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# Individualization of work of a student with vision impairment and his psychosocial functioning

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## Abstract

**Introduction.** The sight is of inestimable importance in every child's process of learning. Lack of eyesight hinders both learning about reality and developing practical skills. Overcoming difficulties and limitations resulting from the loss of vision or serious vision defect requires knowledge about the possibilities of supporting individuals with total vision loss and visual

impairment. This requires learning about limitations and physical, psychosocial, orientation and cognitive consequences.

**Aim.** This article deals with theoretical issues related to the individualization of work of a student with vision disability. The aim of the work is to get acquainted with the model of work with a blind student and determine ways to support his education. Presentation of the consequences of visual disability taking into account the psychosocial functioning of people with damaged eyesight has made it possible to approximate the phenomenon of perceptual compensation. The limitations and difficulties of blind or visually impaired students in spatial orientation emphasised the importance of technical support necessary for safe mobility of the blind in both the educational institution and daily situations.

**Summary.** Teachers, vision therapists and tyflop pedagogy educators play a special role in developing proper practical skills of the visually impaired. It is extremely important that not only the core curriculum, the curriculum, the assessment principles should be adapted to the student's individual abilities, but also the psychosocial conditions should allow the student to feel accepted in a peer environment. It is also important to provide appropriate assistance to a visually impaired student in the initial period of his education, because it is of great importance for further efficiency of his work and development.

**Key words:** student with visual impairment, the blind, Individualized Education and Therapeutic Program.

## **Introduction**

Eyesight has a very important function in the life of every human. Among children with vision impairment, three basic groups are distinguished based on the degree of visual acuity: totally blind children, children with profound visual impairment, visually impaired children. The degree of visual acuity has a significant impact on the functioning of these children in a variety of spheres, including a psychosocial sphere.

Totally blind and visually impaired people have very different visual abilities, which depend to a large extent on the condition of the organ of vision and the degree of vision, external factors and psychophysical predisposition. The extent to which the eyesight damage affects the level of functioning of an individual depends not only on the type and depth of the damage to the vision analyzer, but is also determined by the general health state (Ossowski, 2001).

## **Aim of work**

The aim of this work is to learn about the specifics of working with a student with a severe visual impairment, to identify ways to support his education, to present the consequences of vision disability, including the psychosocial functioning of people with impaired vision, as well as to present the description of the Individualized Education and Therapeutic Program of a student with a vision disability.

## **Dysfunction of the organ of vision**

The organ of vision is a complex sense analyzer that specializes in receiving 400-800 nm range light waves. The following elements are included in the organ of vision:

- the eye protection apparatus which includes eyelids, eyelashes, eyebrows and a tear apparatus;
- the eye motor apparatus consisting of ligaments and extraocular muscles:
- the eyeball, which consists of three layers: sclera, choroid and retina (Konturek, 1998).

Receiving and processing light stimuli is possible due to the proper eye structure. The eyeball is attached to the bone sockets with six muscles, due to which the eye can move.

Permanent sight dysfunction, known as damage, is a defect in both anatomical and functional structure of the eye in relation to the standard state. The degree and extent of the damage may vary, as well as it may affect all the functions of the organ of sight (Sękowska, 2001).

### **Classification of the severely impaired people**

The division of the blind people by The World Health Organization is based on medical criteria and in accordance with these criteria:

The blind people are:

- people with total vision loss - visual acuity 0.00,
- people with visual acuity not higher than 0.05, i.e. people with profound vision loss,
- people with a limited field of view of no more than 20 degrees, regardless of visual acuity (which may be higher than 0.05).

2. Visually impaired people are those with visual acuity ranging from 0.05 to 0.3, and, more broadly, visually impaired people are also those with profound vision loss, classified as the blind (Przeddecka, 2011).

According to the pedagogic definition, people who have to use Braille system during their education process are recognized as blind. On the other hand, visually impaired people are those who in the educational process are

able to use what is left of their eyesight to read the print, although it may be necessary to use enlarged print or optical magnifiers in this process (Sękowska, 2001); (Sowa, Wojciechowski, 2001).

The following factors may affect the functioning of people with visual impairment:

-visual acuity

-field of vision, binocular vision, ocular motor skills, colour perception,

-individual predisposition,

-health state, psychophysical condition - motivation, attention span;

-physical environment - lighting, size, colour, shape of the viewed objects, contrast and space;

-social environment - acceptance, creation of conditions stimulating a child's development (Majewski, 2001).

Diverse causes of eye damage and various factors affecting the visual functioning of students result in the diversification of their needs and abilities both in education and social life (Rudzinska, 2010)

### **Educational support of students with visual impairment**

Students with visual impairment have different educational abilities. The creation of special conditions allows them to achieve full psychophysical and social development as well as enables them to get prepared to function in the environment of sighted people.

Depending on the nature of special education needs, a visually impaired student should be provided with:

**1. Educational support**, consisting in adapting the methods, forms and means of work to the individual needs and abilities of the child.

Tyflopedagogy is one of the branches of pedagogy of specific learning difficulties dealing with upbringing, education, therapy and rehabilitation of

people with total vision loss and visually impaired people in educational institutions. (Słownik Języka Polskiego, 1996).

### **Visual impairment educator**

Essential role in education process is played by visual impairment educators, who:

- partially adapt school curriculum,
- recommend special and modified didactic methods,
- educate the teachers who will work with children with impaired eyesight (Walthes, 2007).
- they ensure the provision of appropriate didactic teaching aids such as modern electronic equipment, e.g. a Braille printer with software for printing embossed drawings, software reading standard print and Braille, speech synthesizer (Dziubińska, 2010).

### **Document of evaluation on the need for special education**

It is important from the point of view of the education process to have an evaluation on the need for special education. The Multidisciplinary Team of the Counselling Centre in the public psychological and pedagogical clinic issues the evaluation document. In the document, the Team presents a diagnosis, recommendations and justification. The diagnosis also includes information about the student's developmental abilities.

In the case when the decision concerns a child with visual impairment, the following factors are determined:

- functional assessment of vision
- the level at which the child uses information obtained through hearing, touch and other analyzers. (degree of perceptual compensation)
- defining deficits in terms of perceptual-motor functions (Dziubińska, 2010).

### **The core curriculum**

Children with impaired vision can follow the standards of the core curriculum of pre-school education, the core curriculum of general education for primary, lower secondary and secondary school, with some modifications. The education process must be adapted to the capabilities and needs of students with disabilities. The education conditions also require adaptation to perceptual abilities and the pace of learning (Jakubowski, 2001).

### **Assessment rules**

The rules for assessment and promotion of students are governed by the Regulation of the Ministry of National Education of 30<sup>th</sup> April, 2007, which requires teachers to consider, in the course of assessment process, the impact of developmental disorders in students with total vision loss and visual impairment on their learning and behaviour. Students with severe visual impairment are entitled to take a lower secondary school leaving examination and secondary school leaving examination in conditions and form adapted to the individual psychophysical needs indicated in the opinions or evaluations.

The education process of students with visual impairment must include the following rules:

- the rule of personalisation
- the rule of concreteness and the use of visual methods in teaching
- the rule of revalidation priority in the organization of education process
- the rule of adapting the requirements to the individual potential of students (Majewski, 1983).

In the teaching process, the rule of the use of visual methods and concreteness of teaching are especially important. The greater the clarity of methods and teaching aids accompanying learning, the more the child

develops ideas and concepts corresponding to the state of reality. The opportunity to learn about a phenomenon, an object in its natural form and surroundings guarantees that the child will associate properly the content with the word which it means. If it is not possible to show a real object or a phenomenon to a student, they should be replaced with an embossed model, devoid of unnecessary details (Dziubińska 2010). When teaching new concepts to children with total vision loss, the teacher acts as a guide who explains and indicates relationships and proportions between specific elements (Kirenko, Gindrich, 2007).

**2. Technical support** - one of the most important conditions is to adapt the school space by means of assessing and modifying the school physical environment of classrooms and passageways. The limitations and difficulties encountered by visually impaired students can be reduced through:

- touch markings of the doors with Braille labels
- introduction of specialist markings on steps, floors and handrails.
- organizing the space in such a way that desks, chairs, other objects on which the student can stumble are not exposed in the passageways. The rule should be adopted that during the breaks the classroom doors will always be open or always closed
- keeping permanent order in the student's environment. (Kirenko, Gindrich, 2007).

Even the best prepared school building in terms of space and design will not provide the visually impaired student with proper education and development opportunities. Spreading pedagogical knowledge in the school community in relation to the appropriate forms of interaction between able-bodied and disabled people is equally important.



### **3. Psychosocial support** includes:

-support from specialists. The role of teachers is to prepare both visually impaired and sighted children for interaction, by providing them with relevant knowledge, setting requirements as far as mutual contacts and encouraging socializing out of school. This will be of particular importance during the adolescence period. Having friends in this period is a condition of proper development (Majewski, 2002).

-integration of people with disability and their able-bodied peers

-providing opportunities to participate in school life, extracurricular activities, class and school ceremonies and trips for students with impairments.

School is a physical as well as a social space that considers the needs and abilities of each student, giving him a sense of security and the possibility to meet his psychosocial needs.

The social sphere is extremely important for the functioning of a human, including the one with visual impairment. For the person with total vision loss, it is essential to be aware of the importance of his own person to others and to the equality of all society members (Ossowski, 1999).

### **Multidisciplinary evaluation of the level of functioning in a student with total vision loss**

#### **Individual Education and Therapy Program (IPET)**

IPET helps to set the level of independent orientation and getting around. Moreover, it provides the opportunity to determine how to use one's own visual capabilities effectively (in the case of the visually impaired), which entails the picking of proper optical and non-optical teaching aids, which the student should use while working in class (Dopierała, 2011).

The education program of a student with visual disability should include information on both the scope of necessary adaptation of the content,

methods as well as forms and means. It is equally important to determine the type and form of additional activities, including rehabilitation goals such as learning Braille, spatial orientation, independent getting around, compensatory and educational activities. The damage to the sight analyzer hinders, and sometimes prevents the access and use of information in the form of a written word, graphic presentations and symbols. It is necessary to adapt written information by means of alternative reading materials and the use of specialist IT (Dziubińska, 2010).

It is also essential to provide the student with visual impairment with access to appropriate optical and non-optical aids and to create opportunities to practise the ability to choose teaching aids independently depending on changing environmental conditions (Dopierala, 2011).

The teacher working with a visually impaired student should consider the risk of developing in the student the following modes of behaviour: aversion to visual work, irritability, shortening attention span, increased fatigue. The problem that can arise at any level of the implementation of the core curriculum is the slower work pace of students with vision impairment. This is due to the slower process of visual perception and the use of tactile techniques (Sękowska, 1981).

The need for a multidisciplinary diagnosis in the case of the students with visual impairment results from specific and individual needs in the education process. The teacher, based on the interview with parents, the conversation with the child and research by means of projection methods, should determine the level of emotional adjustment of the student and his level of involvement in the social life of the peer group. The teacher's role is also to observe and determine the student's directional skills and interests. For a multidisciplinary diagnosis, it is also important to determine the child's situation in the family and school environment (Jakubowski, 2001).

The work with a vision therapist is indispensable in order to make a proper multidisciplinary diagnosis. Considering the ophthalmic data, the therapist should determine the level of use of the eyesight by the student and agree on the optimal for the child external conditions, related to visual work. The therapist should make adaptations and conduct classes improving the functioning of the other senses.

In order to make a comprehensive diagnosis, a psychologist's help is necessary. The psychologist should determine the child's overall mental fitness and specify to what extent the student uses the information received through functional senses - touch, hearing and other undamaged analyzers used for learning, orientation and locomotion. The psychologist indicates deficits within perceptual-motor functions.

When analyzing the results of the diagnosis, the teacher should identify the features that have a positive impact on the student's development and which will be motivational for the implementation of an individual education and therapeutic program (Dziubińska, 2010).

### **The rules of work with a visually impaired student**

The rules of work with a student with visual impairment are essential because they include all of the standards of didactic procedure which influence the intensification of the student's educational achievement. In pedagogical work with a student with impaired vision, the following rules should be applied:

- the rule of assuring safety, tolerance, acceptance and the student's trust in the teacher,
- the rule of grading difficulty
- the rule of personalisation
- the rule of compensation

-the rule of changeability of the type of classes - in the case of work with a visually impaired student, the tasks involving the visual receptor should not last longer than 15 minutes (Jakubowski, 2005).

The aim of the education and revalidation work is to bring up a student who is able to manage his own life, who uses his or her full abilities, who has a proper system of values and takes an active part in social life.

### **Consequences of visual impairment**

Visual impairment bears a lot of negative consequences. If they are not properly minimized by conducting a revalidation and education process, they may hinder the visually impaired person from acquiring self-education competences.

In the life of a person with total vision loss one can distinguish several consequences of damage to or loss of eyesight.

#### **1. Psychosocial consequences result in:**

- disturbance of one's self-esteem,
- lowering the level of fitness and independence,
- difficulties with establishing close, positive relationship with other people (Paplińska, 2008).

The phenomenon of compensation has a positive impact on the social functioning of people with visual impairment. Due to this phenomenon a visually impaired person can increase his/her independence. This is especially about independence in performing everyday activities, i.e. serving yourself, personal hygiene, transportation.

The most important role is played by the sense of touch, but also by the kinesthetic-motor sense and so-called obstacle sense which is enhanced sensitivity which can be exhibited by the blind. Additional facilitation may also be the compensation of the senses, that is replacing the function of the damaged organ by other centres in the body (Janeczek, 2011).

## **2. Physical consequences are related, among other things, to the fact that:**

-people with total vision loss, aware of the negative effects of physical activity, often limit their mobility, which in turn may contribute to the emergence of hypokinesia, functional tics or synkinesia, **called blindisms** (Paplińska, 2008).

-in the people with total vision loss, a bad posture is formed - the arms extended forward, the head and torso retracted and the so-called "rooster walk" is developed.

-a child with total vision loss develops many defective cognitive, social and emotional attitudes resulting from the limited possibility of learning about the world, which is the consequence of the lack of eyesight;

Important consequences of damage to the sight analyzer are also delays in the development of manipulation and locomotion (Ossowski, 2001).

## **3. Orientation and cognitive implications mean that:**

-reception of information is poor. The information is often fragmented, which contributes to making wrong decisions by the people with visual impairment,

-observations of visually impaired people are poorer for observations involving eyesight;

-there is a rapid development of abstraction, classification, differentiation, schematization and thinking by analogy (Błaziak, Kałkus, 2008)

-people with dysfunctions very often feel dependent on others. This is due to excessive protection, doing everything for them and submission. However, it should be remembered that they also want to feel free and independent (Ossowski, 1999)

On the other hand, according to M. Paplińska, the development of technology makes it that the visually impaired can get a lot of independence,

and they also have no major problems with access to the information they need (Paplińska, 2008).

### **Summary**

The sense of sight is one of the most sensitive senses. Its loss causes numerous limitations. It especially strongly affects spatial orientation, hinders getting to know the surroundings and proper forming personality. Furthermore, it prevents the proper body posture. Cutting off from the extensive source of information which is the eye limits the cognitive and executive abilities of the visually impaired. The range of these difficulties and limitations is extensive and includes almost all areas of life.

All of the above factors adversely affect the overall level of functioning of a visually impaired person. To reduce the negative effects of sight impairment, the child should be enabled multi-sensory learning. When working with a child, the following functions should be improved: touch, auditory perception, taste, manual fitness, but also the motor development of the child should not be neglected (Janeczek, 2010).

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