The fact that the grammar and sentence structure for sign language is so dramatically different from our written and spoken language will affect the ability of children with severe and profound hearing loss (and who depend on sign language for communication) to learn reading and writing at the same pace and time as other children.

30 American Sign Language University. (2008) "American Sign Language: Grammar" page on URL: http://www.lifeprint.com/asl101/pages-layout/grammar.htm [5 Jan. 2008].

Fingerspelling

All the letters of the English alphabet can be spelled using one or both hands. The "manual alphabet" or "fingerspelling" is used to spell out the names of people or places that do not have sign names. There are both one-handed and two-handed alphabets for fingerspelling. This is different in languages that use characters instead of letters. For example, in Japanese Sign Language (JSL) fingerspelling is not used much in normal conversation. For personal names and place names, there is a standardised set of «Kanji» signs that allow sign language users to spell out their name using Chinese characters in sign form.[31]

31 Nakamura, K. (2002) "About Japanese Sign Language" page on URL: http://www.deaflibrary.org/jsl.html [8 Apr. 2008].

One-handed English Fingerspelling Alphabet[32] [33]

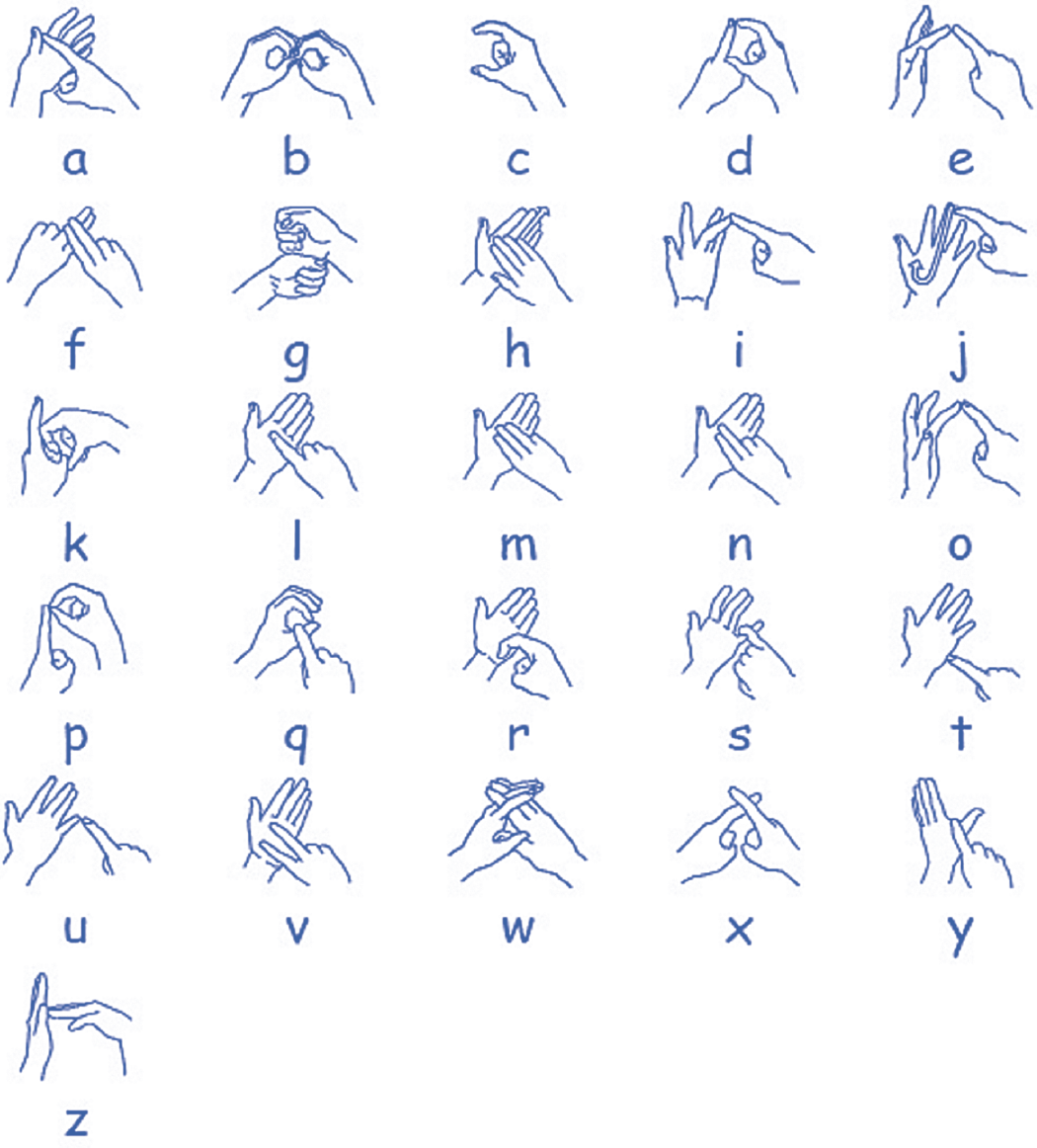


Source: IDP Norway

32 Indonesian Ministry of National Education. (2000) "Sistem Isyarat Bahasas Indonesia *(Indonesian Sign Language)*". Jakarta: Departmen Pendidikan Nasional *(Ministry of National Education)*, p. xxxi.

33 Authors Comment: The English fingerspelling alphabet has been adopted by the Indonesian National Ministry of Education and is now part of the national Indonesian Sign Language.

Two-handed Fingerspelling Alphabet[34]



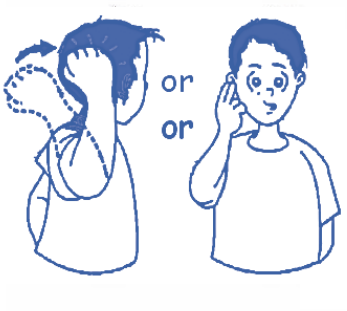
Source: IDP Norway

34 Waterfall Rainbows. (2008) "Fingerspelling" page on URL: http://www.british-sign.co.uk/fingerspelling.php [14 Apr. 2008].

Sign Language – A few Examples[35] [36]


© 2006, www.Lifeprint.com

Make the sign for "mother" by placing the thumb of your right hand against your chin. Your hand should be open, in a "five shape." (American Sign Language)

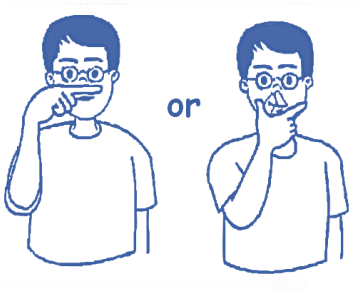


© Matahariku

There are two signs for "mother" in the "Yogyakarta dialect" of Bahasa Indonesia Sign Language. The first is made by moving a closed hand (fist) towards the back of the head (as women would traditionally wear a hair-bun), the second is made by placing two fingers against your right cheek (at the ear).


© 2006, www.Lifeprint.com

Make the sign for "father" by placing the thumb of your right hand against your forehead. Your hand should be open. Some people wiggle their fingers slightly while doing the signs mother and father, but you don't need to. (American Sign Language)



© Matahariku

There are two signs for "father" in the "Yogyakarta dialect" of Bahasa Indonesia Sign Language. The first is made by placing the right index finger horizontally under the nose. The second is made by moving/ spreading the thumb and index finger from the nose down to each side of the mouth. Both signs indicate a moustache.

35 American Sign Language University. (2008) "American Sign Language: Grammar" page on URL: http://www.lifeprint.com/asl101/pages-signs/m/momdad.htm [5 Jan. 2008].

36 Matahariku. (2004) *"Jogjakarta Sign Language - 2nd Edition"*. Jogjakarta: Matakariku, p. 61.

Speech (Oral Communication)

Speech is primarily used by children with mild, moderate, moderate/severe hearing impairment as a first language, and for children with severe and profound hearing impairment as a second language (if at all). Children with hearing impairment should not be forced to learn to speak. In many schools, children who are deaf spend endless hours learning to speak (and sing) while there is little focus on other subject matters. This will create, rather than remove, barriers to learning, development and participation for the children concerned. This approach is therefore no longer seen as acceptable. We must remember that a child who cannot hear well will not be able to speak clearly. This is because s/he cannot hear and mimic the words that other people say.

Lip-Reading

Lip-reading is "seeing the sound of speech" – the movements of the lips and of the tongue. Facial expressions and body language are also clues for the lip-reader. It is difficult for a child – especially one that has never heard – to learn lip-reading. If the child has some hearing and is using signs as well as words, it will help her/him to learn lip-reading. Many words will not be heard properly and using signs and lip-reading helps the child to understand what has been said.

Sound and Hearing Loss

Sound is measured by its loudness (volume) or intensity (measured in units called decibels, dB), and its frequency or pitch (measured in units called hertz, Hz). Hearing impairments can occur in only one ear or in both ears. Hearing loss is generally described as mild, moderate, moderate/severe, severe, or profound, depending upon how well a person can hear the intensities (dB) or frequencies (Hz) associated with speech.

Children and adults with a hearing loss greater than 90 decibels (dB) are generally considered deaf.

Degree of Hearing Loss and Potential Effects[37]

The potential effects of a hearing loss depend on many factors, including degree of loss (see below), but also upon early identification and amplification, early intervention services, parent and teacher involvement, as well as when the hearing loss occurred, whether it was before or after basic communication, and if language was already developed.

Cochlear Implants

Cochlear implants are going to effect the education of many children with hearing impairment in the future. This is already the case in many countries throughout the world, including many developing countries. In the past, cochlear implants have been expensive. However, since the first "indigenous" cochlear implant was launched in India in 2005,[38] more and more people with hearing impairment throughout the world are expected to be able to afford this new and innovative technology.

A cochlear implant is a surgically implanted electronic device that provides a person who is either profoundly deaf or severely hard of hearing with a sense of sound. As a result, some children who have never heard before will experience sound. These children will need speech therapy as well as counselling. Many children (and adults) need months and years to get used to sound, as some sounds may feel intrusive and uncomfortable.

Since it was first approved for testing in 1985, the cochlear implant has created controversy amongst key stakeholders, especially within the "deaf community." Does the cochlear implant pose a serious threat to deaf culture? Can people with cochlear implants function effectively as members of the hearing world? Do the results justify the expense of surgery and therapy? In spite of the controversy, it is estimated that more than 8,000 children worldwide have cochlear implants,[39] including a growing number of children in developing countries.

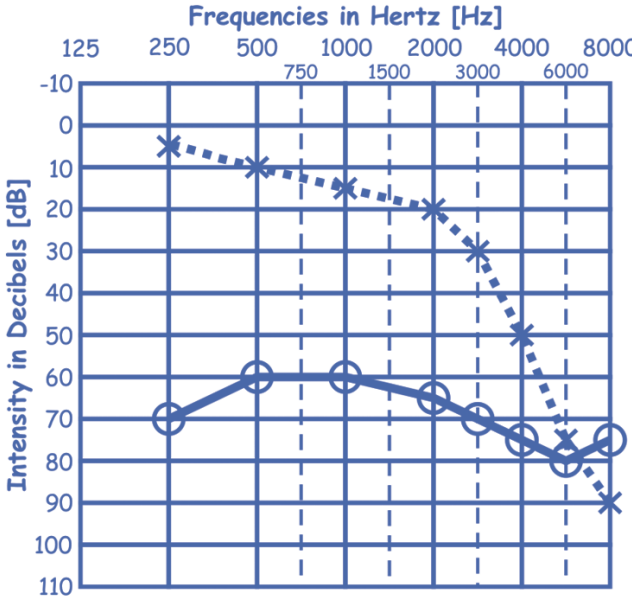
37 Hands & Voices. (2005) "Description of Degree of Hearing Loss Versus Potential Effects" page on URL http://www.handsandvoices.org/resources/coGuide/05_Lossvseffct.htm [11 Jan. 2008].

38 The Hindu Online. (2005) "Indigenous Cochlear Implant to Hit the Market Soon" page on URL http://www.hindu.com/2005/11/25/stories/2005112502220900.htm [2 Aug. 2008].

39 Public Broadcasting Services. (2008) "Cochlear Implants" page on URL http://www.pbs.org/wnet/soundandfury/cochlear/index.html [9 Jan. 2008].

The effects of hearing loss depend on the intensity (dB) needed to hear sounds with different frequencies (Hz). Some children with hearing impairment will need the same intensity (loudness) to hear sounds with different frequencies (pitches). Low-pitched and high-pitched sounds may be equally difficult to hear. Other children with hearing impairment may be able to hear low-pitched sounds without any problems (normal hearing), but not be able to hear high-pitched sounds at all (profound hearing loss). The most important pitches for speech are 500-3000 Hz. However, this may vary considerably from one language to another, as different phonemes (small sounds that make words) have different frequencies (pitches) in different languages.

The results of a hearing test are recorded on an audiogram (see example below). The vertical lines on an audiogram represent pitch or frequency. The horizontal lines represent loudness or intensity.



Source: IDP Norway

The audiogram on the left represents the hearing of an individual with normal hearing in the low frequencies (pitch) sloping to a severe high frequency hearing loss in the left ear (X), and a moderate to severe hearing loss in the right ear (O). The X's indicate the thresholds for the left ear and the O's indicate the thresholds for the right ear.

- **Mild 16-35 dB (decibel)** – The child may have difficulties hearing faint or distant speech. S/he may miss up to 10% of speech signals when the speaker is at a distance greater than one meter, or if the environment is noisy. The child is likely to experience some difficulties with communication as well as in general education settings. The need for a hearing aid and intervention should be considered.
- **Moderate 36-50 dB** – The child will understand conversational speech at a distance of one to two meters. Amplification (a hearing aid) may enable the child to hear and discriminate all sounds. Without a hearing aid, the child may miss 50% to 100% of speech signals.
- **Moderate/Severe 51-70 dB** - Conversation must be very clear and loud to be heard without amplification. A 55dB hearing loss can mean that 100% of speech signals are missed. The child may have difficulty in settings requiring verbal communication (especially in larger groups), including classrooms and playgrounds. The development of spoken language will be delayed and the ability to understand speech will be reduced without intervention and amplification.
- **Severe 71-90 dB** - If the hearing loss is pre-lingual (before language has developed), spoken language may not develop spontaneously, or could be severely delayed unless interventions are made. With optimal amplification (a hearing aid), the child should be able to detect all the sounds of speech and identify environmental sounds. Without amplification, the child is aware of loud voices about 30 centimetres from the ear and is likely to rely exclusively on vision for communication, sign language and lip-reading, or a combination of both (total communication).
- **Profound 91 dB or greater** – The child is aware of vibrations more than tonal pattern. Many children rely fully on vision rather than hearing for communication and learning - exclusive use of sign language (possibly combined with lip-reading). Speech and oral language will not develop spontaneously without modifications and intervention. The ability to understand speech is often greatly reduced, and an atonal voice quality is likely.

Residual hearing can benefit from amplification (hearing aid). Some children with profound hearing loss may benefit from a cochlear implant, although the use of cochlear implants is highly controversial within the deaf community.

- **Unilateral hearing loss (UHL) or hearing loss on only one ear** – The child may be at risk for speech and language delays and/or experience other barriers to learning. Children with unilateral hearing loss may have difficulties hearing conversation on their impaired side, locating where a sound comes from, and understanding speech when there is a lot of background noise. Some children experience few (if any) barriers to learning, development and participation, while others are much more affected. Little is known why some children are affected and others are not.[40] If the hearing loss is complete, this is also referred to as single-sided deafness (SSD).

Removing Barriers to Learning, Development and Participation Related to Hearing Impairment

Partial hearing loss or deafness does not affect a person's intellectual capacity or ability to learn. However, children who are either hard of hearing or deaf will generally require some form of special education services – offered in an inclusive setting - in order to receive an adequate education. Such services may include[41]:

- Early intervention
- Sign language education
- Speech, language, and auditory training from a specialist
- Amplification systems – including hearing aids

40 A research team from the University of Colorado Boulder is currently collecting information about the development of children with unilateral hearing loss.

41 National Dissemination Center for Children with Disabilities. (2004) "Disability Fact Sheet — No. 3" page on Washington: National Dissemination Center for Children with Disabilities URL: http://www.nichcy.org/pubs/factshe/fs3.pdf [4 Jan. 2008].

- Services of an interpreter for those students who use a sign language as their first language
- Favourable seating in the class to facilitate lip-reading
- Captioned films, videos and DVDs
- Instruction for teachers, parents and peers in alternative communication methods, such as sign language
- Consistent and conscious use of visible communication modes (such as sign language, fingerspelling, and cued speech) and/or amplification and aural/oral training
- Guidance and counselling - it is difficult for many children to cope with the social marginalisation and exclusion a hearing impairment often leads to unless they have friends with hearing impairment, or their friends who can hear are able to communicate in a sign language.

Practical Tips for Teaching Children with Hearing Impairments[42] [43]

- Organize the classroom so that all the children are sitting in a U shape. This way the children can see each other, which will make it easier for children with hearing impairment to use sign language, read lips and understand mimics, thereby making it possible to participate more actively in discussions and classroom activities.
- Spend some time giving face-to-face instruction, since group situations can be quite challenging for children with hearing impairment.
- Look at the child (with hearing impairment) while speaking to her/him.

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42 German Association of the Deaf. (2008) "Was ist Gehörlos? - Tipps für die Verständigung" *(What is Hearing Impairment? Practical Ideas for Communication)* page on URL http://www.gehoerlosen-bund.de/gebaerdensprache/gl_tipps.htm [5 Jan. 2008].

43 Sletmo, E. (2004) *Teaching Children with Hearing Impairment in Inclusive Settings*. Jakarta: University of Oslo and Braillo Norway, p. 7.

- Speak slowly and clearly, but not too loud.
- Use short, simple, and clear sentences.
- Be consistent in use of language.
- Use clear mimics and gestures.
- Use "natural" signs (i.e. for tired, sleeping, eating or drinking) if you are not able use formal sign language.
- Ask the child (if s/he has an oral language) to repeat what s/he has understood.
- Write down key words of information given during the class and give it to the child at the end of every day.
- Work together with an audiologist (if available) to teach and encourage the child to use her/his residual hearing to the maximum extent possible, even if the preferred means of communication is sign language (manual communication).
- Reduce all unnecessary noise, as multiple sources of sound will make it more difficult for the child to use her/his residual hearing. This is also important if the child is using a hearing aid (amplification).
- If some of the classrooms in the school are more noisy than others (noise from busy roads, trains, airports or factories), the school should be flexible and move the class who has children with hearing impairment (as well as classes who have children with visual impairment or other disabilities) to a less noisy classroom.
- Be flexible with time, as most children with hearing impairment (both deaf and hard of hearing) will struggle to understand everything that goes on in the classroom (as a result of their hearing loss).
- Focus more on content than on grammar when assessing the writing of children who primarily use sign language for communication. Because the grammar of sign languages is very different from written languages, these children are in fact writing in a "second" language.

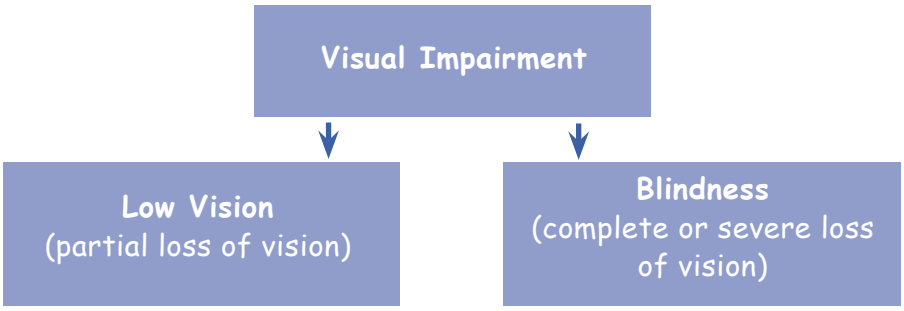
Please take into consideration that:

- Facial hair - beards and moustaches (worn by teachers) may affect the ability of children with hearing impairment to read lip-movement and understand facial mimics.
- Face covering - veils covering eyes, eye brows, nose, mouth and cheeks (worn by teachers and fellow students), will affect the ability of children with hearing impairment to read lips and understand mimics.
- The majority of children who are deaf (profound hearing loss) are born to hearing parents. The school should therefore also attempt to provide instruction for parents on implications of deafness within the family.
- A child who is deaf may need more time to learn than other children. This is because s/he must learn to read and write in a "second" language – a language that is quite different from her/his first language.
- A child who is hard of hearing may also need more time to learn than other children, as s/he will not always be able to hear the teacher's voice and what the other children talk about in the classroom. Therefore, much of the information given during the lessons will be lost.



Visual Impairment

Visual impairment is a broad term used to describe the complete or partial loss of vision.



The greatest challenges most children with visual impairment face are difficulties in mobility (moving around independently), difficulties understanding and using non-verbal communication (facial expressions and body language), and difficulties with written communication (because most of their peers read and write regular ink print).

The effects of a visual loss depend on a number of factors, including degree of loss (blindness versus low vision), but also upon early identification (when was the visual loss identified), early intervention services (when did the child start to receive support), parents and teacher involvement as well as when the visual loss occurred – if it was before or after basic communication, and whether language and visual recognition were developed.

It is important to realise that children who are born blind (or with little residual vision), or who lost their vision at a very early age have quite different needs, and face different barriers, than children who have lost their vision fully or partially later during their childhood.

> *The real problem of blindness is not the loss of eyesight. The real problem is the misunderstanding and lack of information that exists. If a blind person has proper training and opportunity, blindness can be reduced to a physical nuisance.*[44]

Blindness: A person who is blind has a total or high degree of vision loss. About 18% of blind people are totally blind – the remaining 82% can distinguish between light and dark.[45]

Low Vision: Partial vision loss that cannot be corrected by ordinary visual devices (glasses or contact lenses) causes a visual impairment known as "low vision." A person with low vision has severely reduced visual acuity, a significantly obstructed visual field, contrast sensitivity, or all three. The World Health Organization's definition of *low vision* is visual acuity less than *6/18* and equal to or better than *3/60* in the better eye with best correction.

Causes for Visual Impairment[46 47 48 49]

- **Albinism** - People with albinism are born with little or no colour (or pigment) in their eyes, skin and hair. This means that they may have pale skin and very light blonde hair (even if this is not common within their ethnic group). Albinism affects the vision of those affected.
- **Cataract** is a clouding of the lens of the eye that impedes (hinders) the passage of light. Although most cases of cataract are related to the ageing process, many children are also born

44 National Federation of the Blind. (2007) "NFB Homepage" on URL http://www.nfb.org/nfb/Default.asp [12 Dec. 2008].

45 BBC. (2007) "What is the Definition of Blindness" page on URL: http://www.bbc.co.uk/health/conditions/blindness1.shtml. [10 Oct. 2008].

46 World Health Organization. (2008) "Priority Eye Diseases" page on URL http://www.who.int/blindness/causes/priority/en/index.html [11 Jan. 2008].

47 Lighthouse International. (2008) "Eye Disorders" page on URL http://www.lighthouse.org/medical/eye-disorders [05 Jan. 2008].

48 Royal National Institute for the Blind. (2008) "Eye Conditions" page on URL http://www.sortit.org.uk/eyecond_astigmatism.htm [11 Jan. 2008].

49 All About Vision. (2007) "Retinitis Pigmentosa" page on URL http://www.allaboutvision.com/conditions/retinapigment.htm [04 Aug. 2008].

with cataracts or the condition may develop after eye injuries, inflammation, and other eye diseases. Childhood cataract is widespread in many parts of the world. In some cases, childhood cataract is passed on through the family (hereditary). When this happens, the child may have slightly smaller eyes than usual. Infections during pregnancy can also cause cataracts.

- **Diabetes-related eye diseases** are among the leading causes of visual impairment in many countries. Diabetics can develop eye diseases such as diabetic retinopathy (the most common diabetes-related eye disorder), glaucoma and cataracts.
- **Glaucoma** is when the optic nerve that carries information from the light sensitive area of the eye, called the retina, directly to the brain is damaged, usually by high pressure in the eye. Eyes need a certain amount of pressure to keep their shape so that they work properly and stay healthy. When the pressure is too high, the child may find bright light or sunlight uncomfortable (photophobia), and have eyes that are slightly larger than usual. The child will also have a greater chance of developing a "squint" (when the eyes look in different directions) or a "lazy eye" (when one eye is weaker than the other), or the eyes may water more often than for other children.
- **Onchocerciasis** or "**River-Blindness**" is transmitted by blackflies that live and thrive in many riverside areas. Eye lesions can be found in all internal tissues of the eye where they cause inflammation, bleeding, and other complications that ultimately lead to blindness. Ninety-nine percent of those affected live in Africa, while the remaining 1% lives in Yemen, Mexico, Guatemala, Ecuador, Colombia, Venezuela and Brazil.
- **Refractive Errors** including myopia ("short-sightedness"), and hyperopia ("long-sightedness") with or without astigmatism (when the eye can sharply image a straight line lying only in one meridian).
- **Retinitis Pigmentosa (RP)** is a group of hereditary retinal diseases. The first signs of retinitis pigmentosa usually occur in early childhood, when both eyes are usually affected. Night vision can be poor, and the visual field may begin to narrow. During later stages, only a small area of central vision remains,

along with slight peripheral vision. RP is one of the most common eye diseases in countries and cultures where marriage within the family is practiced.

- **Trachoma** is caused by a micro-organism that spreads through contact with eye discharge from the infected person (on towels, handkerchiefs, fingers, etc.) and through transmission by eye-seeking flies. After years of repeated infection, the inside of the eyelid may be scarred so severely that the eyelid turns inward and the lashes rub on the eyeball, which can further scar the cornea and lead to blindness.

The sizes of the symbols on page 46 are near accurate, so you can use them to test the vision of the children in your class if you suspect that any of them may have reduced vision.

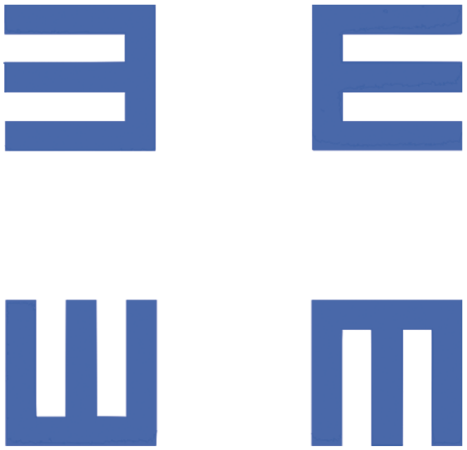
This test is just one of many that should be taken to determine the residual and functional vision of a person. The vision field should also be tested because it determines the extent to which s/he can use her/his residual vision.

In 1992, WHO offered an alternative, working definition of low vision as impairment of visual functioning even after treatment and/or standard refractive correction, where a visual acuity is less than 6/18 to light perception, or visual field is less than 10 degrees from the point of fixation, but where vision is used for the planning and/or execution of a task for which vision is essential.

Braille is the main medium for reading and writing for people who are blind and for those who have low vision (only for those who can no longer read adjusted print or benefit from optical reading devices). Braille is a tactile script, based on a combination of one to six dots, in a six dot frame. There is a Braille code for most languages in Asia, not just those using Latin letters (like the example below), but also for languages using Chinese, Japanese and Korean characters, as well as for those using different alphabets like: Arabic, Cyrillic, Hindi, Singhalese, Tamil and Thai (just to mention a few).

Distance Visual Acuity Test

6/18



The first number (6) is the distance used for testing (6 meters). The second number (18) is the size of the symbol.

If these symbols (letter E) can be seen from a distance of 6 meters with proper correction (glasses), the person being tested has "normal vision".

If s/he cannot see the symbol s/he has low vision.

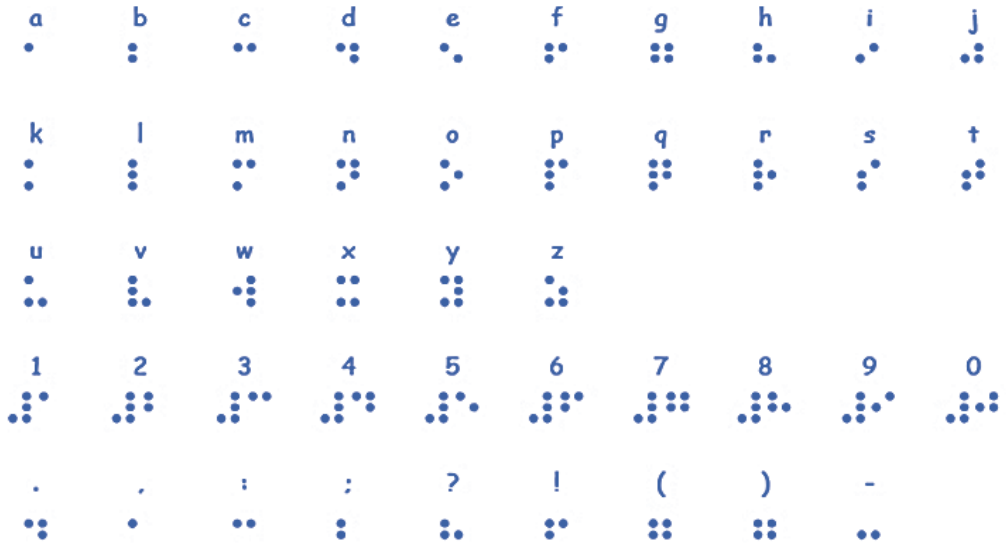
6/60



If this symbol (letter E) at 6/60 cannot be seen from half a distance (3 meters) in the eye with the best correction (as vision is different from one eye to the other), the person is considered to be blind.

Source: IDP Norway

Here is the Braille alphabet in English Braille:



Visual Responses and Capabilities in Normal Visual Development[50]

At the age of 4 to 7 years, a child with normal visual development:

- Discriminates, identifies and reproduces abstract figures and symbols
- Traces, copies and draws figures
- Sorts like figures by a single detail
- Identifies and perceives relationships in pictures, abstract figures and symbols
- Identifies missing detail in pictures
- Identifies perceives and reproduces symbols in single form and in combination (letters and words)
- Identifies letters in different print styles
- Reproduces abstract symbols from memory
- Identifies words on sight

50 Centre for Eye Research Australia - University of Melbourne. (2008) "Visual Development" page on http://www.lowvisiononline.unimelb.edu.au/Assessment/development.htm [11 Jan. 2008].

Practical Tips for Teaching Children with Visual Impairments[51]

"According to experiences gained in low vision programmes in Indonesia, India, and Nepal, good clinical assessment of school-age children with low vision has shown that the vast majority of children can use regular school books. They either read these with non-optical and/or optical interventions such as magnifying devices. This has to a great extent reduced the need for large print books. Students still needing large print, even with magnification, will mostly need sections of their books only, which in most cases can be photocopied and enlarged …"

Karin van Dijk (2004)

- Select books with good print quality and layout. The text should ideally be left-aligned (with an even left margin, and an uneven right margin). This will make it easier for children with low vision to read, with a minimum of assistive devices. It will also benefit other children who struggle with reading.
- Books and other reading material should be provided in Braille for those who depend on Braille for reading and writing. The books should be provided for free or at the same price as sighted children pay for their books (in ink print).
- Children who write Braille should have access to writing frames and stylus for free, or at the same price as pen and pencils.
- Appropriate visual devices should be provided to children with low vision based on their individual needs as well as availability of devices.
- Orientation and mobility (O&M) training should be provided – how to move about with a white cane, use trailing techniques as well as touch and protection techniques, effective use of landmarks (including sound and echo), guiding techniques (human guide) as well as techniques for free movement in space.

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51 Watterdal and Tahir, pp. 4-6.

Experiential Activity - Moving

First put on a blindfold. Stand with your back to the wall of an open space, and try to walk a straight line. When you have walked for 8 or 10 metres, take off the blindfold and see how far you have either turned toward the left, or towards the right.

This simple activity will show us how difficult it is for children who are blind to move about without proper orientation and mobility training.

- Space awareness activities – enable children with visual impairment to move about in open space in order to feel confident and in control over their own bodies and movements.
- Activities of daily living (ADL) – many children with visual impairment need training in performing daily tasks that for most other children are learnt by mimicking and copying their parents, siblings and peers. These are, amongst others: going to the toilet, washing, dressing, tying shoelaces, eating and drinking without spilling, pouring a glass of water, and using cutlery (or sticks).

Experiential Activity - Eating

Put on a blindfold, before you start eating breakfast. Try to pour a glass of water, or a cup of tea, or put butter and jam on your toast, all without using your eyes. If you have noodles for breakfast, try to eat these with chopsticks while still blindfolded. You will probably make quite a mess.

This activity will show us why some children might need more time than others to learn how to eat without spilling too much, get dressed properly, and even go the toilet alone.

- If you have children with albinism in your class, please make sure that their eyes and skin is protected from the sun when playing outside or having physical education, ideally with long sleeves, long trousers, skirts with stockings, caps and sun glasses, because their skin will burn easily in the sun. Children with albinism are therefore extremely vulnerable to skin cancer.
- Seat the children with visual impairment so that they can hear well because they will depend more on their hearing than most other children, both for learning and participation.
- If some classrooms in the school are noisier than others – (noise from busy roads, trains, airports or factories), the school should be flexible and move the class who has children with visual impairment (as well as classes who have children with hearing impairment or other disabilities) to a less noisy classroom.
- We should seat children with low vision so that they can maximise the use of their residual vision as well as prevent them from being blinded by light (reflection from sunshine and other light sources). Many children who are blind have some light perception and feel bothered by light, while others will benefit from light because they will be able to use their light perception for mobility purposes.
- The seating arrangements should be fixed or at least not changed too frequently, so that the children can orient themselves and find the way to their seats independently, as well as know where all their friends are seated (located).
- Prevent the classroom, especially floor areas, from being cluttered to ease mobility for the children concerned and prevent accidents and injuries.
- Likewise, important objects in the classroom (books, learning material and devises) should not be moved around too much. Have fixed places so that children with visual impairment can find things independently.
- Think about a "goal" that should be set for the child with visual impairment (what should be learned throughout the school year), and try to find ways and strategies to help the child achieve this

goal. This will help you to plan for when you might need external support from an itinerant resource teacher, or an assistant teacher (if these are available), how the other children in the class can help out, and what kind of adjusted teaching and learning material would be needed. Remember it may take time to get hold of books in Braille, an abacus or other material – if these are at all available.

- Spend some time to explain to the child with visual impairment about the process of learning in class before they start, especially in classes where series of different activities are required, such as in science experiments, physical education, cooking and crafts classes. It is also important to explain and show how different equipment that is used in the class works because children with visual impairment might not be able to follow the general instructions.
- Read everything that is written on the blackboard aloud and slowly.
- Try to speak while facing the children (not away from them) because children with visual impairment greatly depend on their hearing to receive information, and they need to hear you clearly.
- Involve the other children in the class to help out. Explaining a visual concept to a person who cannot see is an interesting challenge for most sighted children (and adults). It can help them to see things from different perspectives and deepen their understanding of shapes, colours and functions. Assisting their friends with visual impairment will contribute greatly to their social, emotional and academic development, and be mutually enriching.
- Encourage the class to think about how to include their peers with visual impairment in physical education programmes. Inclusion is not just the responsibility of teachers, but also of students. Through physical education, children can learn how to include their peers with disabilities in after-school activities, as well. This is one of the most important points in inclusive education because children with visual impairment tend to be excluded from most after-school activities, even when they are included in regular classroom activities.

- Produce tactile learning material as part of "class projects." If the children make tactile maps, for example, it will help all children learn geography better, especially children who depend on oral and tactile information for learning.
- Use real objects that the child can feel and handle, rather than just working abstractly with pen and paper. This is important for all children, but especially for children with disabilities.
- It is difficult for a child with visual impairment to understand the concept of "things," especially very large and very small things. Therefore, provide as many opportunities as possible for the children to touch different "things." If a big tree has fallen down or been cut down near the school, take the children there to see and touch it. This will provide better understanding of size, height and length for all the children in the class, not "just" for the child with visual impairment.
- Remember that it takes much, much longer to write Braille characters than ink letters – one character can have up to five dots. Those dots are embossed separately, when using a stylus and a writing-frame.



Physical Impairment - Motor and Mobility Impairments

Many children with physical impairment are excluded from school. Most schools remain physically inaccessible for children who depend on wheelchair, callipers and crutches for mobility.

Children who experience difficulties with verbal or written communication due to their physical impairment are also often excluded from schooling, or marginalised in school. It is therefore essential that we start making schools more accessible for children with motor/physical impairment. According to numerous international conventions[52] and agreements,[53] ***all*** children have the right to access quality education in an inclusive (or integrated) setting in their home communities.

A Story about Access and Mutual Enrichment

Murod[54] is a 6-year-old boy from Dushanbe, Tajikistan, who has just been enrolled in an inclusive kindergarten in the outskirts of the city. Not many kindergartens in Tajikistan welcome children with disabilities, but Murod's kindergarten does.

There are more than 20 children in Murod's class, both boys and girls. Murod has cerebral palsy and needs a wheelchair for mobility, so to make the kindergarten more accessible, a ramp has been built. It is a bit steep and only goes to the first floor, but it helps Murad to participate in some of the kindergarten activities together with the other children.

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52 United Nations. (2006) "Convention on the Rights of Persons with Disabilites" page on URL: http://www.un.org/disabilities/convention/conventionfull.shtml [11 Jan. 2008].

53 United Nations. (1993) "The Standard Rules on the Equalization of Opportunities for Persons with Disabilities" page on URL: http://www.un.org/esa/socdev/enable/dissre00.htm [11 Jan. 2008].

54 Murod is a fictitious name to protect the privacy of the child concerned.

Murod needs a lot of exercise. During both class and recreation, he will practice walking and have basic physiotherapy. One of Murod's friends has ADHD. He has a lot of energy and needs to move around more than the other children in the class. For this reason, he often helps out when Murod needs exercise. Learning, playing and doing things together is therefore good both for Murod and for all his classmates.

What is Motor Impairment?

Motor impairment is a disability affecting the ability to control muscle movement, which often limits mobility. Examples include cerebral palsy, arthritis, paralysis, limb loss and reduced function of one or more limbs. The impact of these conditions on learning, development and participation will vary from child to child.

Many children with motor impairment will also experience difficulties in social interaction with other children (and adults), with attention as well as with their cognitive and language development.[55] This highlights the need for comprehensive collaboration between education, health and social sectors when support services are organized by teachers, schools and education authorities.

What is Mobility Impairment?

Mobility may be impaired by a number of conditions. Some are permanent, others are of a temporary nature. These include cerebral palsy, arthritis, muscular dystrophy, multiple sclerosis (MS)[56] and juvenile Parkinson's disease. Injuries may also temporarily or permanently affect mobility.

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55 Iversen, S. (2006) "Tverrfaglig tilnærming til barn med utviklingsproblematikk" *(Holistic Approach to Working with Children with Developmental Problems)* page on URL: http://www.helse-bergen.no/forskning/doktoravhandlinger/Iversen+doktorgrad.htm

56 Multiple sclerosis is most common among adults; however, it can also affect children and teenagers.

Practical Tips for Teaching Children with Physical Impairments

- Classrooms and school facilities (libraries, toilets, sport grounds and play areas) should be made physically accessible for ***all*** children. See Chapter 3 "Accessible School Environments – Universal Design Principles."
- Children who use wheelchairs, callipers or crutches for mobility may find it difficult moving around within a traditional classroom blocked by rows of chairs and desks. It is therefore important that we "set up" the classroom in such a way that all the children can move about freely. Children must not just have physical access to their own desk, but also to other parts of the classroom for group activities or just to fetch something from a shelf or cupboard, or to paste a drawing on the wall.
- Children who get easily tired, and need much rest, may find it difficult to come to school on time or to stay in school the whole day. We should therefore repeat important information once or twice to make sure that all the children have heard it at least once. This will also benefit children with ADHD and children who may have had difficulties understanding the information the first time around.
- Children with physical impairments may sometimes wish/need to use their own furniture, such as ergonomic chairs and sloped writing tables. This should be accommodated without being obtrusive for the other children.
- Specially-designed furniture should, if possible, be made available for those who need chairs and tables that differ from standard classroom furniture. This does not have to be expensive. Chairs can be designed based on local models (see illustrations on p. 26).
- Some children would be more comfortable standing rather than sitting down – especially children with back injuries. This should be accommodated in the classroom.
- Children who are motor impaired, or are without one or both arms/hands, may need to use a tape recorder or an electronic note-taker during class. They should also have the option of

providing giving in their homework on a cassette tape or printed out from a computer with voice-recognition software.[57]

- Many children with physical disabilities will need additional time to read, write, or take notes. This may affect their classroom participation as well as the time they would require to finish assignments. Teachers and school administrators (as well as school inspectors and supervisors) should make sure that the children concerned get the time they need to properly show what they have learned in school. This is important for all children, both with and without disabilities. It is particularly important that extra time is given during exams.
- Some children with physical impairment may need extensions on deadlines for homework and classroom activities that involve locating and using library resources. Teachers should therefore provide reading lists, a list of things to do, and learning material well before the start of the activity, so that the children concerned can prepare properly and begin early.
- Activities that take place outside of school (such as visits to museums, galleries and sport activities), should be planned and implemented in such a way that all children can participate and benefit from the activities. If the class visits a museum or exhibition, it should be a place that is physically accessible. If sport activities are organized, they should be planned in such a way that all the children are physically "challenged" according to their individual potential and abilities.
- The other children in the class should be encouraged to help and assist their classmates with disabilities as part of their own social, emotional and academic development, which is mutually enriching.

57 BBC. (2005) "Voice Recognition Software – An Introduction" page on URL: http://www.bbc.co.uk/accessibility/factsheets/pdf/vr_intro.pdf. [8 Jan. 2008].

Cerebral Palsy

Cerebral palsy is caused by an injury to the parts of the brain that control movement during the early stages of development. In most cases, this injury occurs during pregnancy. However, it can sometimes occur during birth and from brain injuries in early infancy (such as lack of oxygen from near drowning, meningitis, head injury or being shaken). It is estimated that 2 children out of every 1,000 have cerebral palsy.

Children with cerebral palsy may have difficulties with:

- Movement of body parts or the whole body
- Talking as well as non-verbal communication (facial expressions may not always reveal true emotions – i.e. the child might appear to be smiling but is actually very angry or sad)
- Involuntary muscle movements (spasms)
- Eating and drinking
- Muscle weakness or tightness
- Balance and coordination
- Posture (the ability to put the body in a chosen position and keep it there)
- Attention and concentration

Practical Tips for Teaching Children with Cerebral Palsy

- If the child has speech, we should be patient and allow the child all the time s/he needs to ask, or answer questions, or make comments.
- We should allow the child a chance to move around. Children with cerebral palsy need muscle stimulation to improve their motor skills.
- Some children with cerebral palsy will tire easily. We should therefore allow them time to rest during the school day. A place to rest should ideally be provided by the school.
- If the school has access to a computer, it would benefit children with cerebral palsy because many experience difficulties with written communication (often in addition to oral communication) due to weak fine-motor skills.



Developmental / Intellectual Impairment

Developmental impairment describes a congenital (present at birth) or an early-acquired cognitive[58] impairment. Developmental impairment is a collective term for a number of different conditions or diagnoses with the common characteristic that the ability to learn and to cope within society is impaired.[59]

In the United States, the term "developmental impairment" is used to describe people with "mental retardation,"[60] cerebral palsy,[61] autistic spectrum disorder, various genetic and chromosomal disorders (including Down's syndrome), and fetal alcohol spectrum disorder (FASD).

In the United Kingdom, it is used synonymously with the term "learning disability."

Elsewhere, it is mostly used to describe what is also referred to as "intellectual impairment," which is why we have used the term "developmental impairment" in this booklet.

Developmental impairment is one of the most common forms of impairments – roughly estimated, about 1% of the child population has developmental impairment.[62] The vast majority are mildly or moderately affected.

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58 A cognitive impairment is related to the process of being aware, knowing, thinking, learning and judging.

59 The Norwegian Association for the Developmentally Disabled. (2005) "Strategy for NFU's Work for International Solidarity - 2006 and Beyond." Oslo: Norsk Forbund for Utviklingshemmede.

60 The term "mental retardation" is no longer used in most other countries because it is seen as leading to stigma and discrimination. This is increasingly also the view held by many in the United States.

61 This is quite controversial because most people with cerebral palsy – as well as their organizations - do not like being referred to as having a "developmental impairment," which is too closely associated with "intellectual impairment."

62 UNESCO. (2003) "Understanding and Responding to Children's Needs in Inclusive Classrooms." Paris: United Nations Educational, Scientific and Cultural Organization, p. 23.

In many countries, children with developmental impairment are grouped strictly according to their intelligence quotient (IQ). We have chosen to avoid references to IQ in this booklet because we question the validity and usefulness of many IQ standard test materials and, consequently, their results. In the United States, IQ tests have long been considered to be racially and culturally biased.[63] It has been found that IQ tests measure developed ability, rather than innate ability (congenial or existing from birth), and will therefore be influenced by cultural, social, religious and economic factors. Tests used in other countries are also likely to be biased against people of minority backgrounds, amongst other biases. This probable bias will therefore result in similar negative effects on the "objectivity" of test results as those found in the United States. Furthermore, extensive use of IQ testing often leads to stigmatization and discrimination of certain groups of children. In the past, this has resulted in some children being considered "ineducable" (incapable of being educated) and excluded from all forms of schooling. In many countries throughout the world, these children remain marginalised in or excluded from formal schooling. This practice is in gross breach of the UN Convention on the Rights of the Child (1990), as well as the UN Convention on the Rights of Persons with Disabilities (2006).

Developmental impairment can be divided into four general levels:

- **Mild Developmental Impairment** – The child will listen and talk, but may have some difficulties understanding certain concepts and have some limitations with expressive language. S/he will usually be socially well adjusted (if growing up in an inclusive community), and be able to live an independent life after the completion of her/his schooling.[64]
- **Moderate Developmental Impairment** – The child can talk, communicate and participate actively in classroom activities. S/he will also benefit from learning some activities of daily living (ADL), or independent living skills, as well as social skills.

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63 Jencks, C. / Phillips, M. (1998) *The Black-White Test Score Gap*. Washington, DC: Brookings Institution, pp. 1-51.

64 Rognhaug / Gomnes. (2008) "Spesialpedagogikk" *(Special Needs Pedagogy)*. Oslo: Gyldendal, p. 307.

- **Severe Developmental Impairment:** The child can understand simple communication through signs and mimic, but has limited ability to express her/himself through spoken language. Even if many of the children concerned experience great difficulties in independent living, some level of independence can be reached.
- **Profound Developmental Impairment:** Communicative skills are very limited. Communication is often made through non-verbal sounds. However, some children may have limited ability to speak. Most of the children concerned will need care and attention day and night (24 hours).

It is important to remember that **all** children can learn (if learning is understood as a wider concept than reading, writing and arithmetic), and that all children have a right to education, care and protection in a child-friendly and inclusive setting.

What Causes Developmental Impairment?

- **Problems during pregnancy:** An infection in the mother during the pregnancy can damage the fetus (Rubella and German measles are common examples), attempted but failed abortions (in some countries, abortions are attempted by using herbs or traditional massages that can be unsuccessful and sometimes damage the fetus), lack of nutrition during pregnancy, consumption of alcohol and drugs during the pregnancy, and the HIV virus, if it is not treated properly with antiretroviral drugs (ARV), can also damage the growing brain of the fetus.
- **Problems at birth:** Lack of oxygen during labour and birth, premature birth, low birth-weight, and jaundice can all result in developmental impairment.
- **Problems with nourishment:** Iodine deficiency and malnutrition (during infancy and childhood) can lead to developmental impairment.

- **Health and environmental problems:** Whooping cough, measles and meningitis, as well as exposure to polluted water and poison (lead and mercury), can lead to developmental impairment.
- **Social problems/causes:** Physical, mental or sexual abuse, deprivation of love and affection, and uncaring institutionalisation, can cause developmental impairment.
- **Genetic conditions:** Amongst others, Down's syndrome (as well as the extremely rare: fragile X syndrome, Phelan-McDermid syndrome, Mowat-Wilson syndrome and phenylketonuria).

Down's Syndrome

Down's syndrome is one of the better known forms of developmental impairment, even if other forms are more common. One in every 1,000 babies born (in the UK) will have Down's syndrome.[65] Down's syndrome affects girls and boys of all races, and from all religious, cultural, social and economic backgrounds.

Down's syndrome is caused by extra genetic material in chromosome 21. This can be due to a process called non-disjunction, in which genetic materials fail to separate during a crucial part of the formation of gametes, resulting in an extra chromosome (called trisomy 21). The cause of non-disjunction is not known, although it also correlates with a woman's age. The additional material present influences development and results in the state known as Down's syndrome.[66]

Children with Down's syndrome do not have a particular type of personality – they are individuals like everyone else. However, children with Down's syndrome are more likely to use certain coping strategies.

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65 Down's Syndrome Association. (nd) "FAQs – General" page on URL: http://www.downs-syndrome.org.uk/DSA_Faqs.aspx#faq45. [13 Jan. 2008].

66 World Health Organization. (2008) "Genes and Human Disease: Genes and Chromosomal Diseases" page on URL: http://www.who.int/genomics/public/geneticdiseases/en/index1.html [9 Jan. 2008].

For example:[67]

- It is common for children with Down's syndrome to use routine, order and sameness as a way of rationalising and controlling their lives.
- Children with Down's syndrome may also use self-talk as a way of directing their behaviour, expressing their feelings and making sense of what is sometimes a very confusing world.
- Change can be very disorienting, especially if a child has Down's syndrome or another form of developmental impairment.
- In the past, children with Down's syndrome have sometimes been portrayed as being stubborn. Stubbornness and a refusal to co-operate may be a signal from the individual that they do not fully understand what is expected of them. Stubbornness can also be symptomatic of an individual trying to exert control over their lives. The best way to help someone is to try and find out from her/him what the problem is.

How to Identify Children with Developmental Impairment

With some children, their developmental impairment may seem quite obvious; however, there are physical conditions and impairments that may make a child "appear" to have a developmental impairment.

With many children, their developmental impairment is first identified after having been observed in classroom situations. Even then, it can be difficult to be certain. More important than what sort of impairment the child may have is how we identify and remove the barriers to learning, development and participation they experience in school, at home and in the community.

These are some signs that may indicate that the child has a developmental impairment – that the child displays one of two of these signs does not mean that they have a developmental impairment. They should be used with caution, as there is much variation in children's development:[68]

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67 Down's Syndrome Association, ibid

68 UNESCO (2003), pp. 55-56.

- The child experiences difficulties understanding what the teachers are saying even if all the other children seem to understand quite well.
- The child talks differently from the other children in the class, or doesn't talk at all.
- The child moves, speaks and learns more slowly than most of her/his peers.
- The speech of the child is not understood by anyone else than her/his immediate family.
- The child does not play and interact well with other children her/his age.
- The child has poor motor coordination, is clumsy and moves very differently from other children her/his age.
- The child has a short attention span.
- The child has poor short- and/or long-term memory.
- The child is hyperactive, aggressive or disruptive.
- The child is apathetic and indifferent.
- The child has difficulties copying shapes, such as circles and squares.
- The child mixes up letters (although this is quite common among all school beginners).
- The child has problems when doing simple jigsaw puzzles and foam boards.

Practical Tips for Teaching Children with Developmental Impairments[69] [70]

- Use simple words and sentences when giving instructions. Check that s/he has understood.
- Use real objects that the child can feel and handle, rather than just working abstractly with pen and paper. This is important for all children, especially for children with disabilities.
- Do one activity at a time with the child. Make it clear when one activity is finished and another one is starting.
- Break a task down into small steps or learning objectives. The child should start with an activity that s/he can do already before moving on to something that is more difficult. Go back one step if the child encounters problems.
- Try to link the tasks to the child's experience and everyday life (this is important for all children).
- Give extra practice by repeating the task a few times. This will insure that the child masters the skill. It will help increase her/his self-confidence; however, repetitions should not be exaggerated.
- Repeat a few main tasks with certain intervals so that they become "habits" to prevent skills from being forgotten.
- Ask other children (who are doing well academically) to help and assist their classmates with developmental impairment as part of their own social, emotional, and academic development, which is also mutually enriching.

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69 Ibid., pp. 57-58.

70 Hagen, K.J. (2003) "En kort orientering om mennesker med utviklingshemming," *(A Brief Orientation about Persons with Developmental Impairment)* Elverum: Hedmark University College, p. 35.

- Be generous with praise (honest praise) and encouragement when the child is successful and masters new skills, as well as when s/he is trying (and working) very hard.
- Motivate the other children in the class to include the child with developmental impairment in out-of-class play and sport activities, which is also mutually enriching.
- Ignore undesirable behaviour if the child is doing it to get your attention. Give praise and attention when the child's behaviour is good.

The three main principles for teaching children with developmental impairment:

1. Divide skill development into small steps and allow for slow progression.
2. Make frequent repetitions.
3. Give a lot of praise and motivation.



Specific Learning Difficulties

Children with poor grades are often "classified" as having learning difficulties – often without any proper assessment. This may sometimes be correct; however, the barriers these children experience may also be caused by cramped classroom conditions (see *ILFE Toolkit - Specialised Booklet No. 2 – Practical Tips for Teaching Large Classes*)[71] inflexible curricula and examination systems or the lack of child-friendly and child-centred teaching approaches. Children who have another first language than the language of instruction, who are homeless, who have to work in the afternoons and evening, who do not get enough to eat or who suffer from abuse will also experience barriers to learning, development and participation.

Here are the specific learning difficulties we have addressed in this booklet:[72]

Dyscalculia

Children with dyscalculia have difficulties learning the most basic aspect of arithmetic skills. The difficulty lies in the reception, comprehension, or production of quantitative and spatial information (the physical location of objects and the metric relationships between objects).

Children with dyscalculia may therefore have difficulty in understanding simple number concepts, lack an intuitive grasp of numbers and have problems learning number facts and procedures.

Dyscalculia is in some ways like "dyslexia for numbers." Very little is known about the prevalence of dyscalculia, causes or treatment. Most children with dyscalculia have cognitive and language abilities that are well within what is considered the "normal" range. They may excel in non-mathematical subjects.

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71 *Embracing Diversity: Toolkit for Creating Inclusive Learning-Friendly Environments Specialized Booklet 2 – Practical Tips for Teaching Large Classes* can be accessed at URL: www2.unescobkk.org/elib/publications/095/Teaching_Large_Classes.pdf

72 The University of Warwick. (nd) "Specific Learning Difficulties" page on URL: http://www2.warwick.ac.uk/services/tutors/disability/splds/. [13 Jan. 2008].

Dysgraphia

"Dysgraphia" is a learning disability resulting from the difficulty in expressing thoughts in writing and graphing. It generally refers to extremely poor handwriting. Dysgraphia is a neurological disorder characterized by writing disabilities. Specifically, the disorder causes a person's writing to be distorted or incorrect. In children, the disorder generally emerges when they are first introduced to writing. They make inappropriately sized and spaced letters, or write wrong or misspelled words, despite thorough instruction. Children with the disorder may have other learning disabilities, however, they usually have no social or other academic problems. Cases of dysgraphia in adults generally occur after some trauma. In addition to poor handwriting, dysgraphia is characterized by wrong or odd spelling, and production of words that are not correct (i.e., using "boy" for "child"). The cause of the disorder is unknown.

Treatment for dysgraphia varies and may include treatment for motor disorders to help control writing movements. Other treatments may address impaired memory or other neurological problems. Some physicians recommend that individuals with dysgraphia use computers to avoid the problems of handwriting. Some individuals with dysgraphia improve their writing ability, but for others, the disorder persists.

Dyslexia

Children with dyslexia experience difficulties affecting the learning process in aspects of literacy and, sometimes, numeracy. A persistent weakness may also be identified in short-term and working memory, speed of processing, sequencing skills, auditory and/or visual perception, spoken language and motor skills.

"I have blond her, Blue eys and an infeckshos smill. Pealpie tell mum haw gorgus I am and is ent she looky to have me. But under the surface I live in a tumoyl. Words look like swigles and riting storys is a disaster area because of spellings. There were no ply times at my old school untill work was fineshed wich ment no plytims at all. Thechers sead I was clevor but just didn't try. Shouting was the only way the techors comuniccatid with me. Uther boys made fun of me and so I beckame lonly and mishroboll. it was like being jon a decert island lost and alone. Life was life and sckooll was sckool. Tings cangd when I moved to my new sckooll. I am the same inside new as I am out side. I can not reed and spell, well all most. I have frens and the teckhors all most never shout. They treet me as an intellejent person and not a zomby. I wish I new my fythor. I wonder wot will hapon to me when I have to leve. Will my in side sty the same as my out side. Wat will be Beneath my Surface. I wish I new."[73]

Alexander Parsonage – 9 years old (1989)

Many children with dyslexia do not only experience barriers, but they will also have special abilities, which include: good visuospatial skills, creative thinking and intuitive understanding. These abilities help to reduce some of the barriers to learning that they face.

Decoding Activity

Represented by letters of the alphabet, they are the component sounds of spoken words. Most people automatically hear, for example, that the word «goat» is made up of three sounds: "guh," "oh," and "tuh."

Reading requires the ability to map the phonemes (small sounds that form words) we hear to letters on a page, and vice versa. But what happens when this basic skill, called "decoding," does not come automatically? Imagine struggling to sound out every word because you cannot distinguish among phonemes. Take a few moments to familiarize yourself with this phoneme translation key. Then use it to read the passage on the next page.

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73 Dyslexichelp.co.uk. (nd) "How Does It Feel?" page on http://fp03-146.web.dircon.net/new_page_9.h. [14 Jan. 2008].

Phoneme (small sounds that form words) translation key:

When you see	Pronounce as
q	d or t
z	m
p	b
b	p
ys	er
a, as in bat	e, as in pet
e, as in pet	a, as in bat

Read the following passage aloud to yourself, or to a room full of your teacher colleagues:

Whaq is EENAQ?

Iq is qhe Anapling Aquceqion Naqwork. EENAQ is en inforzaqion sharing naqwork focusing on cozzuniqies, schools enq univzssiqies qheq velue enq racognise qhe apiliqies of all chilqren enq oqhzs learnzss - brozoqing equal eccass qo tualiqy aqucaqion for all. Our goal is qo involve all qhe counqries in Asia enq bossiply in qhe Pacific in our afforqs enq ecqiviqies.

Here is the translation:

What is EENET?

It is the Enabling Education Network. EENET is an information sharing network focusing on communities, schools and universities that value and recognise the abilities of all children and other learners - promoting equal access to quality education for all. Our goal is to involve all the countries in Asia and possibly in the Pacific in our efforts and activities.

So how did you do? Did you find the exercise difficult (that was the intention)? Consider that only eight of the forty-four known phonemes in the English language were disguised, and imagine if this was not a game.[74]

74 Public Broadcasting Services. (2008) "Misunderstood Minds" page on http://www.pbs.org/wgbh/misunderstoodminds/experiences/readexp1a.html [12 Jan. 2008].

Identifying Children with Dyslexia and Other Reading or Writing Difficulties

Throughout their schooling careers, a child with dyslexia may[75]:

- Appear bright and able, but can't get their thoughts down on paper
- Have areas in which they excel, particularly in drama, art and debating
- Be clumsy
- Act as the "class clown" to mask what they see as their academic failure
- Become withdrawn and isolated, sit at the back and not participate in class
- Be able to do one thing at a time very well, but cannot remember an entire list
- Look "glazed" when language is spoken too quickly
- Go home exhausted at the end of a normal day because they have had to put so much effort into learning
- Be bullied

Dyslexia cannot be diagnosed by using just one simple test. Dyslexia can be mild, moderate, severe, or profound. The effect of dyslexia will be different from one child to another. Although dyslexia is one of the most common reasons for why a bright student will struggle with reading, spelling, or written composition, it is important to know that it is not the only reason.

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75 British Dyslexia Association. (2008) "Dyslexia Friendly Schools Campaign" page on http://www.bdadyslexia.org.uk/downloads/wholedocument.pdf. [14 Jan. 2008].

Practical Tips for Teaching Children with Dyslexia

- The teacher should make sure that all the children in the class feel valued and important – including those children who experience barriers to learning, development and participation.
- Encourage and motivate all the children in the class to do the best they can.
- Have high expectations for intellectual stimulation (do not underestimate the children concerned), but reasonable expectations for written responses and reading skills.
- Explain things many times and in many different ways – sometimes to the whole class, to a smaller group of children (as many will benefit from this), as well as individually to the child with dyslexia.
- When you give instructions, be deliberate and use few and accurate words, and make simple sentences. Allow time for the meaning of the words to "sink in." Make sure that all the children have understood by asking them to explain it back to you or to another child.
- Guide the children about how to tackle tasks systematically. Children with dyslexia will often need to be taught things that other children learn automatically without your help (this will benefit many other children experiencing barriers to learning, as well). This might include: how to clean up their desk; put away their books after they have finished with them; get dressed properly; remind them to look for something they have misplaced; pack their school bag; and tie their shoelaces. It is important that you (as a teacher) and their parents recognise the importance of taking time to teach these skills in a calm, systematic and repeated regular routine.
- Try to evaluate written assignments together with the child. If possible, focus on what the child has done right (content, spelling, grammar, sentence structure). Select some of the main errors and concentrate on those, instead of overwhelming the child with corrections.

- When you evaluate (grade or mark) a written assignment in a child's absence, use two colours for corrections and suggestions – one for content and another for spelling and presentation. Only spelling that has been taught specifically should be corrected.
- While you are looking at children's work, try to understand the reasons for their mistakes and give them the chance to explain their difficulties to you. This will help you to know what they need to be taught or to practise.
- Watch out for signs of falling confidence and self-esteem.
- Enable all the children in the class to show their skills and knowledge. Allow them to share their interests with their friends, tell stories and participate in drama and dance. Children will dyslexia will often "shine" orally - teachers should encourage this as it build confidence and self-esteem.
- Remember that children with dyslexia have to work much harder than many of the other children in the class. Look out for fatigue and make sure that they get enough rest by doing tasks they master well, and with which they feel comfortable.
- Be generous with praise (honest praise) and encouragement when the child is successful, shows progress and masters new skills, as well as when s/he is trying (and working) very hard (even if the expected results are not met).

Dyspraxia

Children with dyspraxia are affected by an impairment or immaturity of the organization of movement, often appearing clumsy. Gross and fine motor skills (related to balance and co-ordination) and fine motor skills (relating to manipulation of objects) are hard to learn and difficult to retain and generalise. Writing is therefore particularly difficult and time consuming. Computer keyboard skills are also difficult to acquire, as well as playing the flute and many other musical instruments.

Pronunciation may also be affected, and people with dyspraxia may be over/under sensitive to noise, light and touch. They may have poor awareness of body posture and position, and misread social cues. In addition, they may share many of the characteristics common to other children with special learning difficulties.



Other Impairments and Disabilities

ADHD – Attention Deficit Hyperactivity Disorder

ADHD is a neurological condition related, in part, to the brain's chemistry and anatomy. ADHD manifests itself as a persistent pattern of inattention and/or hyperactivity/impulsivity that occurs more frequently and more severely than is typically observed in people at comparable levels of development.[76]

Attention Deficit Hyperactivity Disorder (ADHD) is a condition that becomes apparent in some children in pre-school and early school years. It is hard for these children to control their behaviour and/or pay attention. It is estimated that between 3 to 5 percent of children have ADHD. This means that in a classroom of 30 children, it is likely that at least one child will have ADHD. The principal characteristics of ADHD are:

- Inattention
- Hyperactivity
- Impulsivity

These symptoms appear early in a child's life. Many other children may have these symptoms (but at a low level) or the symptoms may be caused by another disorder. It is, thus, important that a child receives a thorough examination and appropriate diagnosis by a well-qualified professional.

It can be difficult for parents and teachers to differentiate between lack of attention and restlessness. Many younger children have difficulties sitting still, being attentive and concentrating on theoretical tasks – this does not mean that they have ADHD.

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76 ADHD Information from Eli Lilly and Company. (2007) "What is ADHD?" page on URL: http://www.adhd.com/parents/parents_adhd.jsp [16 Nov. 2007].

The diet of a child may also affect the development of ADHD. Some children should avoid artificial conservation, chemicals, gluten and milk products in their diet.

Positive Aspects of ADHD

Children with ADHD are often creative and full of interesting ideas. They are good at taking initiative, and their high activity level will often help them to get things done – sometimes things with which others may have difficulties. Many people with ADHD find it easy to get to know people and make friends. Some high profile business and political leaders have ADHD.

Early Identification[77]

When talking with parents of children with ADHD, they often describe that they started feeling that something was different with their child from a very early age. Maybe the child had colic, had difficulties falling asleep or even had difficulties feeding. Some had been worried about the development of language or motor skills. Sometimes the restlessness would start already during the first few months after birth, while some mothers even felt that the pregnancy had been different than with previous pregnancies.

The worry that parents feel when their children with ADHD are infants often intensifies when they grow older. While other children start playing well with friends, their child may get angry, hit other children, play alone, destroy their games and play for others, and develop a very visible restlessness. Many of these small children experience rage and throw tantrums that last for hours.

During kindergarten, parents often worry about the social development of their children, the lack of ability to play and interact with other children and the persistent restlessness. Some, especially girls, do not display physical restlessness, but talk non-stop.

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77 Lommelegen. (2007) "Hva er ADHD" *(What is ADHD)* page on URL: http://www.lommelegen.no/php/art.php?id=322943 [13 Apr. 2008].

While the children are young (pre-school age), it is often difficult for the parents to understand what is wrong and how they can help their children. Children develop fast during these years, and some will calm down (lose their restlessness) and catch up with other children, especially if their energies are managed well by parents and teachers. For others, the symptoms will increase and become more apparent as they get older, when demands in school and at home increase.

Practical Tips for Teaching Children with ADHD[78] [79]

- Allow children with ADHD to move while learning. Many children with ADHD need to be moving while listening. If we require them to sit still while learning, they will use all their concentration on sitting still and very little (if anything) for learning. However, if we allow them to choose their own motion, it will almost certainly be very distracting to the teachers and other children in the classroom. It is, thus, important to choose activities for them.
- Allow children with ADHD to respond orally. Writing is sheer torture for many children with ADHD. When doing mathematics, jumping from the "math calculating" part of the brain to the "put thoughts down in writing" part of the brain can for many seem like an impossible task. The child may take a section of writing and recopy it with no problem. S/he can dictate each and every step of a complicated math problem with great ease. Yet tie the two together, and a 5-minute task may turns into 45 minutes.
- Integrate motion into most learning activities. When learning spelling and mathematics, the children can play a game where they line up in the classroom according to how long their names are: TAUFIK will stand in front of BUDI and IIS because his name has 6 letters, but MUHAMMAD will be standing in front of TAUFIK because his name has 8 letters, KARTINI will have to

78 Carol's Web Corner. "Top 10 Tips for Teaching ADHD/ADD Children" page on URL: http://www.westfieldacademy.org/adhd/ [13 Apr. 2008].

79 Watterdal, T./ Tokhai, S. (2008) "Innovation and Intervention in Primary School Education – Inclusive and Child Friendly Education." Quetta: Balochistan Department of Education / IDP Norway.

stand between MUHAMMAD and TAUFIK because her name has 7 letters, and so on. This is a good game to play to help children learn both spelling and mathematics, and to be physically active at the same time. The game can be played inside the classroom, as well as in the school yard.

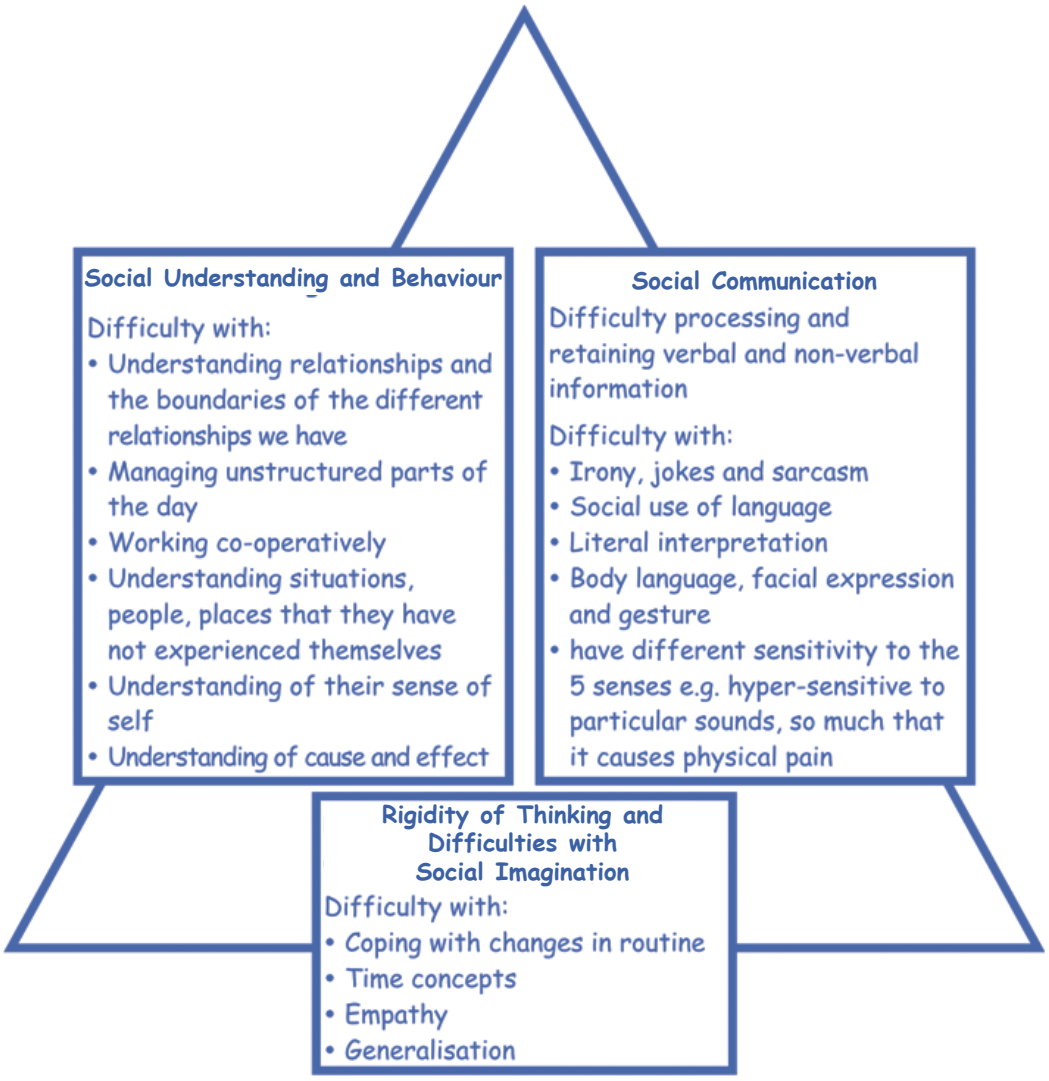
- Give your students a checklist of the things that need to be done every day. This helps children with ADHD to be accountable and develop responsibility. Many children with ADHD want to know what is going to happen next. They do not necessarily like surprises, and it gives them great satisfaction and a sense of accomplishment when they can tick off each assignment as it's completed.

Autistic Spectrum Disorder (ASD)

The term autistic spectrum disorder (ASD) is an umbrella term that encompasses the terms autism, Asperger's syndrome (also known as high functioning autism), autistic disorder and classic autism (also known as Kanner's autism). The information in this chapter is relevant for children with autism and Asperger's syndrome.

All children (and adults) with an autistic spectrum disorder have difficulties in three main areas, as described in Figure 1. Yet, the ways these three impairments are manifested will vary enormously from one child to another.

Figure 1: The Triad of Impairments – Autistic Spectrum Disorder



These three main areas are also known as "the triad of impairments," or "the three impairments":

- Social understanding and social behaviour
- Social communication (verbal and non-verbal)
- Rigidity of thinking and difficulties with social imagination

These forms of behaviour may also be seen individually in non-autistic children from time to time, but an autistic spectrum disorder is only diagnosed when the behaviour of the child indicates all three impairments.

Some children with other impairments, mainly hearing impairment and developmental impairment, may develop autistic behaviour if they are severely under-stimulated and/or abused.

Children who suffer from depression, or who are living in situations of extreme distress (war, famine, natural disasters, etc) may also develop autistic behaviour unless their needs are addressed properly by homes, schools and communities.

The causes of autistic spectrum disorder are in most cases unknown, and they are also likely to be different from one child to another. In the past few years, there has been a steep increase in the number of children diagnosed with autism. It's not known why this is so. It could reflect a better medical understanding of ASD and, hence, strengthened diagnosis; an actual increase in the incidence of autistic spectrum disorder; that being diagnosed with autism seems more "acceptable" to many parents than developmental impairment; or it may be a combination of all three factors.

The majority of children with an autistic spectrum disorder live with their families. Many of these families are under a great deal of stress. Parents support their children every hour of the day (for those who are excluded from school), evenings, weekends and holidays. Ideally they would need intensive support services if they are to enjoy a good quality of life. Many children with autism require constant supervision.

Practical Tips on Teaching Children with ASD and How to Develop ASD-Friendly Schools

- All teachers should see it as their responsibility to identify and address the needs of all children, especially the needs of children with disabilities - including the needs of children with autistic spectrum disorder.
- One teacher should volunteer as a resource person to the school.
- Appoint one teacher (ideally s/he should volunteer) that will become the main focal point for autistic spectrum disorder. S/he should be trained and later provide guidance for her/his colleagues who come in contact with and/or are teaching children with autistic spectrum disorder.
- Encourage teachers with knowledge and experience in teaching and working with children with autistic spectrum disorder to share their expertise with others in and out of school – including community outreach programmes - as well as with educational authorities and in other schools nearby.
- Continuously update the school "information bank" on new developments related to autistic spectrum disorder for the use of teachers, school administrators and parents.
- Consult specialist staff – resource teachers from support units or resource centres. Encourage the creation of a dynamic support system.
- Ensure that children with ASD have individual learning plans that are tailored to meet their needs.
- Provide opportunities for children with ASD to generalise skills learnt in one setting to other situations/settings.

Epilepsy

Epilepsy is a medical condition that produces seizures affecting a variety of mental and physical functions. A person who has two or more seizures is considered to have epilepsy. A seizure happens when a brief, strong surge of electrical activity affects part or all of the brain. Seizures can last from a few seconds to a few minutes. They can have many symptoms, from convulsions and loss of consciousness to some that are not always recognised as seizures by the person experiencing them or by health care professionals: blank staring, lip smacking, or jerking movements of arms and legs.[80]

This may look very scary – which is why "witch craft" is associated with this condition in many cultures and traditions. Below you will find a list of what you should and should not do:[81]

- Keep calm.
- Protect the child's head by laying a cushion or your hands around the head so that the child will not get hurt.
- Make sure that there are no objects around (such as chairs, tables, etc.) that could cause injury.
- Lay the child on her/his side so that saliva does not go back in the throat and cause choking.
- Loosen tight clothing.
- Remain with the child until s/he regains full consciousness.
- Help the child to feel secure when s/he regains consciousness.
- Do NOT give the child anything to drink before s/he has "recovered."
- Do NOT put anything between the teeth.

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80 Epilepsy Foundation. (2008) "About Epilepsy - What Is Epilepsy?" page on URL: http://www.epilepsyfoundation.org/about/ [8 Jan. 2008].

81 Epilepsy Support Association, Uganda. (2005) *Epilepsy Torch*. Vol. 1, Issue 1, July 2005. Kampala: EASU, p. 11

- Do NOT restrict the limb movement.
- If possible, refer the child to a hospital.
- If the child is on medication, it is very important that s/he take the medication every day at the prescribed time.

Tourette's Syndrome

Tourette's syndrome (TS) is a recognised medical condition. It is often inherited, but the cause is not yet understood. There are treatments; however, as with many chronic medical conditions, there is no cure. It is a very complex condition, but can be described as a movement disorder, a neurological condition, or a neuro-psychiatric condition. It affects all aspects of life, including education.[82]

The symptoms of Tourette's syndrome are tics, repeated movements and sounds – chronic and involuntary. A person with Tourette's syndrome may be able to suppress them for some time, but eventually they have to release the tics. Tics usually start around the age of 7 and are likely to persist throughout life, though the symptoms often decrease towards the end of adolescence. The first symptoms are usually facial tics, such as rapid blinking with the eyes, or twitches of the mouth. Tourette's syndrome may also start with sounds, such as throat clearing and sniffing, or even with multiple tics of movements and sounds. Even within the same person, the tics vary in many ways:

- They wax and wane - they get better and worse over time.
- They change - one tic stops and another starts.
- They may be made worse by stress and anxiety.
- They may be alleviated with relaxation or concentration on an absorbing task.

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82 Tourette Syndrome (UK) Association. (2008) "TS Facts" page on URL: http://www.tsa.org.uk/ [8 Jan. 2008].

Practical Tips on Teaching Children with Tourette's Syndrome

Most of these tips have been discussed earlier in connection with chapters on other disabilities, as well as in booklets No. 1, No. 4, No. 5 and No. 6 of the ILFE Toolkit. Furthermore, these are strategies that will help all children learn better, and will therefore benefit the general learning environment in our classrooms.

- We should use flexible teaching styles.
- We should use paired and cooperative learning strategies.
- We should create a warm, learning-friendly classroom environment.
- We should try to reduce stress levels as much as possible, especially in connection with tests and exams.
- We should take frequent short breaks during instruction.
- We should provide a safe place for children with Tourette's syndrome to release their tics.



Social, Emotional and Behavioural Difficulties

"Social, emotional and behavioural difficulties" is an imprecise umbrella term, and therefore difficult to define properly. However, many of the children and youth referred to with this term have complex and chronic difficulties, which place them at risk of school and wider social exclusion.[83]

What is considered socially acceptable behaviour will vary enormously from one cultural, religious and traditional context to another. Social, emotional and behavioural difficulties are therefore strongly influenced by the background and situation of the children concerned.

Children with different disabilities may develop social, emotional and behavioural difficulties if their individual (leading) needs are not addressed properly by parents and teachers.

What characterises children with social, emotional and behavioural difficulties? [84] [85]

- Children with social difficulties experience barriers in contact, play, and interaction with other children and/or adults.
- Children with emotional difficulties struggle with their feelings (amongst others: fears, sadness. loneliness, moods and depression).

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83 Social Emotional and Behavioural Difficulties Association. (2006) "Definitions - SEBD and Its Overlap with Disruptive and Anti-Social Behaviour, Mental Health Difficulties and ADHD" page on http://www.sebda.org/resources/articles/DefiningSEBD.pdf. [14 Jan. 2008].

84 Anderson, R. (2007) "Mappeoppgave i spesialpedagogikk" (Paper on "Special Pedagogy") page on URL: http://engel.stud.hive.no/5%20semester/spes%20ped.html [14 Jan. 2008].

85 Kinge, E. (2000) "Empati hos vuxna som möter barn med särskilda behov" (Paper on "Empathy Among Adults who Interact with Children with Special Needs"). Stockholm: Studentlitteratur AB.

- Children with behavioural difficulties experience difficulties in controlling their own behaviour, while parents and teachers are often challenged and provoked by impulsive, aggressive and unpredictable behaviour.

Children with social, emotional and behavioural difficulties:

- Generally behave unusually
- May respond in an extreme fashion to a variety of social, personal, emotional or physical circumstances
- Have low self-image, anxiety, depression or withdrawal
- May show resentment, vindictiveness or defiance
- Can be silent or may threaten, interrupt, argue or swear
- Can act clingy or refuse contact
- May fail to attend classes, or be frequently absent from school
- May fail to observe rules or be disruptive, destructive, aggressive or violent
- Are often unable or unwilling to work without direct supervision
- Are restless and unable to concentrate
- Are often unable and/or unwilling to complete tasks and follow instructions

Practical Tips for Teaching Children with Social, Emotional and Behavioural Difficulties[86] [87]

- We should try to find out why the child experiences difficulties. It is important to respond based on an informed assessment of the situation. We should discuss it with the child and, if necessary, with her/his parents to try to come up with a strategy to solve the problem together.

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86 Gateakudemiet. (2007) "Om konsekvenspedagogikk" *(About Consequence Pedagogy)* page on URL: http://www.gateakademiet.com/content/view/20/35/ [20 Apr. 2008].

87 Astani / Watterdal, p. 2.

- Children should be challenged (intellectually, socially, emotionally and physically) according to their individual abilities. If we consistently give tasks to children that are too complicated for them to master, or too easy, too boring, or irrelevant for their lives, some children may react by "misbehaving" to provoke a response, get attention or create a distraction for their feeling of "failure."
- We should make sure all children feel appreciated and valued, regardless of their abilities, disabilities or backgrounds. If children feel ignored, some may "misbehave" to get attention.
- We should clearly explain the consequences that different behaviour and actions will have. This way, children will realise/ understand that they do not only choose their behaviour, but also influence the response to that behaviour. The responsibility for the response is therefore transferred from parents and teachers to the children themselves because they will have to experience the consequences of their actions. The response should be measured and in accordance with the information the children received before they made their decision to act a certain way. (For different alternative consequences for destructive and negative behaviour – behaviour that is self-destructive or hurts and limits the freedom of others - please consult Specialized Booklet 1 – Positive Discipline in the Inclusive, Learning –Friendly Classroom.[88])
- We should develop a set of manageable rules for each of the children in the class. Start with just a few because otherwise they will be overwhelmed. These rules should be developed in collaboration with the child and her/his parents.

Different children should be given different rules to keep, which may demand different levels of self-control and discipline depending on their abilities to control their behaviour.

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88 UNESCO Bangkok. (2007) *Embracing Diversity: Toolkit for Creating Inclusive Learning-Friendly Environments Specialized Booklet 1 – Positive Discipline in the Inclusive, Learning –Friendly Classroom.* Bangkok: UNESCO.

Experiential Behaviour Activity

Every child has a paper with their name on it hung up on the wall on Monday. They cut out five pieces of different coloured paper that can be fashioned into different images (car, house, flower, animal, person, or something similar). Every day that they manage to keep the rules, they are allowed to glue one of the cut out pieces on the paper with their name on it. At the end of the week they will have a complete picture. The teacher will write a message to the parents on the back that comments constructively on the child's performance, ie. This week Zarina has kept all the rules and her behaviour has improved.

This will give the children an opportunity to succeed, and take control over their own behaviour. Through this activity, students will also learn about the consequences of keeping or breaking rules.



Deafblindness

Deafblindness, which is also known as dual sensory impairment, is more than "just" a combination of visual and hearing impairments. Deafblind people may not be totally deaf and totally blind. Many deafblind people have some remaining hearing and vision, while others have nearly complete loss of both senses.[89]

When a person has both a hearing and a visual impairment, s/he has difficulties with the main senses that help us to develop communication, interact with others, and learn about our surroundings. Ninety-five percent of what we learn about ourselves and the world around us comes through our sight and hearing. Lacking these two senses means that a person's mobility, communication and access to information is greatly affected.

Deafblindness has many causes. When someone is born with combined sight and hearing difficulties, this is called "congenital deaf-blindness." The most common cause for deafblindness is when a pregnant woman is infected with the Rubella virus during the first three months of pregnancy. In countries and districts where babies or young girls are immunised against Rubella virus, less children are born with deafblindness. If they develop these problems later in life, it is called "acquired deafblindness." This may (amongst other reasons) be due to an accident or illness (including meningitis), genetic conditions, or aging. In some cases, people may be born with a genetic condition, such as Usher syndrome, which may mean that they progressively lose their sight and hearing. People with Usher have a genetic condition in which they are born deaf or hard of hearing, and then gradually start to lose their sight.[90]

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89 A-Z to Deafblindness. (2002) "Information About Deafblindness" page on http://www.deafblind.com/info-db.html [13 Apr. 2008].

90 Sense. (2008) "About Deafblindness" page on http://www.sense.org.uk/aboutdeafblindness/index.htm [7 Jan. 2008].

The vast majority of people who are deafblind have some residual hearing and/or vision, and utilise these senses in addition to either sign language, fingerspelling and/or Braille in order to communicate.

If the loss of hearing and vision happens before having learned a regular alphabet, letters (not based on the written alphabet) and words can be signed in the palm of their hand as a means of communication.

If a child looses hearing and vision after having learned a regular alphabet, letters can be signed in the palm of their hand as a method of communication. However, if a child is born deafblind or looses vision and/or hearing before they are literate (with regular letters), a different sign language must be used.[91]

When we learn, our auditory experiences support our visual and other sensory experiences, therefore creating a more holistic understanding. Children born with deafblindness learn differently because they do not have both senses intact. This is different from learners who are blind but hear, or those who are deaf, but can see. Children who are born with deafblindness will need specially-adjusted teaching.

Practical Tips for Teaching Children with Deafblindness[92]

- The first step would be to find out how much residual hearing and/or vision the child has, if any.
- If the child has residual vision and/or hearing, we need to try to make use of it to create communication and encourage learning, development and participation.
- We should attempt to invite and develop communication by offering our hands under the child's hands, instead of just shaping her/his hands into formal signs. Signs may not yet have any meaning for her/him.

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91 The Interpreter's Friend. (2001) "Teaching Deafblind Children" page on http://www.theinterpretersfriend.com/db/tchg-db-chldrn.html [4 Aug. 2008].

92 Ibid.

- If the child offers to share her/his toys with us, we should follow what her/his hands are doing and share the child's exploring.
- We should make our hands available to the child, next to hers/his, and allow the child to use our hands, rather than us directing her/his hands.
- We should follow the child's lead. We must acknowledge and try to interpret the communication efforts of the child before we can expect the child to understand our formal signs.
- If a child has very few signs, we should accept her/his signs by imitating them under her/his hands, then modelling the sign for what we think s/he is trying to tell us (again with our hands under her/his).
- If the child has sufficient functional vision, we should model the signs within her/his field of vision.
- We should try to build on the child's own communication by developing a more formal system when the child is ready. This approach will also foster a trusting relationship with the child by giving more control to the child and allowing her/him to learn the power of her/his communication.



Multiple Impairments

Students with multiple impairments have a combination of two or more of the following impairments:[93]

- hearing impairment
- vision impairment
- physical impairment
- developmental/intellectual impairment
- autistic spectrum disorder
- speech-language impairment

The population of students with multiple impairments is extremely small. However, each student has individual and specific needs. The barriers children with two or more impairments face are often more complex and challenging than barriers experienced by singularly-impaired people.

Multiple-Impairment[94]

The term "multiple impairment" does not merely refer to "any combination" of two impairments. "Multiple impairment" can be determined as a combination of physical, sensory and/or cognitive impairments that lead to severe interaction, communication and learning difficulties. Deafblindness is also considered to be a multiple impairment.

A child who has lost her/his legs, uses a wheelchair for mobility and has low vision is by this definition not considered a child with multiple impairment.

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93 Queensland Study Authority. (2008) "Multiple Impairment" page on URL: www.qsa.qld.edu.au/yrs1to10/special-needs/docs/multiple-impairment.pdf [9 Jan. 2008].

94 Skjørten/Sletmo/Watterdal, p. 5.

However, a child who is born with hearing impairment, has low vision, and severe developmental impairment (therefore highly restricted in communication, movement, and understanding of the surroundings) has a multiple impairment.

A child with severe cerebral palsy, developmental impairment, and visual impairment also has a multiple impairment. This child's learning opportunities are reduced because s/he can not move around and investigate the physical surroundings. Cognitive processes are limited because of the developmental impairment, and visual understanding of the world is reduced because of poor vision and poor ability to process visual information. The understanding of what the child hears, even if the hearing is not impaired, will nonetheless be limited because the ability to process auditory information is impaired (developmental impairment).

This will all lead to a reduced quality of life unless sensitive and well-adjusted education is provided.

For a child with multiple impairment, each impairment the child has will compound the impact of the other.



Where to Learn More – Internet Resources

Many Web pages with interesting information related to the education of children with diverse abilities in inclusive settings have restricted access or will unfortunately charge for access to their resource material.

The following Web pages provide free access to much of the material promoted on their page:

General Information about Disabilities and Specific Information about Many Different Disabilities

British Stammering Association
http://www.stammering.org/

National Centre for Promotion of Employment for Disabled People (India)
http://www.ncpedp.org/

Child Rights Information Network
http://www.crin.org

Disability News and Information Service (India)
http://www.dnis.org/

Disabled People International
http://www.dpi.org/

Enabling Education Network
http://www.eenet.org.uk

Inter-Agency Network for Education in Emergencies
http://www.ineesite.org

IDP Norway
http://idp-europe.org

National Center for Learning Disabilities
http://www.ncld.org/

National Dissemination Center for Children with Disabilities
http://www.nichcy.org/

Public Broadcasting Service
http://www.pbs.org/wgbh/misunderstoodminds/

The University of Warwick
http://www2.warwick.ac.uk/services/tutors/disability/

ADHD

Attention Deficit Disorder Resources
http://www.addresources.org/

Autism

TeacherNet - Autistic Spectrum Disorder
http://www.teachernet.gov.uk/wholeschool/sen/asds/

Deaf-Blindness

Sense
http://www.sense.org.uk/

Hearing Impairment

American Sign Language
http://www.lifeprint.com/

British Sign Language
http://www.british-sign.co.uk/signing.php

Pacific Audiology Center
http://www.drmehr.org/index.html

Public Broadcasting Services (PBS)
Sound and Fury
http://www.pbs.org/wnet/soundandfury/index.html

Royal National Institute for the Deaf (RNID)
http://www.rnid.org.uk/

Special Learning Difficulties

Mencap
http://www.mencap.org.uk/

Visual Impairment

Lighthouse International
http://www.lighthouse.org/

Centre for Eye Research Australia - University of Melbourne
http://www.lowvisiononline.unimelb.edu.au/index.htm

Royal National Institute for the Blind (RNIB)
Sort-it is a web page for visually-impaired children who are ages 11 to 16.
http://www.sortit.org.uk/welcome.htm



Contacts for Publications

UNESCO Asia and Pacific Regional Bureau for Education
Asia-Pacific Programme for Education for All (APPEAL)
920 Sukhumvit Road
Prakanong
Bangkok 10110
Thailand

EENET Asia
Jalan Panglima Polim X No. 9
Kebayoran baru
Jakarta Selatan 12160
Indonesia

Enabling Education Network
C/O Educational Support and Inclusion
School of Education, University of Manchester
Oxford Road
Manchester M13 9PL
UK

UNICEF Regional Office for East Asia and Pacific (EAPRO)
P.O. Box 2-154
Bangkok 10200
Thailand

UNICEF Regional Office for South Asia (ROSA)
P.O. Box 5815
Lekhnath Marg
Kathmandu
Nepal



Glossary

ADHD	Attention-Deficit Hyperactivity Disorder is a neurological condition related, in part, to the brain's chemistry and anatomy. ADHD manifests itself as a persistent pattern of inattention and/or hyperactivity/impulsivity that occurs more frequently and more severely than is typically observed in people at comparable levels of development.[95]
Audiogram	An audiogram is a "picture" of your hearing. The results of your hearing test are recorded on an audiogram. The vertical lines on an audiogram represent pitch or frequency. The horizontal lines represent loudness (volume) or intensity.[96] (See example on page 36)
Augmentative and Alternative Communication (AAC)	Augmentative and Alternative Communication (AAC) is the term used to describe extra ways of helping people who find it hard to communicate by speech or writing. AAC helps them to communicate more easily. AAC includes many different methods: Signing and gesture, picture charts, books and special computers. AAC can help people understand what is said to them as well as being able to express what they want.[97]
Autism / Autistic Spectrum Disorder	Autism is a lifelong developmental disability. It is part of the autistic spectrum and is sometimes referred to as an autistic spectrum disorder (ASD). The word "spectrum" is used because,

95 ADHD Information from Eli Lilly and Company. (2007) "What is ADHD?" page on URL: http://www.adhd.com/parents/parents_adhd.jsp [16 Nov. 2007].

96 Mehr, A. (n.d.) "Audiograms - Understanding Your Audiogram" page on URL: http://www.drmehr.org/audiograms.html [9 Jan. 2008].

97 International Society for Augmentative & Alternative Communication. (n.d.) "What is AAC" page on URL: http://www.isaac-online.org/en/aac/what_is.html [19 Feb. 2008].

while all people with autism share three main areas of difficulty, their condition will affect them in very different ways. The three main areas of difficulty that all people with autism share are sometimes known as the "triad of impairments."

They are:

- Difficulty with social communication
- Difficulty with social interaction
- Difficulty with social imagination

It can be hard to create awareness of ASD because people with the condition do not "look" disabled. Parents of children with ASD often say that other people simply think their child is naughty; autistic adults find that they are misunderstood.[98]

Braille

Braille is a system of reading and writing for people who are blind and for some who have low vision. Braille consists of embossed dots evenly arranged in quadrangular letter spaces or cells. In each cell, it is possible to place six dots - three high and two wide. By selecting one or several dots in characteristic position or combination, 63 different characters can be formed. To aid in describing these characters by their dot or dots, the six dots of the cell are numbered 1, 2, 3, downward on the left, and 4, 5, 6, downward on the right.

Braille officially comprises two grades. Grade 1 Braille is completely spelled out, consisting of the alphabet, punctuation, numbers, and many composition signs that are special to Braille. Grade 2 Braille (Contracted Braille) consists of Grade 1, as well as contractions and short-form words.

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98 The National Autistic Society. (2008) "Autism: What Is It?" page on URL: http://www.nas.org.uk/nas/jsp/polopoly.jsp?d=211 [16 Nov. 2007].

There are Braille codes for most languages in Asia. In addition to those using Latin letters, languages using Chinese, Japanese and Korean characters, as well as for those using different alphabets like Arabic, Cyrillic, Hindi, Singhalese, Tamil and Thai (just to mention a few) exist.

Cerebral Palsy

Cerebral palsy is caused by an injury to the part of the brain which controls movement during the early stages of development. In most cases, it occurs during pregnancy. However, it can also occur during birth or from brain injuries in early infancy (such as lack of oxygen from near drowning, meningitis, head injury or being shaken).

Children with cerebral palsy may have difficulties with:

- Movement of body parts or the whole body.
- Talking as well as non-verbal communication (facial expressions may not always reveal true emotions – i.e. the child might appear to be smiling, but is actually angry or sad).
- Involuntary muscle movements (spasms).
- Eating and drinking.
- Muscle weakness or tightness.
- Balance and coordination.
- Posture (the ability to put the body in a chosen position and keep it there)

Cochlear Implant

An electronic device that gives a sensation of hearing to congenitally deaf or pre-lingually deafened children, adolescents and adults. It is a sophisticated kind of hearing aid. The receiver is surgically implanted behind the ear with electrodes in the inner ear (cochlea). The external part of the device comprises a

	microphone and a transmitter. The electrodes are positioned in the inner ear to make contact with undamaged parts of the hearing nerve.[97]
Communication	Communication includes languages (including sign language), display of text, Braille, tactile communication, large print, accessible multimedia, as well as written, audio, plain-language, human-reader, and and augmentative and alternative means of communication such as can be provided through information and communication technology.[98]
Deaf	In audiological terms, a person is deaf if s/he has a hearing loss that is sufficiently severe, (even when using a hearing aid or other technical equipment) to hinder both auditory speech perception and the control of his or her own voice. In cultural terms, Deaf (with capital D) may refer to a person who prefers to communicate mainly through a sign language.[99]
Deafblindness	Deafblindness (also known as dual sensory impairment) is more than a combination of visual and hearing impairments. Deafblind people may not be totally deaf and totally blind. Many deafblind people have some remaining hearing and vision, while others have nearly complete loss of both senses. Ninety-five percent of what

99 Skådalen Resource Centre. (2007) "Glossary of Hearing-related Terms." Oslo: Skådalen Kompetansesenter, p. 12.

100 United Nations. (2006) "Convention on the Rights of Persons with Disabilities - Article 2" page on http://www.un.org/disabilities/convention/conventionfull.shtml [11 Jan. 2008].

101 Skådalen Resource Centre, p. 14.

	we learn about ourselves and the world around us comes through our sight and hearing. Lacking these two senses, mobility, communication and access to information is greatly affected.[102]
Decibel	Decibel (dB) is the unit used to measure the intensity of sound (volume or loudness). The human ear can hear everything from your fingertip brushing lightly over skin to a loud jet engine. On the decibel scale, the smallest audible sound (near total silence) is 1 dB. A sound 10 times more powerful is 10 dB. A sound 100 times more powerful than near total silence is 20 dB. A sound 1,000 times more powerful than near total silence is 30 dB. Any sound above 85 dB (i.e. a lawnmower, car horn or rock concert) can cause hearing loss, and the loss is related both to the power of the sound as well as to the length of exposure.[103] Decibel, related to hearing impairment, should be considered in connection with Hertz (frequency or pitch) because the two combined best measure the loss of hearing.
Developmental Impairment	Developmental impairment is describesing a congenital (present at birth) or an early-acquired cognitive impairment. Developmental impairment is a collective term for a number of different conditions or diagnoses with the common characteristic that the ability to learn and to cope within society is impaired.[104]

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102 A-Z to Deafblindness. (2002) "Information about Deafblindness" page on URL: http://www.deafblind.com/info-db.html [13 Apr. 2008].

103 How Stuff Works. (2008) "What Is a Decibel and How Is It Measured?" page on URL: http://www.howstuffworks.com/question124.htm [5 Jan. 2008].

104 The Norwegian Association for the Developmentally Disabled. (2005) *Strategy for NFU's Work for International Solidarity - 2006 and Beyond*. Oslo: Norsk Forbund for Utviklingshemmede.

Disability	The International Classification of Functioning (ICF) defines disability as the outcome of the interaction between a person with impairment and the environmental and attitudinal barriers he/she may face.[105] or: A restriction or inability to perform an activity in the manner or within the range considered normal for a human being, mostly resulting from impairment.[106]
Down's Syndrome	Down's (or Down) syndrome is caused by extra genetic material in chromosome 21. This can be due to a process called non-disjunction, in which genetic materials fail to separate during a crucial part of the formation of gametes, resulting in an extra chromosome (called Trisomy 21). The cause of non-disjunction is not known, although it sometimes correlates with a woman's age. The additional material present, influences development and results in the state known as Down's syndrome. The name "Down's syndrome" comes from the physician, Dr. Langdon Down, who first wrote about his findings in 1866. In 1959, the trisomy 21 was identified as the cause for Down's syndrome.[107]
Dyscalculia	Dyscalculia is an impairment in the ability to calculate, and process mathematics. The difficulty lies in the reception, comprehension, or production of quantitative and spatial information (the physical location of objects and the metric relationships between objects).

105 Disabled People International. (2005) "DPI Position Paper on the Definition of Disability" page on URL: http://v1.dpi.org/lang-en/resources/details.php?page=74 [15 Nov. 2007].

106 Barbotte et al, p. 1047.

107 World Health Organization. (2008) "Genes and Human Disease: Genes and Chromosomal Diseases" page on URL: http://www.who.int/genomics/public/geneticdiseases/en/index1.html [9 Jan. 2008].

Dyslexia	Dyslexia is an impairment in the ability to read. It is affecting the learning process among children, youth and adults in aspects of literacy and sometimes numeracy. A persistent weakness may also be identified in short-term and working memory, speed of processing, sequencing skills, auditory and/or visual perception, spoken language and motor skills.
Dysgraphia	Dysgraphia is an impairment in the ability to write, causing a person's writing to be distorted or incorrect. In children, the disorder generally emerges when they are first introduced to writing. They make inappropriately sized and spaced letters, or write wrong or misspelled words, despite thorough instruction.[108]
Dyspraxia	Dyspraxia is an impairment or immaturity in the organization of movement. Gross and fine motor skills (related to balance and co-ordination) and fine motor skills (relating to manipulation of objects) are hard to learn and difficult to retain and generalise. Writing is therefore particularly difficult and time consuming; computer keyboard skills are also difficult to acquire, as is manipulation of many musical instruments.
Early Intervention	Early childhood intervention consists of multidisciplinary services provided to children from birth to 5 years of age to promote child health and well-being, enhance emerging competencies, minimize developmental delays, remediate existing or emerging disabilities, prevent functional deterioration, and promote adaptive parenting and overall family functioning. These goals are accomplished by providing

108 National Institute of Neurological Disorders and Stroke. (2007) "What is Dysgraphia" Page on URL: http://www.ninds.nih.gov/disorders/dysgraphia/dysgraphia.htm [18 Apr. 2008].

	individualised developmental, educational, and therapeutic services for children in conjunction with mutually planned interventions for their families.[109]
Epilepsy	Epilepsy is a medical condition that produces seizures, which can consequently affect a variety of mental and physical functions. When a person has two or more seizures, they are considered to have epilepsy. A seizure happens when a brief, strong surge of electrical activity affects part, or all, of the brain. Seizures can last from a few seconds to a few minutes. They can have many symptoms, from convulsions and loss of consciousness, to some that are not always recognised as seizures by the person experiencing them (nor by health care professionals): blank staring, lip smacking, or jerking movements of arms and legs.[110]
Handicap	The social or environmental consequence of a physical or developmental impairment. No one has a handicap. However, many societies attempt to make people (with impairment or a perceived impairment) handicapped by creating barriers of rejection, discrimination and prejudice that can prevent them from making choices and decisions that affect their lives. A handicap is therefore related to the inabilities (shortages) of a community or a system, not to the abilities of an individual. The term "handicap" is no longer considered appropriate because it is stigmatising and discriminative.[111]

109 Shonkoff, J./Meisels, S. (2007) *Handbook of Early Childhood Intervention.* Cambridge: Cambridge University Press, p. XVIII.

110 Epilepsy Foundation. (2008) "About Epilepsy - What Is Epilepsy?" page on URL: http://www.epilepsyfoundation.org/about/ [8 Jan. 2008].

111 Watterdal/Tahir, p. 4.

Haemophilia	Any of a number of inherited diseases where normal blood clotting is impaired. Haemophiliacs experience prolonged bleeding from the slightest wound, as well as painful internal bleeding without apparent cause. Haemophilia is nearly always linked to a person's biological gender. It is transmitted through the female line to male infants only. Males affected by the most common form are unable to synthesize Factor VIII, a protein involved in the clotting of blood. In spite of treatment, haemophiliacs remain at risk from the slightest incident of bleeding. The disease is painful and can cause deformities of joints that result in physical impairment.[112]
Hard of Hearing	The term used to describe a degree of hearing loss (ranging from mild to profound) for which a person usually receives some benefit from amplification. Most people who are hard of hearing are oralists (communicate by using their voice), although a small number learn sign language. Usually they participate in society by using their residual hearing with hearing aids, speech reading, and assistive devices to facilitate communication.[113] People who are hard of hearing and people who are deaf are also referred to as people with hearing impairment.
Hearing Impairment	Hearing impairment is a broad term used to describe the complete loss of hearing (deaf) or partial loss of hearing (hard of hearing).
Impairment	Any temporary or permanent loss or disturbance of a body structure or function, whether physiological or psychological. An impairment

112 Watterdal/Tahir, p. 4

113 Deafness Research Foundation. (2002) "Glossary of Medical Terms" page on URL: http://www.drf.org/hh_dictionary/glossary.htm [18 Apr. 2008].

	is a disturbance affecting functions that are essentially mental (memory, consciousness) or sensory, internal organs (heart, kidney), the head, the trunk or the limbs.[114]
Intellectual Impairment	Intellectual impairment is a term used to describe a set of conditions involving deficiency in cognitive functioning and adaptive skills. In other words, intellectual impairment can affect a person's ability to reason and understand, to acquire skills and master developmental milestones within "typical" age ranges, to problem-solve and adapt to new situations, and to learn and remember as easily as others.[115] This booklet uses the terms "intellectual impairment" and "developmental impairment" to describe the same sets of conditions.
Invalid	This term should no longer be used because it is discriminating and stigmatising. It was (in the past) mostly used for persons with physical (motor and mobility) impairment. It has unfortunately "snuck" into many different languages from English and is still in use in quite a number of countries, often without the users fully realising what the term actually means. It should therefore immediately be replaced with: "children or persons with disabilities," or more specifically with: "children/persons with physical impairment, motor impairment or mobility impairment."
Language	Language includes spoken, and signed languages, as well as other forms of non-spoken languages.[116]

114 Barbotte et al., p. 1047.

115 Play C.A.R.E. (2002) "What is Intellectual Impairment." page on URL: http://www.playcare.unitingchurch.org.au/intellectual.html [18 Apr. 2008].

116 United Nations. (2006) "Convention on the Rights of Persons with Disabilities - Article 2" page on URL: http://www.un.org/disabilities/convention/conventionfull.shtml [11 Jan. 2008].

Low Vision	Low vision is a significant reduction of visual function that cannot be fully corrected by ordinary glasses, contact lenses, medical treatment and/or surgery. Low vision affects people of all ages in the home, on the job, and at school. It impacts daily activities like reading, writing, mobility, sports and watching television. People with severe low vision may be classified as legally blind.[117]
Mental Retardation	The term "mental retardation" was perceived by many to be discriminating and stigmatising. It has therefore been replaced in most countries with the terms "intellectual impairment" or "developmental impairment."
Mobility Impairment	Mobility may be impaired by a number of conditions. Some are permanent, others are of temporary nature. These include cerebral palsy, arthritis, muscular dystrophy, multiple sclerosis (MS)[118] and juvenile Parkinson's disease. Injuries may also temporarily or permanently affect mobility.
Motor Impairment	Motor impairment is a disability affecting the ability to control muscle movement, often limiting mobility. Examples include cerebral palsy, arthritis, paralysis, limb loss and reduced function of one or more limbs. The impact of these conditions on learning, development and participation will vary from child to child.

117 CPS – The Centre for the Partially Sighted. (2008) "Low Visioon Library: About Low Vision" page on URL: http://www.low-vision.org/?dispage=10 [18 Apr. 2008].

118 Multiple sclerosis is most common among adults; however, it can also affect children and teenagers.

Mutual Enrichment

When implementing inclusion, we are recognising diversity as enrichment for all involved. Experience shows that diversity brings:

- Enrichment for all children involved, including those experiencing temporary and/or permanent barriers and needs
- Enrichment for all teachers who are directly or indirectly involved.
- Enrichment for all parents and families involved.
- Enrichment for the school community as a whole.
- Enrichment for the community at large.[119]

Narcolepsy

Narcolepsy is a malfunction of the sleep/wake regulating system in the brain, which until recently was of unknown origin. Its most common manifestation is excessive daytime sleepiness and sleep attacks. The other conspicuous symptom is a sudden loss of muscular control triggered by amusement, anger or excitement, which is called cataplexy. Other symptoms of narcolepsy are:

- Temporary paralysis upon falling asleep or awakening.
- Hallucinations - vivid images or sounds - upon falling asleep or awakening.
- Moments (but sometimes extended periods) of trance-like behaviour in which routine activities are continued on "auto-pilot" (automatic behaviour).

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119 Uganda Ministry of Education and Sports. (2008) *Towards Inclusive Education in Uganda – A Right-Based Education for All*. Kampala: Ministry of Education and Sports, p. 17.

	◆ Interruption of night-time sleep by frequent waking periods, marked by quickening of the heart rate, over-alertness, hot flushes, agitation, and an intense craving for sweets.[120]
Paraplegic	Paraplegic involves a loss of sensation and movement in the legs and in part, or all, of the trunk (back). This varies according to the level of the injury. Generally, the lower the injury, the less the loss of movement and sensation. Paraplegia usually results from an injury to the spinal cord in the mid and lower back.[121]
Physical Impairment	Physical impairment is a musculoskeletal (involving the joints, limbs and associated muscles) and/or neurological (involving the central nervous system i.e. brain, spinal cord or peripheral nerves) condition which affects the ability to move or to coordinate controlled movement.[122]
Tinnitus	Tinnitus is the perception of sound in the ears or head where no external source is present. Some call it "ringing in the ears" or "head noise." No one else can hear the sound except the person who suffers from tinnitus. The sounds each person experiences may vary, ranging from just one sound or a mixture of whistling, ringing, buzzing and rushing sounds. If they are loud enough, the sounds may interfere with the person's

120 Narcolepsy Association UK. (n.d.) "What is It?" page on URL: http://www.narcolepsy.org.uk/narcolepsy/whatisit/show_page [20 Feb. 2008].

121 Combo AG. (2007) "Definition" page on URL: http://paraplegic-online.com/edefinition01.htm [9 Jan. 2008].

122 Queensland Government. (n.d.) "What is Physical Impairment?" page on URL: tp://education.qld.gov.au/studentservices/learning/disability/generalinfo/physical/pi2.html [18 Apr. 2008].

	day-to-day life. Many people with hearing impairment suffer from tinnitus. Tinnitus may also permanently affect the hearing of those who suffer from this condition.[123] [124]
Tourette's Syndrome	Tourette's (Tourette) syndrome (TS) is named after Dr. George Gilles de la Tourette, the French neurologist who first reported TS in medical literature in 1885. It is a recognised medical condition, which is often inherited, but the cause is not yet understood. There are treatments, but no cure, as with many chronic medical conditions. It is a very complex condition and can be described - with equal accuracy - as a movement disorder, a neurological condition, or a neuro-psychiatric condition. TS affects all aspects of life, such as education, relationships, and employability.[125]
Universal Design Principles	Universal design means the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design. "Universal design" shall not exclude assistive devices for particular groups of people with disabilities where this is needed.[126]
Visual Impairment	Visual impairment is a broad term used to describe the complete or partial loss of vision.

123 A-Z to Deafblindness. (2002) "Tinnitus" page on URL: http://www.deafblind.com/tinnitus.html [13 Apr. 2008].

124 American Tinnitus Association. (2007) "About Tinnitus" page on URL: http://www.ata.org/abouttinnitus/index.php [13 Apr. 2008].

125 Tourette Syndrome (UK) Association. (2008) "TS Facts" page on URL: http://www.tsa.org.uk/ [8 Jan. 2008].

126 United Nations. (2006) "Convention on the Rights of Persons with Disabilities - Article 2" page on http://www.un.org/disabilities/convention/conventionfull.shtml [11 Jan. 2008].

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