



# Journal of Exceptional People

2017 – Volume 1; Number 10

**Institute of Special Education Studies**  
Faculty of Education – Palacký University Olomouc



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# Introduction

Dear readers,

You begin to read through our jubilee tenth issue of the Journal of Exceptional People (JEP), which publishes contributions on extraordinary people from around the world. Our editors are trying to maintain a high level assessment of published articles and not to disappoint the confidence that is expressed by incorporating the JEP in prestigious databases, specialized magazines such as Bibliographia Medica Čechoslovaca (BMC), The National Medical Library of the Czech Republic, ERIH Plus, Ulrich 's Periodical Directory and Index Copernicus International.

Our magazine is open not only to domestic contributors, namely from the Czech Republic, but is mainly trying to publish professional scientific papers and overview essays which are related to the focus of our magazine and go beyond the boundaries of Europe

In our articles the issue of disabled people appears, there are also analytical studies aimed at specific systems of special educational care. We acquaint readers with the already implemented scientific researches and their methodological bases, however, we publish review studies, which aim at ordination, streamlining and comparison of already known information. Some space is also dedicated by our editors to reviews of interesting books that are related to the theme of our magazine. At the end of every number we usually have the JEP basic ethical and technical information that should be known by all contributors.

The first two articles of the JEP tenth issue are devoted to the issue of people who are disadvantaged due to impaired visual perception. It is mainly the first post of Czech authors M. Vrabel and P. Benes *Individuals With A High Refractive Error And The Learning With An Appropriate Type Of Optical Corrective Aid*. This issue is more expanded in a continuing contribution by Nigerian author I. E. Archbong *Influence of Networking on the Adjustment Process of Persons with Visual Impairments*.

It is followed by the contribution of three Czech authors who deal with teachers' views on the ongoing changes in the concept of the Czech education system, which strongly affected "the life of the teaching public" (Langer, J., Kozáková, Z., Moučková, M.). Another article by P. Svoboda and H. Benešová reports about a comparative study on the re-education exercises designed to develop reading, which was implemented among the German and Czech children. The theme "*Development of laterality, Articulation and Sentence Comprehension in a Girl with Specific Language Impairment - a Longitudinal Case Study*" was chosen by R. Mlčáková, while another post that we are publishing, concerns on the issue of people with Asperger's syndrome (Schwarzová, L.). The combined Czech-English team composed of T. Houšková, M. Růžička, L. Hrbáčová, T. Sampey invites readers to London and acquaints them with the unique organization Build on Belief operating there. Nigerian authors Ash, M.M., Olay, J.E., Ewa, J.A. also chose a very interesting topic, as indicated by the name of their contribution - *HIV / AIDS Awareness Baseline And Persons With Visual Impairments In Cross River State, Nigeria*. In the last article by Slovak authors B. Kováčová and I. Lištiaková we are introduced to *Analysis Of Early Childhood Intervention Occupational Therapy In A Group Of Clients With Low Graphomotor Skills*. The tenth issue of our magazine is completed by three book reviews.

We believe that most of the contributions will captivate you and our magazine will enrich you not only from the professional point of view.

Pavel Svoboda and Jan Chrastina – executive editors

# Individuals with a high refractive error and the learning with an appropriate type of optical corrective aid

(overview essay)

Pavel Beneš, Martin Vrabel

**Abstract:** *The aim of this paper is to assess the importance of proper selection of optical corrective aid for individuals with high refractive error which is one of the possible causes of decreased visual acuity and describe the subsequent training needs for proper use of the corrective aid. Reduction of visual functions is a common cause of many limitations in the implementation of individual's everyday activities and hinders social inclusion.*

**Keywords:** *a high refractive error, optical corrective aid, education, training, visual impairment*

## 1 Introduction

There are many causes and ocular conditions leading to decreased visual functions. First, they are congenital or second – of acquired nature and often lead to poor vision that cannot be treated. The loss of vision or limitations of visual functions have an impact not only on the ontogeny of the individual but also on his/her orientation and movement in the living space. The most often conditions develop with age are for example: age related macular degeneration, cataract, glaucoma, etc. Thanks to prevention and screening programmes is the spectrum of these conditions less common. Depending on the type and degree of disability we can often offer treatment to these people and provide them with various optical corrective aids. These will help in space orientation and allow them to see at various distances. On the basis of diagnosed functional disability is then the effort to reach the widest possible inclusion of the person. The aim of the intervention is to make the functioning of visually impaired individuals equal to those without visual impairment. The specialist in low

vision assessment play the most important role in rehabilitation process of people with visual impairment.

One of the main reasons in the incidence of low vision globally is uncorrected refractive error (ametropia). According to recent surveys and updated data from the World Health Organization it is up to 43% of individuals who do not have adequate correction of nearsightedness (myopia), farsightedness (hyperopia) or astigmatism. Small visual impairment and low vision are usually connected to a common term known as low vision. This, together with blindness are then subsumed under the term visual impairment. A high refractive errors cause changes in many aspects of the vision process. Myopia is refractive error where the image of an object is focused in the front of the retina, in the most cases the axial length of the eye is too long. Hyperopia is refractive error where the image is focused behind the retina, eye is too short (Fredrick, 2002). Astigmatism is mostly caused by irregularly shaped cornea or crystalline lens (Severa, Veselý, Beneš, 2016). In all cases these conditions lead to blurred vision at any distance followed by eye discomfort and headaches.

To support people with visual impairments we can recommend and select an appropriate type of optical corrective aids. The most common are glasses (spectacles) which are devices consisting of spectacle frame that holds mounted optical lenses. For correction of high refractive errors we use a special type of lenses with typical characteristics, eg. aspheric surfaces, high refractive index (thinner, lighter), etc. Given properties of spectacle lenses have also their limitations especially in dioptric ranges, diameters and coatings. Glasses are worn to correct the refractive error but also for aesthetic and fashion purposes. They are prescribed by ophthalmologist or optometrist. For visually impaired people glasses also provide magnification.

Optical aids, eg. glasses, are a big challenge, especially for non-wearers, despite the fact they can greatly support their visual functions. But to be a successful wearer needs to follow the advice and recommendations of eye care practitioners. In any social environment, such as the for example school, it is to be kept in mind that the proper use of optical correction aids improve visual function and performance of the individual. From the perspective of a teacher/lecturer is known to direct dependence on the proper development of visual learning. The visual capacity of children is actually learned function, which can have a positive effect on successful support and further learning. Especially by learning in the sensitive phase of psychical development stage (Janková, 2015).

Not always is an appropriate corrective optical aid the only goal. Every individual has to be educated how to use the optical device correctly and practice the correct use. Especially in cases of high ametropia. Special glasses and contact lenses are individual optical corrective and training devices, useful to improve first visual functions, second to develop and coordinate his/her activities. Person using optical aids has to learn how to wear glasses or contact lenses, respectively (Efron, 2010).

Due to visual conditions we also learn how to focus the image of an object onto the foveal areas at retinas, for the best imagination. There is also need to learn adequate hand-eye or leg-eye coordination.

The aim of this research is to describe and show the situation in common population which have decreased their visual functions due to incorrect use of an appropriate optical aids. Our intervention is then the only option of support of visual functions in people with visual impairments.

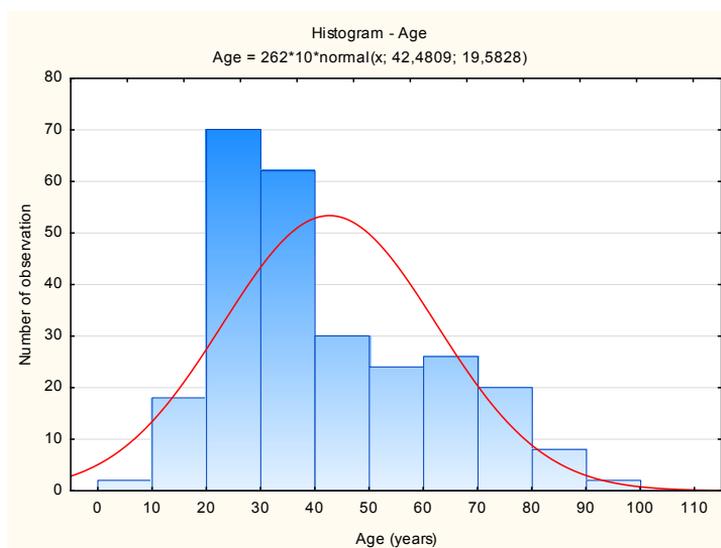
## 2 Material and Methods

This randomized study includes 131 individuals, i.e. 262 eyes and were divided into three groups represented by high refractive errors representing myopia, hyperopia and astigmatism. Generally, visual impairment is according to WHO divided into 5 categories. But we decided to compare data of individuals with uncorrected visual acuity ranked as visual impairment (category 1) and severe visual impairment (category 2), ie. VA  $<6/18-6/60$  or  $<6/60-3/60$ . The intention was to conduct an objective measurement of the refractive state of the eye. To measure these values autorefractometer with Placido disc (KR 8100P, Topcon, Japan) was used. Determining the visual acuity (VA) was carried out on a standard investigative 6 m using a projection optotype (ACP-8, Topcon, Japan). The results were recorded and then statistically processed in program Statistica 12, CZ-Czech single-user version, the company StatSoft®, which is available to students and employees of Masaryk University. Then there been recommended an appropriate type of corrective aids to each person. In most cases were made glasses with the advantages of the latest types of lenses and technological procedures in their processing for the correction of a specific and high visual/refractive errors. Great emphasis was also laid on the aesthetics. There were also chosen and fitted contact lenses via an objective measurement of refraction in the above instrument, also were measured keratometry and corneal topography to eliminate corneal distortions and ectasias. Based on the parameters were then fitted to the appropriate type of spherical, toric or progressive lenses, respectively. In this study there are not included individuals who showed signs of any intervention on the cornea, blepharitis, purulent conjunctivitis or other eye disease. The study adhered to the tenets of the Declaration of Helsinki. Informed consent was obtained before data collection from the adults or guardians as long as subjects fell under the defined study criteria.

## 3 Results

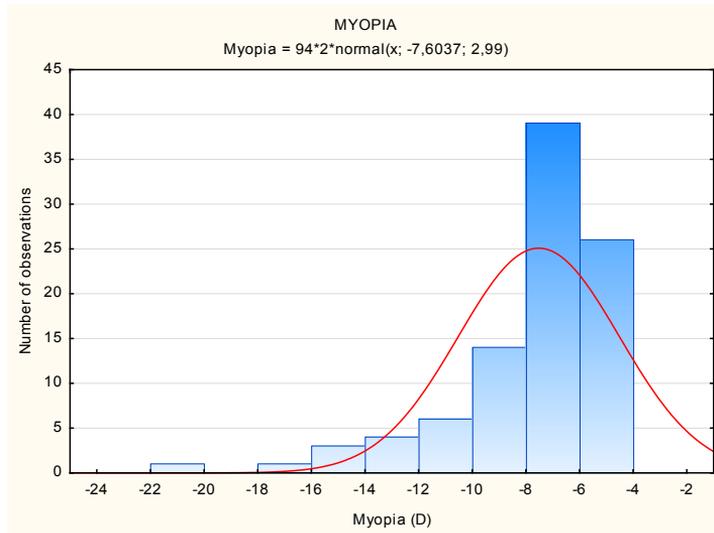
The taken data show the distribution of high refractive errors in the sample of measured subjects. The aim of this study is to present the visual situation across the

population sample. We did not assess the individual's visual functions. The cohort of participants consist of 131 individuals (n = 262 eyes), 47 males and 84 females. The average age is  $42.5 \pm 19.6$  years (min. 10 years, max. 95 years, med. 37 years), see *Figure 1: Age distribution*. The entry criteria was uncorrected visual acuity worse than 6/18 (0.30) mostly corresponding to refractive error higher than 4.0 diopters. But this value is very individual. Subjects were divided into three groups depending on the type of their uncorrected objectively measured higher refractive error. The reproducibility of measurements was ensured.



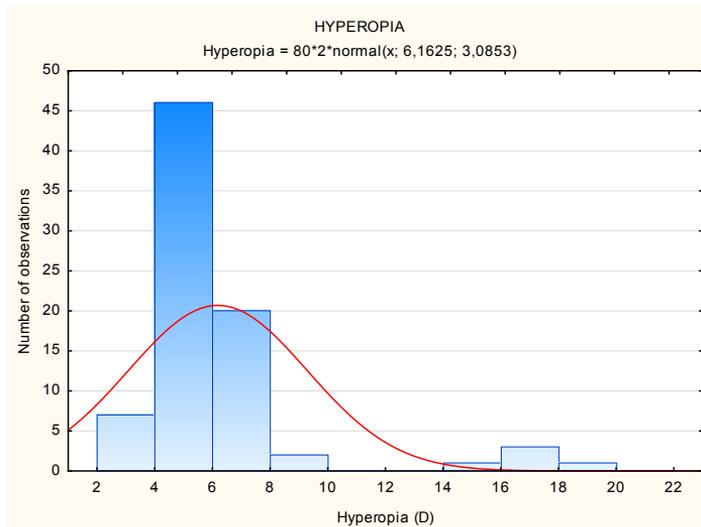
**Figure 1:** Age distribution

Group I is represented by 47 (n = 94) individuals, 22 males and 25 females with **myopia**. The average of objective refraction is  $-7.6 \pm 2.9$  D (min. -4.0 D, max. -20.5 D, med. -6.6 D), see *Figure 2: Myopia distribution*. Average age of this group is  $35.4 \pm 14.5$  years (min. 14 years, max. 83 years, med. 34 years).



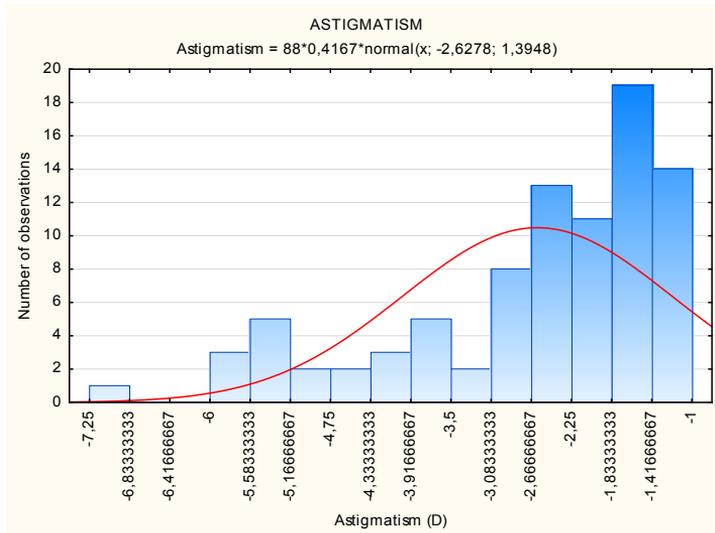
**Figure 2:** Myopia distribution

In group II is 40 (n = 80) subjects, 15 males and 25 females with **hyperopia**. The average of objective refraction is  $+ 6.16 \pm 3.0$  D (min. + 4.0 D, max. + 19.0 D, med. + 5.25 D), see *Figure 3: Hyperopia distribution*. Average age of this group is  $47.6 \pm 20.5$  years (min. 10 years, max. 78 years, med. 46 years).



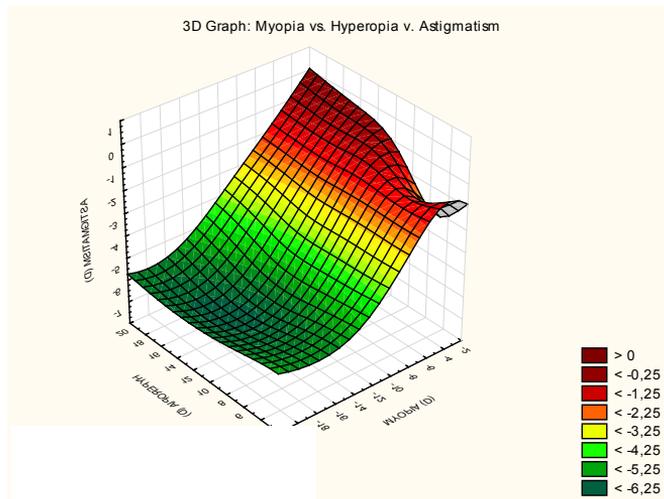
**Figure 3:** Hyperopia distribution

The group III consists of 44 (n = 88) subjects, 17 males and 27 females with **astigmatism**. For higher validity of the results were as unsuitable individuals chosen with total astigmatism lower than -1.0 D. The average of astigmatic values is  $-2.62 \pm 1.4$  D (min. -1.0 D, max. -7.25 D, med. -2.15 D), see *Figure 4: Astigmatism distribution*. Average age of this group is  $46.4 \pm 22$  years (min. 16 years, max. 95 years, med. 38 years).



**Figure 4:** Astigmatism distribution

When we compare all results of high refractive errors will obvious their share in formation of visual image quality and their distribution across the sample of the selected population will be obvious, as we can see in *Figure 5: Sharing of all refractive errors*.



**Figure 5:** Sharing of all refractive errors

## 4 Discussion

The distribution of high refractive errors in population is not so common thanks to screening methods and possibilities of refractive surgery, thus refractive errors affect the majority of the population. The most common refractive error in population is hyperopia but is not so often corrected with optical aids as myopia and astigmatism (Verhoeven, 2015, Wolfram, 2014). Our study is also represented by more individuals with myopia. Every individual suffering from high refractive error has affected his/her education skills at different levels (Verhoeven 2013). Education of these persons must be led and formed due their needs and demands. Especially training at near work – writing, reading, etc. has an important role and effect in education process. Proper training and compliance procedures for handling and habituation to visual aids – glasses and contact lenses, is a condition for correct imaging and providing of optical quality image created by corrective optical aid.

## 5 Conclusion

Appropriate selection and design of corrective aids is often limited. In more complex cases this is not a mere correction of refractive error. Nowadays glasses are not seen as a handicap, but in addition to the correction of high refractive errors, reinforce the individual's own personality with respect to his/her image. There are differences between correction with glasses and contact lenses. Generally, every person wearing contact lenses must have glasses in case of possible eye infection or inflammation.

Advantages of contact lenses are in no limitation of visual field and they are invisible in high ametropia of individuals. Disadvantages of glasses are mostly in image distortions in the optical lens periphery. The aim of eye care practitioners and trainers is to educate individuals with vision loss to increasing the individual's level of independence with activities of daily living, education that have been compromised by visual impairment. We recommend to focus on the proper training and education of people with visual impairments about the correct use of the aids in their own environment. For more complex and detail results, this study will need further research in cooperation with professionals from the field of special education and specialists from rehabilitation centers.

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# Influence of networking on adjustment process of persons with visual impairments

(overview essay)

**Idongesit, Etim Archbong**

**Abstract:** *This paper looks at the influence of networking in the adjustment process of persons with visual impairment, what the internet offers and how persons with visual impairment can benefit from it. It further looks at the meaning of networking, the history of internet. It lists examples of network which include: academic and research network, airline, car rental, and hotel networks, corporate network, private networks etc and also the types of networks which are local area networks, wide area networks, intranet, Ethernet and internet. It concludes with the benefits of networking in the adjustment process of persons with visual impairments.*

**Keywords:** *Networking, person with visual impairment*

## 1 Introduction

The internet has increased the rate of information awareness and with the advent of internet-based communication; persons with visual impairment developed more in their interpersonal relationship with others both internally and internationally. They are more informed about them networking the web. Visual impairment influences the most important sense (Wagner & Oliver, 1994). Over the years persons with visual impairment have been using the computer and other portable devices for in surfing the internet and World Wide Web (www). Visual impairment consists of low vision, partial or total blindness. Visual impairment affects the individuals that are afflicted with it in so many ways. It causes restriction in movement, adjustment problem in physical, social and emotional areas. With the advent of internet, networking has been made possible. Networking is a special form of communication through the use of the internet and the World Wide Web (WWW), e-mail to browse other people's

profile pages, get connected with other visually impaired persons all round the world and getting information about other people who are visually impaired but have been able to make it in life.

## **2 Networking**

Networking is a term that has so many meanings. Networking according to entrepreneurs is compiling a huge database of names usually by collecting business cards. Others see networking as the opportunity to get in front of people and personally prospect for business. As for entrepreneurs, it is a way of getting connected to different business people in order to have connection with them for business purposes. Some see it as a process of developing and using their contacts to increase their knowledge, expand their sphere of influence or serve their community. For the purpose of this work, networking is the process by which people interact with online services within virtual, cloud-based communities for the purpose of communication and sharing information. Networking dates back to the birth of online bulletin boards prevalent during the late 90s. These bulletin boards allowed information to be posted and for participants to post comments. Bulletin boards evolved into more of an e-mail posts whereby members of a particular list serve could reply to e-mail threads.

## **3 Computer Network**

A supportive system of sharing information and services among individuals and groups having a common interest is networking. The design establishment or utilization of a computer network. Networking involves the use of a network including the physical hub. Networking has brought exchange of information. The internet itself is networking. Computer networking is when two or more computers connect to each other. The purpose of a network is to enable the sharing of files and information between multiple systems.

According to Lewis (2013), launching of web browser and internet technology started in the 1990s, which present us with information, but there was little to nothing that we could do with this information once retrieved. He said networking on internet provides us with materials.

## **4 Social Networking**

Social networks have become the standard by which so many communicate within the classroom and workplace and with most acquaintances and friends with whom one shares similar interests. Networking has a great deal to offer, once the concept is firmly grasped and access obstacles dealt with. Social networking for people who

are visually impaired can be rewarding, fulfilling and fun. The social network according to Kef (1999) refers to all the connections within a specific group of people for instance the relations between close members in a classroom or relationships of colleagues in a certain division. Social networks include facebook, twitter, youtube, e-mail etc. Social networks according to Lewis (2013) have become the standard by which so many people communicate within the classroom, workplace. The network is designed to optimize the freedom, functioning and enjoyment of people.

The skills and experience needed to operate an electronic environment are gradually becoming widespread within the visually impaired community.

## 5 Types of Network

One way to categorize network depends on their scope or scale. The smallest and simplest networks are Local Area Networks (LANs) which extend over only a small area typically within a single building or a part thereof. A home network is a type of Local Area Network that is contained within a user's residence.

Wide Area Networks can extend over a large geographical area and are connected via the telephone network or radio waves. A metropolitan area of network (MAN) is designed to serve a town or city, and a campus area network is designed to serve a university or other educational institution. An intranet is a private network within an organization that uses the same communication protocols as the internet.

Extranet is when a part of an intranet is made accessible to suppliers, customers or others outside the organization.

Internet is a network that is composed of a number of smaller computer networks. The internet is the World Wide Network of interconnected internets that operate using a standardized set of communication protocols called TCP/IP (transmission control protocol/internet protocol). This ultimate internet is larger than any other network. Internet connects thousands of networks and hundreds of millions of computers throughout the world.

## 6 History of Internet

The ability for many computers to be connected over long distances began in 1969 at the University of California at Los Angeles (UCLA) with the development of ARPANET, which was established by the U.S. Defense Advanced Research Project Agency. This made computers vastly more powerful and useful because it has, in effect, made the network into a computer. The internet has become the site of all sites where different information is obtained, different organizations, universities and so on, connect with their agents, students, all over the world. It forms a basis where

information all over the world can be obtained. It forms a basis for communication, social interaction etc. The internet has served the visually impaired in lots of ways.

## 7 Examples of Networks

- Banking networks in which one bank card can be used at many automatic teller machines over a widespread area.
- Message networks that allow people to use computers to send and receive mail electronically.
- Corporate networks are those networks which transfer the results of data processing operations between corporate locations.  
Academic and research networks e.g. school portals.
- Airline, car rental and hotel networks: they enable travelers to make reservations from anywhere in the country.
- Private networks: They are designed to provide communications between a company's host computer and the employee's and customer terminals.

The internet covers commercial, academic and government endeavours. Users have access to unpublished data, journals on a huge variety of subjects. Networks have existed as long as there has been communication. Networking is part of any natural system.

## 8 Influence of Networking on the Adjustment Process of Persons with Visual Impairments

There is an important need to create awareness of what the web/internet constitutes, how it works and what it can offer to persons with visual impairment. According to Williamson and Schauder (2000), networking helps as an effective buffer for emotional and social adaptation to vision loss. It brings effective social support. It reduces depressive symptoms, brings higher life satisfaction and better adaptation to vision loss. Networking makes it possible for the visually impaired to communicate with other visually impaired overseas. They can advocate better for each other by forming a group online which reduces isolation. It makes it possible to get information about other visually impaired persons who have made it in life regardless of their disabilities. This will give persons with visual impairment a greater hope for a better future. It acts as motivator to them and helps them to develop positive self-esteem and self-image about themselves.

Networking makes it possible for them to know details about another person's life without ever previously having talked to the person. It provides explicit information. Networking will make them stay informed about changes in their lives at low cost.

They meet new friends online both at home and internationally. It helps them learn conveniently at their own pace through online learning, distant learning. This will make them have confidence in themselves that they are not left out in the information world, bringing adjustment emotionally and psychosocially.

Networking brings literacy to persons with visual impairment, easy employment achievement and economic success. It increases their functioning socially (they become socially adjusted). They are better adjusted psychologically and have an easier time maintaining gainful employment. They will be more socially accepted by their sighted peers and are likely to participate in e-commerce and in a wide range of social activities on internet. It engenders confidence and knowledge of self-worth. It will encourage and motivate them to learn skills and expertise needed for gainful employment.

Networking brings social support from others online when they are stressed up with life situation. Social support will enhance physical and psychological well being and reduces the effects of life stress. It improves their coping mechanism through helping behaviour. The presence of others online will prevent isolation, making them feel that they are a valued part of a network, receiving signs of love and understanding when needed.

Friendship helps them to develop and maintain positive self-images, and provides opportunities for self-disclosure, self-assurance and feelings of security, control over themselves and the environment.

Networking helps them to try to prove to the world and themselves that they are fully competent and adequate, striving for independence. It makes them feel happy.

## 9 Conclusion

The influence of networking in the adjustment process of persons with visual impairment cannot be overemphasized. The internet has contributed positively in the lives of many likewise for the visually impaired. Networking can help them adjust properly in the society psychologically, socially, vocationally, mentally, emotionally etc. It makes them feel safe, secure and loved by some people through communicating with friends on internet, it makes them have the feeling that they can make it in life through the profiles of others who are visually impaired and have made it in life. Networking, therefore, has a positive influence in the adjustment process of persons with visual impairment.

## 10 Recommendation

Despite all the positive influences of networking in the adjustment process of persons with visual impairments, most of them still have problem getting to and making use of the web.

1. Network developers should design the web in a way that persons with visual impairment will be able to network on it conveniently without problem.
2. Technologies should be developed to make access to the web easier for persons with visual impairment.
3. Awareness should be made about the influence of networking in the adjustment process of persons with visual impairment and these persons should be encouraged to use of the internet.
4. Easy guidelines should be made for visual impaired users on how to access different web pages. Visually impaired users of internet also need to be supported and actively promoted by government and industry.
5. There is need for private, public and voluntary sectors to promote and deliver increased awareness and wider accessibility. New models of integration should be developed for participation of persons with visual impairment to be satisfying.
6. There is need to create awareness about what the web constitutes and how it can be operated and what it offers.

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# Current changes in the education of pupils with mild intellectual disability from the point of view of primary school teachers of the Czech Republic

(scientific paper)

Zdeňka Kozáková, Martina Moučková, Jiří Langer

„The paper is dedicated to the following project: ‘Teaching staff as a key factor in inclusive education’ (IGA\_PdF\_2016\_026)“.

**Abstract:** *Inclusive education is currently (2016) one of the main priorities of the Ministry of Education, Youth and Sports (hereinafter referred to as MŠMT). Consequently, we were interested in the views of teachers on inclusive education and related legislative changes. We carried out a questionnaire survey with the main objective to ascertain the teachers’ views on the amendment to the Education Act (Act No. 82/2015 Coll., amending the Act No. 561/2004 Coll., on pre-school, primary, secondary, higher professional and other education /Education Act/ as amended, and certain other legislation) and the current Regulation (Regulation No. 27/2016 Coll., on educating pupils with special education needs and gifted pupils). We approached 3746 mainstream schools in total, of which 485 participated. The survey results show that to a certain degree teachers have negative attitude to the legislative changes in the education of pupils with mild intellectual disability and specific difference of opinion with the amendment to the Education Act and the associated Regulation. However, their views differ on different legislative points. The vast majority of teaching staff highlights the concern of educating pupils with mild intellectual disability jointly with mainstream pupils and seem to think that if so, pupils with mild intellectual disabilities should be taught some subjects outside the class collective. The survey results raise many concerns and problem areas requiring further attention.*

**Keywords:** *Inclusive education, amendment to the Education Act (Act No. 82/2015 Coll.), Regulation No. 27/2016 Coll., teaching staff, views, MŠMT, RVP ZVLPM*

## 1 Introduction

Amendment to Education Act No. 82/2015 Coll. came into force on 01 September 2016, amending Act No. 561/2004 Coll., on pre-school, primary, secondary, higher professional and other education (Education Act) as amended, and certain other legislation (hereinafter referred to as Act No. 82/2015 Coll.) and the associated Regulation No. 27/2016 Coll., Regulation on educating pupils with special education needs and gifted pupils (hereinafter referred to as Regulation No. 27/2016 Coll.), which provides education for pupils with special education needs including pupils with mild intellectual disability (hereinafter referred to as MID).

## 2 Theoretical background and definition of terminology

From the amendment to the Education Act it follows (MŠMT – Act No. 82/2015 Coll., §16, Para 1, [online]) that *“children, pupils and students with special education needs, including pupils with MID, have the right to receive free assistance provided by schools and school facilities, whereas the assistance is classified into five assistance levels according to the organisational, educational and financial requirements.”*

In our research, we focused on pupils with mild intellectual disability. In accordance with the tenth revision of the International Classification of Diseases and Related Health Problems we understand intellectual disability (mental retardation) as the *“condition where intellectual development ceased or is incomplete, which is particularly characterised by violation of skills manifested during the developmental period, affecting all forms of intelligence, namely cognitive, language, motor and social skills”* (ICD10, 1992, Page 219). A pupil with MID has intelligence within the range of 50 to 69 (ICD10, 1992).

Difficulties in teaching manifest themselves not only in reading, writing and arithmetics, but also in other areas. Persons with MID usually achieve full independence in adulthood, whether in caring for themselves or looking after a household (Kozáková, Krejčířová, Müller, 2013). Children and pupils whose performance in the school-relevant skills and competences, knowledge, cognizance or habits corresponds to mild intellectual disability (MID) or upper zone of moderate intellectual disability are classified into the third assistance level.

In our research we were interested in the views of teachers on educating pupils with MID whilst receiving assistance, on individual and group integration, on repealing the RVP ZV Appendix amending education of pupils with MID (hereinafter referred as the RVP ZVLPM), and on the use of teacher’s assistant and personal assistant in educating pupils with MID (MŠMT – Regulation No. 27/2016 Coll., Regulation on educating pupils with special educational needs and gifted pupils [online]). We were also interested how teachers view the potential presence of up to

four teachers at the same time in one class and the preparation of the education assistance plan (hereinafter the PLPP) for pupils who by the early September will not be assessed by the school counselling facility.

### 3 Methodological background of the research

#### Objectives

The **main** research **objective** was to ascertain teachers' views on the amendment to the Education Act (Act No. 82/2015 Coll.) and Regulation No. 27/2016 Coll.

Within the main objective the following **partial objectives** were set:

- To ascertain teachers' views on educating pupils with MID whilst receiving assistance
- To ascertain teachers' views on repealing the RVP ZVLMP
- To ascertain teachers' views on individual and group integration
- To ascertain teachers' views on educating pupils with MID in some subjects outside the class collective
- To ascertain teachers' views on the use of teacher's assistant and personal assistant in educating pupils with MID and potential presence of up to four teachers at the same time in one class
- To ascertain teachers' views on the preparation of the PLPP for pupils who by the early September will not be assessed by the school counselling facility

#### Questionnaire and methodology

A non-standardised anonymous questionnaire was prepared to reflect the set objectives. According to Chráska (2007), it is the most widely used data acquisition method in general. The questionnaire included open, closed and scaled items. The compiled questionnaire was distributed to mainstream schools. A list of all primary schools in the Czech Republic was acquired through the Ministry of Education, Youth and Sports website (MŠMT ČR, 2016, online). Subsequently, mainstream schools were selected from the said list. Information on each school was attained through the Registry of Inspection Reports available on the Czech School Inspectorate website (Czech School Inspectorate, 2016, online) and from websites relating to schools and their founding deeds. 3746 mainstream schools were selected in total.

The survey was carried out between March and November 2016. One questionnaire was sent to every mainstream primary school whilst ensuring that the respondent had unique IP address, namely that we had taken into account first completed

questionnaire from one proxy server. This ensured the informative value of the survey as only one completed questionnaire could be sent from each school.

As reported by Chráska (2007), the return of questionnaires sent electronically is significantly lower than personal handover. 485 questionnaires were returned in total, with one completed questionnaire excluded owing to erroneous completion; thus the total of returned questionnaires represents 12.9%.

## 4 Results

The results were statistically assessed and processed, and are presented in table format for clarity.

The **first item** related to examining the degree of agreement/disagreement by the teaching staff on repealing RVP ZVLMP. The questionnaire item was as follows: *Give the scale of your agreement/disagreement on repealing RVP ZVLMP*. Responses are given in Table 1:

**Table 1:** Views of teachers on repealing RVP ZVLMP.

Response	Absolute frequency	Frequency in %
Agree	52	10.74
More likely agree	57	11.78
More likely disagree	126	26.03
Disagree	249	51.49
Total	484	100.00

As it can be seen from Table 1, teachers more likely disagree with repealing RVP ZVLMP. Of the 484 respondents, 249 respondents (51.49%) disagree, 126 respondents (26.03%) more likely disagree, 57 respondents (11.78%) more likely agree and 52 respondents (10.74%) agree.

The **second item** related to examining the degree of agreement/disagreement by the teaching staff on educating pupils with MID whilst receiving assistance. The questionnaire item was as follows: *Give the scale of your agreement/disagreement on educating pupils with MID whilst receiving assistance*. Responses are given in Table 2:

**Table 2:** Views of teachers on educating pupils with MID whilst receiving assistance.

Response	Absolute frequency	Frequency in %
Agree	86	17.77
More likely agree	120	24.79
More likely disagree	157	32.44
Disagree	121	25.00
Total	484	100.00

As it can be seen from Table 2, teachers mostly tend to disagree on educating pupils with MID whilst receiving assistance. Of the total number 157 respondents (32.44%) more likely disagree, 121 respondents (25%) disagree, 120 respondents (24.79%) more likely agree and 86 respondents (17.77%) agree.

The **third item** related to examining the degree of agreement/disagreement by the teaching staff on educating pupils with MID in mainstream classes. The questionnaire item was as follows: *Give the scale of your agreement/disagreement on individual integration of pupils with MID into mainstream primary school classes*. Responses are given in Table 3:

**Table 3:** Views of teachers on educating pupils with MID in mainstream classes.

Response	Absolute frequency	Frequency in %
Agree	44	9.09
More likely agree	91	18.80
More likely disagree	162	33.47
Disagree	187	38.64
Total	484	100.00

The **fourth item** related to examining the degree of agreement/disagreement by the teaching staff on group integration of pupils with MID into special classes. The questionnaire item was as follows: *Give the scale of your agreement/disagreement on group integration of pupils with MID into special primary school classes*. Responses are given in Table 4:

**Table 4:** Views of teachers on integration of pupils with MID into special classes.

Response	Absolute frequency	Frequency in %
Agree	155	32.03
More likely agree	191	39.46
More likely disagree	76	15.70
Disagree	62	12.81
Total	484	100.00

As it is shown in Tables 3 and 4, the teaching staff is more favourably inclined to accept the group integration of pupils with MID into primary schools special classes than individual integration of these pupils. With group integration agree 155 respondents (32.03%), 191 respondents (39.46%) more likely agree, 76 respondents (15.7%) more likely disagree and 62 respondents (12.81%) disagree. With individual integration agree 44 respondents (9.09%), 91 respondents (18.8%) more likely agree, 162 respondents (33.47%) more likely disagree and 187 respondents (38.64%) disagree.

The **fifth item** related to examining the degree of agreement/disagreement by the teaching staff on the use of personal assistant. The questionnaire item was as follows: *Give the scale of your agreement/disagreement on the use of personal assistant for pupils with MID.* Responses are given in Table 5:

**Table 5:** Views of teachers on the use of personal assistant for pupils with MID.

Response	Absolute frequency	Frequency in %
Agree	235	48.55
More likely agree	133	27.48
More likely disagree	64	13.22
Disagree	52	10.74
Total	484	100.00

The **sixth item** related to examining the degree of agreement/disagreement by the teaching staff on the use of teacher's assistant. The questionnaire item was as follows: *Give the scale of your agreement/disagreement on the use of teacher's assistant in a class where pupils with MID are taught.* Responses are given in Table 6:

**Table 6:** Views of teachers on the use of teacher’s assistant for pupils with MID.

Response	Absolute frequency	Frequency in %
Agree	324	66.94
More likely agree	94	19.42
More likely disagree	24	4.96
Disagree	42	8.68
Total	484	100.00

In contrast to third and fourth items where the teaching staff favoured group integration of pupils with MID in special classes rather than the individual form of integration in the mainstream classes, it shows from the responses to the fifth and sixth items that the teaching staff do not perceive much difference between using personal assistant or teacher’s assistant for pupils with MID. With using the services of personal assistant agree a total of 235 respondents (48.55%), 133 respondents (27.48%) more likely agree, 64 respondents (13.22%) more likely disagree and 52 respondents (10.74%) disagree. With using teacher’s assistant agree a total of 324 respondents (66.94%), 94 respondents (19.42%) more likely agree, 24 respondents (4.96%) more likely disagree and a total of 42 respondents (8.68%) disagree.

The **seventh item** related to examining the degree of agreement/disagreement by the teaching staff on the preparation of PLPP for pupils who by the early September will not be assessed by the school counselling facility. The questionnaire item was as follows: *Give the scale of your agreement/disagreement on the preparation of PLPP for pupils who by the early September will not be assessed by the school counselling facility.* Responses are given in Table 7:

**Table 7:** Views of teachers on the preparation of PLPP for pupils who by the early September will not be assessed by the school counselling facility.

Response	Absolute frequency	Frequency in %
Agree	70	14.46
More likely agree	105	21.70
More likely disagree	132	27.27
Disagree	177	36.57
Total	484	100.00

It is clear from the results presented in Table 7 that 63.84% of the respondents disagree with the preparation of PLPP for pupils who by the early September will not be assessed by the school counselling facility. In contrast, 36.16% of the respondents agree. A possible cause for the discrepancy may be the large onus on teachers who will be preparing additional new documents and will be literally „paper“ overloaded.

The **eighth item** related to examining the degree of agreement/disagreement by the teaching staff on the potential presence of up to four teaching staff at the same time in one class. The questionnaire item was as follows: *Give the scale of your agreement/disagreement on the potential presence of up to four teaching staff at the same time in one class.* Responses are given in Table 8:

**Table 8:** Views of teachers on the potential presence of up to four teaching staff at the same time in one class.

Response	Absolute frequency	Frequency in %
Agree	36	7.44
More likely agree	37	7.64
More likely disagree	107	22.11
Disagree	304	62.81
Total	484	100.00

As it follows from the results presented in Table 8, teachers predominantly disagree with the presence of up to four teaching staff at the same time in one class. Overall, 84.92% of the respondents disagree. A possible cause of the principal opposition may be anxiety related to the louder classroom environment and the associated fragmented attention by pupils.

The **ninth item** related to examining the degree of agreement/disagreement by the teaching staff on the amendment to Education Act No. 82/2015 Coll. and Regulation No. 27/2016 Coll. The questionnaire item was as follows: *Give the scale of your agreement/disagreement on the amendment to the Education Act and the associated Regulation relating to pupils with MID.* Responses are given in Table 9:

**Table 9:** Views of teachers on the amendment to Education Act No. 82/2015 Coll. and Regulation No. 27/2016 Coll.

Response	Absolute frequency	Frequency in %
Agree	98	20.25
Disagree	386	79.75
Total	484	100.00

As it follows from the results presented in Table 9, a total of 386 respondents (79.75%) disagree with the amendment to the Education Act and the associated Regulation dealing with education of pupils with special educational needs, namely pupils with MID, and gifted pupils. A total of 98 respondents (20.25%) agree.

The **tenth item** related to examining the degree of agreement/disagreement by the teaching staff on educating pupils with MID in some subjects outside the class collective. The questionnaire item was as follows: *Give the scale of your agreement/disagreement on educating pupils with MID in some subjects outside the class collective.* Responses are given in Table 10:

**Table 10:** Views of teachers on educating pupils with MID in some subjects outside the class collective.

Response	Absolute frequency	Frequency in %
Agree	356	73.55
Disagree	128	26.45
Total	484	100.00

As it can be seen from the Table 10, the absolute majority of respondents agrees with educating pupils with MID in some subjects outside the class collective (356; 73.55%). With education outside the class collective, a total of 128 respondents (26.45%) disagree. One possible reason for more frequent agreement may be the anxiety felt by teachers in educating pupils with MID within the mainstream collective of healthy pupils.

## 5 Discussion

The research was carried out in 2015 within the “Systemic support for inclusive education in the Czech Republic” project, which investigated ‘attitudes and needs

of educational public in relation to the implementation of assistance in accordance with the new school legislation.' This research was aimed at special school teachers and also at the mainstream school teachers. As part of this research, one of the issues was whether the teachers consider the amendment to the Education Act as the appropriate step towards improving the education of pupils with special education needs. A total of 3566 mainstream primary school respondents replied. The results showed that 46.4% of the respondents considered the amendment to the Education Act the correct step and 32.7% of respondents did not consider the said amendment as the right step. The answers of the respondents were fairly evenly matched; nevertheless, more teachers considered the amendment to the Education Act as the right step (Systemic support for inclusive education, 2015, online). When comparing the specific results of both studies, we find that the teachers' views differ in comparison to 2015. Our research has shown that the teaching staff more likely disagrees with the amendment to the Education Act and the associated Regulation (79.75%). This outcome may be due to the research sample and also to other aspects.

## **6 Ethical aspects and limits of the study**

The research results show that teachers adopt a rather negative attitude to the legislative changes in educating pupils with mild intellectual disability and some disagreement with the amendment to the Education Act itself and the associated Regulation. As the research was carried out at the very beginning of the introduced changes, these negative results may indicate a certain anxiety on the part of the teaching staff and scepticism of the unknown and new. Consequently, it may relate to the attitudes affected by the challenging bridging period where only time will tell whether the said concerns are justified.

## **7 Conclusion**

The presented research results indicate rather negative attitudes of the teaching staff towards the amendment to the Education Act and the associated Regulation. Teachers have mostly negative views on repealing RVP ZVLMP, which amends education of pupils with mild intellectual disability, where a total of 77.52% respondents disagree with the repealing. Repealing RVP ZVLMP Appendix means that the primary school pupils practical (particularly for the first grade pupils, but later also for second grade pupils) education is carried out under the newly revised Education Program for the primary education framework. The majority of teachers expressed concern that students with mild intellectual disability will not be able to achieve even the minimum output as given in this newly modified RVP ZV and consequently, will not be able to meet the demands of the mainstream primary school.

More than half of survey respondents (57.44%) disagrees with educating pupils whilst receiving assistance. It may be possible to think whether it relates to the disagreement with assistance as such, or the placement of students with mild intellectual disability in inclusive education. Thus, it would certainly be worth investigating the reasons for disagreement more closely.

If we examine the opinions of teachers on the individual and group integration of pupils with MID, we find that a total of 346 respondents (71.49%) agree with group integration of pupils into the primary schools' special classes and a total of 135 respondents (27.89%) agree with individual integration of pupils into the primary schools' mainstream classes. Thus, the results show a clear preference for group integration. It would certainly be interesting to examine the reasons for this preference in detail.

We are aware that the research results may be affected by the fact that the amendment to the Education Act came into force only recently. Thus, it would be interesting to find out whether the opinions of the teaching staff will somehow change with lapse of time. It would also be useful to focus in detail on the reasons and causes of individual attitudes and opinions and based on that, subsequently look for ways in which the education could work to the satisfaction of all parties.

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# Reeducational exercises for the progress of eye movements – comparative study realized at German and Czech children

(scientific paper)

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**Annotation:** *The contribution informs about realized survey which took place in 2015 at children of German and Czech nationality. In both groups children with diagnosed dyslexia and also children without any diagnosed fading disorders were represented. To measure the quality of reading we chose selected types of exercise focused on stimulation of eye movements from the publications Exercise for the progress of reading (Svoboda, 2012) and a German version Übungen zur Entwicklung des Lesens (Svoboda, Dömischová, Lacková. 2015).*

*The aim of the research was to verify the validity of assumption if there is an existence of similar troubles of German and Czech schoolchildren when doing reeducational work with selected exercises, primarily at children with dyslexia and also those without diagnosed dyslexia. Secondly the aim was to describe detected oddities and to specify most frequent mistakes. The research was crowned with an analysis of particular exercises and with suggesting of particular methods of working with them.*

*During the research qualitative and quantitative approaches were changed. Quantitative strategy was chosen at comparing of coping of particular exercises in Czech and German language at children with diagnosed dyslexia problems. Testing and structured interview were used. Qualitative approach was chosen at an analysis of particular exercises and at a description of detected oddities and specification of most frequent mistakes.*

**Keywords:** *oculomotor movements, reeducational reading exercise, dyslexia*

## 1 Introduction

The realized research was supported by a set of reeducational exercises which were published in the Czech Republic, in the Slovak Republic, in Austria and in Germany.

These exercises due to their exact aims are meant for the stimulation and specification of oculomotor movements used for reading and they are used by readers – beginners and also by those who suffer from dyslexia as a reeducational utility in the initial period of proper reading practice. Elementary base of types of these reeducational exercises were created by the author of this contribution. The author conceived these exercises as supplemental reeducational material suitable especially for children of younger and older school age who were diagnosed with lower quality of oculomotor movements – e.g. by means of a test OZOP – T-256 (Svoboda, 2003).

Presented exercises were published in the Czech and Slovak Republic repeatedly by a publishing house Portal. This type of an exactly aimed reeducation became enormously popular with children, parents and teachers as well.

A present aim of the author and his colleagues who participated in the preparation of foreign-language versions of the presented exercises is to spread this offer also to other European countries. A premise of the realized research was to prove the fact that also at work with foreign-language exercises children struggle with similar or the same problems as Czech children do. In order to find out and compare presumed specifics the authors decided for the comparison of reeducational value of German and Czech exercises. This choice was influenced by relatively easy availability of the found German school and also by the fact that the local teachers were very accommodating and enabled the author and his colleague to realize the quasiexperiment. During the searching and the first email contact we also asked if the school reeducate children with dyslexia problems as we wanted to include them in our survey. Our aim was to gain relatively extensive group of children with reading problems, however we did not include in our survey children of the 1st year because this developmentally youngest group is only in the initial learning stage of reading – syllabication. We did the same when searching for a Czech school.

## 2 Choice and compound of tested exercises

At the choice of tested exercises we had an ambition to include all their basic types in them. At this choice we also had to take into account the difficultness of particular exercises and to assign an adequate group of readers. For each year we chose 4 exercises of various types, the first of which was used as a sample one and the three others we measured in terms of our quasiexperiment. When comparing the fruitfulness of German and Czech readers we also tried to use as similar and comparably difficult exercises as possible. Therefore we preferred exercises with identical solution (e.g. the brand of a car – Subaru). Furthermore we took into account the total number of letters of a searched word and we also assessed its general acquaintance.

For better illustration we mention an example of one type of an exercise from Czech and German version which we used in terms of our survey.

**Picture 1:** A teaser of analogical exercise

**Přípravná cvičení**

**Čtení podle obrázků**

1)  

**Pouze jedno z aut skrývá název značky. Napiš ji.**

**I S U U B S A K S R U E**  
           

**Vorbereitungsübungen 4a**

**Lesen nach einem Bild**

1)  

**Nur hinter einem Modell der Fahrzeuge verbirgt sich eine Automarke.  
Schreibe diese auf.**

**I S U U B S A K S R U E**  
           

Translation:

**(The name of a car is hidden in only one car. Write it).**

The note:

  – difficulty

Both versions of the exercise always hide one identical and to solve them is approximately identically difficult.

When evaluating we used a following system: A pupil who was successful and managed to solved the exercise at the first attempt got 2 points. A pupil who did the same with some mistakes or with a little help got 1 point and a pupil who failed got no points.

### 3 Realization of the research itself

47 pupils participated in the research, 23 of them were from German school and 24 from Czech school. The percentage of the boys representation in both groups was 52 percent and 58 percent.

Another subject matter was the age of the pupils. 6 pupils from the second, fourth and fifth years of Czech and German school participated in the research, in the third year the number of surveyed children was almost identical – 5 children at Czech schools and 6 children at German ones.

**Table No.1** Summary of surveyed children at Geman and Czech schools

Class	German Pupils		Czech Pupils	
	7 year	8 year	7year	8 year
2.	4	2	3	3
	8 year	9 year	8 year	9 year
3.	1	4	2	4
	9 year	10 year	9 year	10 year
4.	2	4	1	5
	10 year	11 year	10 year	11 year
5.	3	3	0	6

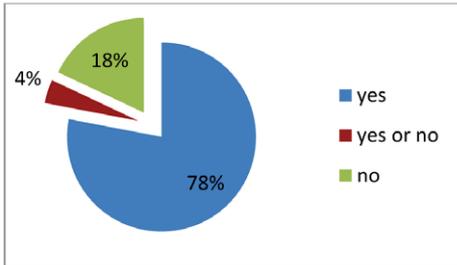
Not even one of surveyed children had postponed school attendance, the age of children in all 4 groups was almost identical.

Our research was also focused on assessment of performance of children with dislexia. In our sample there were 22 percent of children (5 children) with dislexia at German school and 33 percent (8 children) at Czech school.

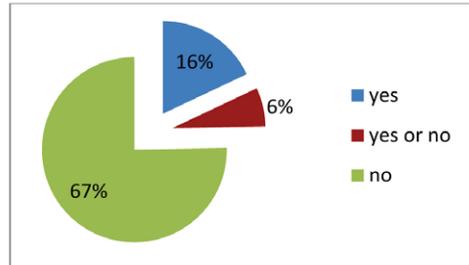
Before the beginning of the survey we asked each child individually if they liked reading. Here we came across bigger differences between both groups of different nationalities. Following graphs show the gained answers.

**Graph 1, 2:** Popularity of reading at Czech and German pupils

**German Pupils**

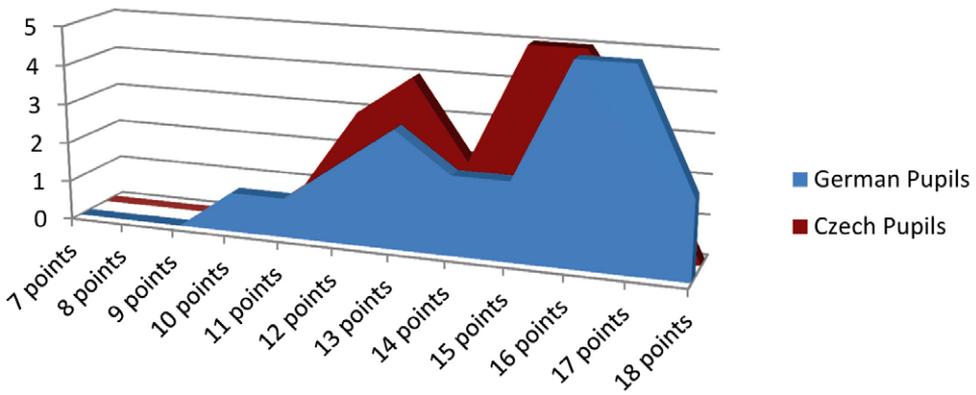


**Czech Pupils**



Afterwards we continued with a planned experiment when we measured the performance of Czech and German children at solving of particular reeducational exercises. A following graph proves the existence of minimal differences between both groups of observed readers.

**Graph 3:** The number of gained points at both groups of readers



Also the check numeric processing of the average number of points has proved only a minimal insignificant difference between both observed groups. Total fruitfulness of German pupils was 81 percent, total fruitfulness of Czech pupils was 79 percent. This result let us presume that both groups are mutually homogeneous. Therefore we could proceed to comparison of performance of Czech and German children who were diagnosed with dyslexia and we tried to measure their performance with the performance of an intact groups of children without any dyslexia diagnose. More significant differences appeared here.

We made the measurement of performance of total 13 children diagnosed with dislexia (N = 13, 8 Czech and 5 German children). The total average number of gained points at a mixed dislexia group was 12.9 points, at an intact mixed group it was 15.4 points (N = 34 children, 18 German pupils and 16 Czech pupils).

We set a following hypothesis:

*H1(a) Observed children diagnosed with SPU – dislexia achieve at solving of selected reeducational exercises much worse results than children of a check group.*

The calculation with the help of Student T-test has proved that there is a significant difference in performance between children with dislexia and those from an intact group. The outcome of the test exceeded a critical value ( $T = 3.52$ , critical value = 2.014,  $N = 47$ ). The validity of an alternative hypothesis was proved.

We also presumed that the performance of all observed German children at solving of reeducational tasks will be approximately the same as the performance of Czech children. To verify this assumption we set a null hypothesis and tried to verify its validity by a relevant calculation.

*H2(o) Observed Czech and German children will achieve approximately the same results at solving of reeducational exercise.*

Average result of Czech children was 14.1 points, German children achieved the value 14.9 points. Student test proved the validity of this null hypothesis ( $T = 1.03$ , critical value = 2.014,  $N = 47$ ).

In the following part of our experiment we focused on the assessment of difficultness of particular exercises. Our aim was also to find out if there are significant differences between the performance of Czech and German children in terms of particular types of reeducational exercises. Firstly we sorted exercises based on difficultness and we made a summary of achieved points at both groups of pupils.

The costing with the help of Spearman's coefficient of ordinal correlation showed a weak dependence between both sequences ( $r_s = 0.104$ ). The performance of German and Czech children corresponded in the difficultness rank only in case of three tasks. Exercise 7 was for both groups the easiest one, on the other hand Exercise 3 was the most difficult one. Exercise 9 appeared to be of a middle difficultness. The rank of difficultness was very variable and non-correlational at other exercises.

On the basis of these outcomes we tried to explain the existence of proved differences and therefore we focused particularly on exercises which placed on the order ladder of both groups at very different positions.

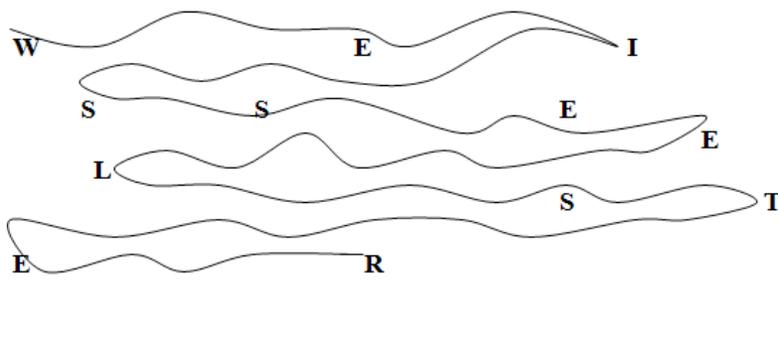
Next picture is depicting Exercise 1 was in the German version one of the most difficult exercises and in the Czech version one of the easiest ones. (In the rank of difficultness 11<sup>th</sup> position at German children and 2<sup>nd</sup> position in the rank of difficultness at Czech children).

**Table 2:** Ranked Czech and German exercises according to the number of achieved points.

Czech version						German version					
A type of exercise	a	b	c	The average		A type of exercise	a	b	c	The average	
3	1,7	1	0,3	1,00		3	1,5	1	1,5	1,33	
5	0,7	1,5	1,8	1,33		1	1,8	2	0,8	1,53	
11	1,3	1,2	1,5	1,33		10	1,5	2	1,3	1,60	
2	1,8	1,5	1,3	1,56		12	1,5	1,5	1,8	1,60	
9	1,8	1,7	1,2	1,56		9	1,3	1,8	1,8	1,63	
12	1,8	1,7	1,3	1,60		2	2	1,3	1,7	1,67	
8	1,5	1,5	1,8	1,61		6	1,2	2	1,6	1,67	
4	2	1,7	1,5	1,72		11	2	1,3	1,7	1,67	
6	1,7	1,8	1,7	1,72		8	1,8	1,8	1,7	1,77	
10	2	1,5	1,7	1,73		4	1,8	1,8	1,8	1,80	
1	2	1,8	1,5	1,78		5	1,8	1,6	2	1,80	
7	1,8	2	2	1,94		7	1,8	2	1,8	1,87	
<b>The total average</b>	1,68	1,58	1,47	1,57		<b>The total average</b>	1,67	1,68	1,63	1,66	

**Picture 2** Exercise 1c – German version

3) 



German children had probably a problem with a synthesis of searched words as they have never heard of River Weisse Elster. A very frequent version they were

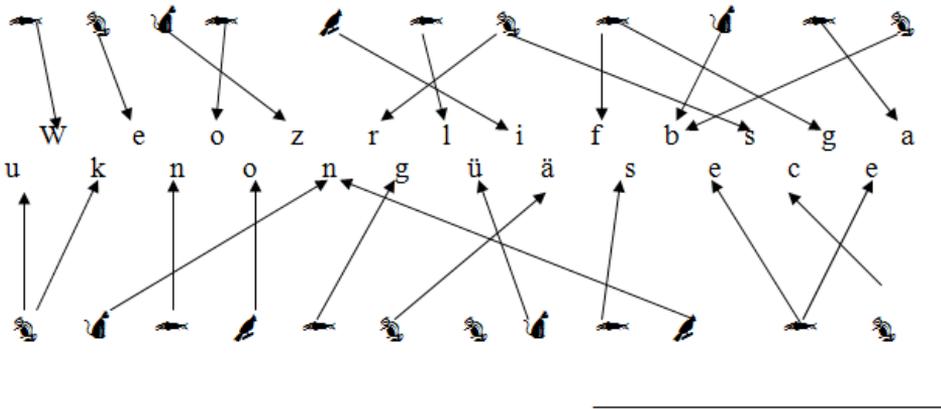
creating were words such as Weis See Lster which, when read in German, sounds really distinctly. On the other hand the Czech version did not include any bigger “captiousness”.

Further more significant problems were present at solving another task which is considered to be more difficult. In the publication *Übungen zur Entwicklung des Lesens* (page 29) it is marked with a sign 4 sandglass. Also during our survey it came to the light that children had significant problems when solving it.

**Picture 3 Exercise 10 c – German version**

3) ⌚⌚⌚⌚

*Das Bild von einem Barsch hilft dir, den Namen eines österreichischen Sees zu erschließen. Lies die Buchstaben von links nach rechts und zwar nur solche, auf die der Pfeil mit dem Barsch zeigt. Schreibe den Namen des Sees auf.*



In this exercise the task of the children was to read the name of Austrian lake Wolfgangsee and to orientate themselves when searching with the help of a symbol of a fish. The most mistakes appeared at symbols which were composed of two letters. Many children used crayons or highlighters, most of them rewrote the searched word with every single letter on an ancillary line. Czech children were a little bit more successful at solving a similar task. However, in this case there were rather different results, which was probably caused by a variously difficult double solution.

The next type of the exercise was comparable as regards the level of difficultness at both groups of observed children.

Picture 4 Exercise 6A – German version

1) ⌚⌚⌚

*Welche Spinne ist in diese Tabelle herein gekrabbelt? Kennst du sie?*

U	K	Z	R	I	E	A	S	P	N
---	---	---	---	---	---	---	---	---	---

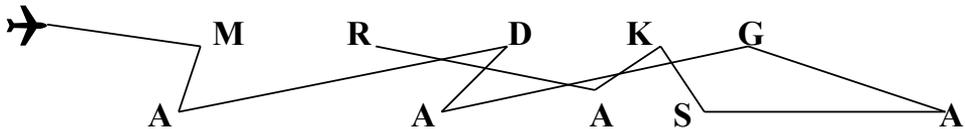
Reihenfolge: 2, 4, 6, 1, 3, 8, 9, 5, 10, 10, 6

This task was rather time consuming and for slower pupils it was therefore “a hard nut to crack”. For quicker understanding we used an illustrative teaser. Despite this some mistakes often appeared during the process of solving it. We characterised these mistakes as mistakes caused by inattentiveness. We also observed that children correctly solved the first and mostly also the last letter whereas the most mistakes appeared in the middle of an unscrambled word. Some children also proceeded with the help of an grapheme which they had already written before. For instance the letter Z, hidden above the number 6 they used as an duplicate when writing it as a final letter of a word.

Furthermore we focused on an exercise with crossings of ancillary lines. We found out that these crossings cause the solvers significant difficulties.

Picture 5 Exercise 3b – German and Czech version

2) ⌚⌚



We were observing the solution of this task and we found out that the biggest problems at both groups of children appeared in an area where there are crossings of ancillary lines – at letters D and K. In this place both Czech and German children read some letters twice. Therefore they distorted the correct word so instead of MADAGASKAR there was a word MARDAKGASKAR. One pupil even read the letters – on the first line from the right to the left and the other line from the left to the right. Therefore the result was a word MRDKGASAAA.

We also verified the efficiency of our chosen ancillary strategy which we discovered during the process of solving the tasks. We noticed that it helped both German and Czech pupils when they highlighted by means of colourful ancillary lines when

solving the tasks. Thanks to the colourful resolution children could better realize which part of the word they were in there were fewer situations of changing the order of particular words. This fact should be taken into consideration if other publications of reeducational exercises will be issued and should be cited as a recommendation in the introduction.

We analysed the next type of an exercise (picture 6) also in the Czech version. The resulting words were identical – TOLEDO. When solving it helped children a lot when they could underline in color or mark with tittles. Despite doing so many children were not able to solve a searched word without our help. However we can state that this type of exercise was attractive for both German and Czech pupils and they really enjoyed the solving of the word.

**Picture 6** Exercise 11b, German version

2) 

***Versuchst du die Namen spanischer Städte zu entdecken? Bei der Addition gehe für die Anordnung der Buchstaben nach rechts, beim der Subtraktion wieder zurück. Schreibe die Namen der Städte auf.***

Stokil däs nūorav.

$2 + 1 + 3 + 3 - 2 + 6 =$  \_\_\_\_\_

#### 4 Conclusion

The described research was done in order to verify the validity of two basic hypotheses which were set on the basis of logical assumptions and gained knowledge stemming from the longtime reeducational work with children with dyslexia and also with beginner readers. In the first case the authors presumed that reeducational exercises intended for the stimulation of eye movements will be found suitable also as a diagnostic utility because the results of both German and Czech children with dyslexia problems will be at solving of selected exercises much worse than the results of children from the check group. This was proved. The aim of the authors was also to prove that reeducational exercises have the utility inside the conception of these exercises. In other words that the system of searching for hidden solution with the help of fine oculomotor movements will be beneficial for the stimulation of a proper eye function regardless a language (German or Czech). The validity of this assumption was also proved. Another aim of the authors was to find out if there are some specific differences in particular types of reeducational exercises which would be able to reflect the specifics of both languages. It was found out that differences in

the difficultness of exercises really exist and that they correlate to some extent with the specifics of Czech and German languages and probably also with sociocultural backgrounds. These differences are very variable, however, because of their polarity they have no significant profile. Their character therefore cannot claim that given exercises were on the whole variously difficult for German and Czech children.

If these exercises for reeducation and development of eye movement in Czech and German speaking countries are used, it is probable that their usefulness for the stimulation of eye movements will be provable and comparable.

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# Development of laterality, articulation and sentence comprehension in a girl with specific language impairment – a longitudinal case study

(scientific paper)

Renata Mlčáková

**Abstract:** *The article is about speech and language therapy topic. The aim of the paper was to assess laterality, articulation and sentence comprehension in a girl (Monika) with Specific Language Impairment (SLI). We were interested in finding whether and how the degree of laterality, articulation and sentence comprehension changed within six, seven and three years, respectively. We researched areas with persisting deficits that can be an obstacle in Monika's education, choice of profession and possible career paths. There are specific symptoms in language area of persons with SLI persisting to adulthood, such as deficits in processing and understanding (comprehension) of spoken and written language. These difficulties could be a disadvantage in successful education and choosing the job.*

**Key words:** *laterality, articulation, developmental phonological disorder, comprehension, specific language impairment.*

## 1 Introduction

The paper deals with a longitudinal speech therapy case study of a girl, Monika (aged 13 years in 06/2016) who struggled with shortcomings in the reception and expression of speech and language pursuant to a specific language impairment (hereinafter also referred to as SLI), known as developmental dysphasia in the Czech environment. The author of this paper provided speech therapy for the girl over a five-year period (since April 2009, i.e. from the age of 5 years and 10 months to November 2014, i.e. to the age of 11 years and 5 months). Four control speech therapy examinations took place from November 2014 to December 2016, followed by recommendations for intervention. In the 2015/2016 school year, Monika completed the 5th class of a primary school of common type in the Czech Republic, where she was educated according to an individual education plan reserved for impaired communication

abilities in terms of developmental dysphasia. For the 2016/2017 school year, the girl is attending the 6th class at a primary school of common type; she receives support provided by a teaching assistant because of persisting difficulties in the reception and expression of speech and language. The collaboration with the assistant is praised by Monika as well as her mother. We focused our research on monitoring selected areas that experienced evolution and variation but also stabilization and improvement during Monika's schooling. We were interested in finding whether and how the degree of laterality, articulation and sentence comprehension has changed. We researched areas with persisting deficits, which can be an obstacle in Monika's education, choice of profession and possible career paths.

### **1.1 Data from the girl's personal history**

Monika has Czech and Canadian citizenship, Czech and Canadian nationality, and was born in Canada to Czech-speaking parents. She lived with her parents and younger sister in Canada until the age of five years. From two and a half to five years, she attended a kindergarten in Canada together with English-speaking children. Speech development in early and pre-school age did not have a typical course. According to her mother, Monika actively used three Czech words at the age of about two and a half – “*táta, dej, ahoj*” (dad, give, hello). She did not speak English at all, had communication problems in the kindergarten, cried and was disappointed with the fact that children and teachers did not understand her and that she did not understand them. She began to behave aggressively toward other children and her neighbourhood. This reactive behaviour did not recede and it was necessary to change the kindergarten (Mlčáková, 2011). In Canada, she underwent audiology examination at the age of three; at 4 years and 3 months age she was examined by a speech therapist, a psychologist and at the Centre for Autism Research with the conclusion: difficulties in comprehension (receptive language – understanding), production (expressive language – verbal skills), articulation, oral-motor skills and pragmatics; light sensory-neural hearing loss in both ears at high frequencies. As mentioned by Mlčáková (2011), the family lived for about one month in the Czech Republic when the girl was three years old; according to her mother, Monika's vocabulary increased significantly at that time. Two years later, the mother decided to move to the Czech Republic even with the second daughter because she felt that the Czech-speaking environment was more favourable for developing Monika's language skills than the language environment in Canada. The girl's father remained in Canada. Since the age of five years, Monika attended a speech therapy classroom at a kindergarten of conventional type. In addition to this speech therapy care, Monika alternated three more speech therapists during her preschool age. The mother always sought professional help, she wanted to know her daughter's diagnosis, she wanted to

help her daughter, but did not know how to develop her communication skills. More detailed history data is presented by Mlčáková (2015, 2013, 2011, 2010). Based on the recommendation of a speech therapist (author of this article), Monika attended a primary speech therapy school in the Czech Republic for the first three years of schooling. In the third year of the primary speech therapy school, conflicts began to emerge between Monika and her classmates; Monika did not have friends in the classroom. Nevertheless, she wanted to gain them enforcing their attention often by specific manners; consequently, complaints about Monika's behaviour on the part of the class teacher began to multiply. Monika, however, did not understand what she did wrong in her behaviour. According to her mother, Monika had difficulties in developing relationships with her peers because she did not develop "probing with peers" due to difficulties in understanding. As the mother stated, Monica learned from movies. For example, she liked the film "*Ať žijí duchové*" (Long Live Ghosts), and she learned from the film that children behaved to each other in a certain way. Monika did not understand some situations, did not understand some meanings in communication with peers, but felt "confused" even when communicating with teachers. Escalating misunderstanding between the mother and school led her mother to the decision to change the school and move. Due to persistent deficits in comprehension, the speech therapist suggested that Monika would repeat the third year in a common primary school with fewer children in the class, preferably in the country. The mother acceded to this opportunity and Monika repeated the third year in a primary school of ordinary type with very good results. Monika successfully completed the 3rd and 5th year at the common primary school in the country with success and recognition; she again wanted to learn and looked forward to school. The atmosphere of the school and the approach of school personnel toward Monika were very helpful and professional, and Monika felt happy. The school, however, did not have the second level. Therefore, Monika had to change the school for the 6th year. Due to persistent difficulties in reception and expression, Monika is educated through a teacher assistant and is reaching good school results so far. Monika prepares her homework with the help of her mother. The latter provides Monika with consistent and stable support; for example, she creates graphic schemes to the curriculum and often explains seemingly clear ideas in the texts. Currently, Monika has the greatest difficulty in understanding the meaning of adjectives (e.g. hostile, amazing) and subsequently in understanding the context. For Monika, it is difficult to learn English words where the Czech equivalents she does not understand even in her native Czech language, e.g. "amazing". According to her mother, Monika is yet unable to talk equally with peers, is not at their language level, and has difficulty in understanding everyday communication in colloquial language. On the other hand, the mother appreciates that Monika has the opportunity to be educated with children who have no language difficulties since she thus has a good chance to work

on herself and reduce her language shortcomings. *It is necessary to emphasize that the education of children with developmental dysphasia is challenging for all involved, especially for children themselves, due to deficits in language as well as non-language areas including deficits in cognitive functions.*

## 2 Terminology

**Specific language impairment** is reflected in the hindered ability or inability to learn to communicate verbally, although the conditions for the development of language (speech) are adequate (Dvořák, 2007, p. 53). According to Mikulajová (2012), it is a neurobiological developmental disorder of speech when children have impaired ability to understand speech and/or express themselves using speech in comparison to their peers.

According to Drnková (1991) the term of **laterality** (from the Latin *latus*, *lateris* = side) means right side (or preference) or left side (or preference). The specific manifestations of laterality are: laterality of the upper extremities, lower extremities laterality, eyes and ears. We find out by laterality tests which hand (foot, eye, ear) the client prefers or whether he is “skillfull” to both hands. Then we talk about the ambidexterity (A) – undefined laterality of the upper extremities. Zelinková (2015) pointed that laterality of the upper extremities stabilizes usually at the age of 10 to 11. Dvořák (2007, p 109) defines laterality as follows: “asymmetry of the body according to the median plane; shape laterality concerns shape asymmetry, laterality functional (motor and sensory) concerns the half of the function of unpaired organ or the preferential use of one of paired organs (limb, eye, ear). Functional laterality of the upper extremities is expressed by dexterity quotient (DQ).

The ability of humans to produce sounds that are used to convey a message, the act of producing such sounds is identified as **articulation**, and this activity is a major component of speech as distinguished from the term language (Kent, 2013, s. 6). **Developmental phonological disorders** represent a group of language disorders that affect the ability of children (usually around 3 to 4 years of age) to mimic speech patterns of the words of adults; they affect the ability to learn and organize sounds into words. The children feature difficulties in auditory distinguishing and weakening of acoustic feedback; the problem occurs at linguistic level, it does not relate to the creation of sounds by speech organs (Dvořák, 2007).

The concept of **comprehension** (cf. Dvořák, 2007, p. 148; Hartl and Hartlová, 2010, p. 415) can be seen as the understanding of relationship, context, purpose, nature of the problem; as a method of cognition, comprehension is similar to intuition and achieved directly. In connection with the concept of comprehension, Dvořák (2007, p. 148, s. 150) refers to language disorders that represent difficulties in encoding or decoding of the language; language disorders include difficulties in

verbal communication, understanding, reading, writing, problem-solving; language disorders are divided according to processing language symbols into receptive and expressive. Receptive language disorders (RLD) are central auditory processing disorders; the understanding of words or sentences is impaired, the subjects have difficulty in understanding the meaning of words and phrases exposed to them, e.g. when asked to show a named object or image; manipulation according to instructions is more complicated, demandingness increases with the length of sentences, the variety of tasks, with using negatives, etc. An important prerequisite for understanding the language is physiological and clear speech (e.g. the pronunciation, fluency, prosody) of the examiner. Expressive language disorders (ELD) are reflected in difficulties with verbal expression, i.e. difficulties in compiling words to formulate thoughts, difficulties in finding words, naming objects, lack of appropriate vocabulary, difficulties in semantics, phonology, morphology, and syntax shortcomings. Průcha (2011) states that the qualitative aspect of the process of learning the meanings of words, i.e. learning words as semantic categories, are explained much less than the quantitative aspect of learning vocabulary by children. According to Lernerová and Johns (2012), children with difficulties in understanding the language can understand separate simple words, such as “*to sit*”, “*chair*”, “*to eat*” “*biscuit*”, but have difficulties in understanding the sentence in which these words are used, e.g. “*Sit in the chair only after eating the biscuit*”. According to Lorusso, Burigo, Borsa & Molteni (2015), linguistic **impairments** in children with SLI disrupt abstract **language** processing more than visual-motor **impairments** in nonverbal learning disabilities.

### 3 Research Objectives of the Case Study

- Monitor the development of laterality in the course of six years, i.e. since the age of 6 years 3 months to the age of 12 years 8 months.
- Investigate the development of articulation over a period of seven years, i.e. since the age of 5 years 10 months to the age of 12 years 8 months.
- Evaluate the development of speech comprehension over a period of three years, i.e. since the age of 10 years to the age of 12 years 8 months.

### 4 Research Methods

Regarding the research methods, we used the laterality test by Matějček and Žlab (1972), the actual examination of articulation of sounds and articulation examination focusing on the symptoms of developmental phonological disorders. Furthermore, we used a sentence comprehension subtest from the Heidelberg Language Development Test H-S-E-T (Grimmová, Schöler, Mikulajová, 1997). Speech examinations of the monitored area were carried out by the author of this article.

#### 4.1 The Laterality Test by Matějček & Žlab (1972)

We re-examined the hand and eye preference for the girl by The test of laterality made by Matějček and Žlab (1972). We did not modify the test. We examined the laterality with the girl aged 6 years 3 months, 7 years 8 months, 9 years 0 months, 10 years 9 months and 12 years 8 months. We investigated the degree of laterality - the degree of preference of the upper extremities. We have calculated the degree of laterality using Dexterity Quotient (DQ):

P... right-handed responses

A... ambidexterity responses (client used both hands or alternated them)

n... the sum of all exam tasks for the hands

The result of calculation DQ is a number that varies in the range from 0 to 100 (Table 1). To express the degree of laterality Matějček, Žlab (1972) use 5 levels:

**Table 1:** The degree of laterality

<b>P</b>	100–90	strict right hand preference
<b>P-</b>	89–75	less strict right hand preference
<b>A</b>	74–50	ambidexterity
<b>L-</b>	49–25	less strict left hand preference
<b>L</b>	24–0	strict left hand preference

Degree of preference of the upper extremities was assessed using 10 exam tasks for the upper extremities. We also investigated the type of laterality - the relationship between laterality of the upper extremities (P, P-, A, L-, L) and laterality of the eye (p, l, a). Eye laterality (p, l, a) was assessed using two tasks for the eyes. In children with developmental dysphasia occurs a higher percentage of children with ambidexterity (A) and with an undetermined type of laterality (A/p, A/l, A/a, P/a, L/a, P-/a and L-/a).

#### 4.2 Assessment of Articulation and Phonological Disorder

Articulation evaluation included a sample of connected speech, production of sounds in spontaneous conversation. We try to observe correctly produced sounds as well as misarticulated phonemes in as „natural“ as possible speaking context. Also the articulation of all Czech phonemes (vowels, diphthongs and consonants) was assessed during repeating words with these phonemes in initial, medial and final position.

Consonants B, V, D, Z, Ž, Ď, G, H were assessed due to their nature only in initial and medial position. Within the examination of articulation of words in terms of phonology, we focused on the detection of developmental phonological disorders at the level of words.

### 4.3 Sentence Comprehension Test

Monika received a subtest from the Heidelberg Language Development Test H-S-E-T (Grimmová, Schöler, Mikulajová, 1997) called The Sentence Comprehension Test. This test detects the level of language abilities and is designed for children aged 4 to 9 years. Subtests, for example, are aimed at sentence comprehension, the ability to form plurals and singulars, repeating phrases, the ability to form derived words, the ability to form sentences and other language aspects. The examples of ten tasks from the **sentence comprehension** subtest (for children aged five years and older) are the following instructions: “*Little child washes the mum*”, “*A grass-hopper will jump before the dog runs*”. Grimmová, Schöler, Mikulajová (H-S-E-T Handbook 1997) indicate that children will resolve these tasks incorrectly if they insist solely on surface strategies and do not penetrate into the depth of meaning of sentences. Children’s reactions are evaluated as either correct or incorrect. Correct answers are evaluated by one point, incorrect by zero points.

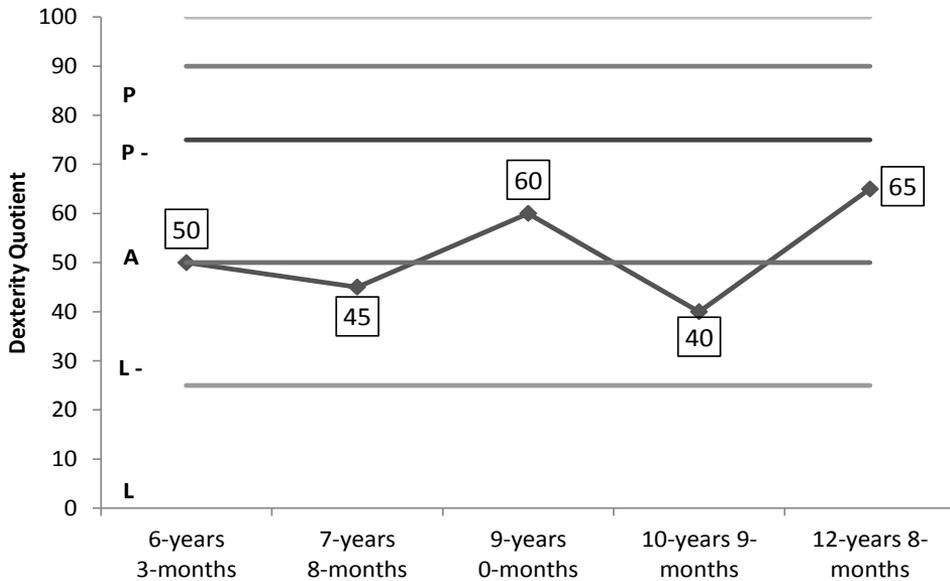
## 5 Results

As we can see from Table 2 and Figure 1, during five measurements we noticed a change in a girl hand preference, in **degree of laterality and in the type of laterality**. Interestingly, the girl writes and draws by the right hand at school. We recommend leaving the choice of the hand preference to the girl. The change in preference of eyes was not noticed. The girl preferred the left eye during all five measurements. Table 2 demonstrates that the first, the third and the fifth measurement found the type of laterality – undetermined laterality (A/l, ambidexterity of hand and left eye preference). At the second and the fourth measurement we observed a consistent left-sided laterality (L-/l, less strict left hand preference and left eye preference). At the third measurement we found undetermined laterality (A/l, ambidexterity of hand and left eye preference).

**Table 2:** Results of the test of laterality by Matějček, Žlab (1972)

	Age of the girl				
	6-years 3-months	7-years 8-months	9-years 0-months	10-years 9-months	12-years 8-months
Number of right-handed reactions P	3	2	5	2	4
Number of left-handed reactions L	3	3	3	4	1
Number of reactions rated as ambidextrous A	4	5	2	4	5
Dexterity Quotient $DQ = \frac{P + \frac{A}{2}}{n} \cdot 100$ $DQ = \frac{P + \frac{A}{2}}{n} \cdot 100$ $DQ = \frac{P + \frac{A}{2}}{n} \cdot 100$	50	45	60	40	65
Degree of laterality	A	L-	A	L-	A
Type of laterality (laterality of upper extremities/ laterality of eyes)	A/l	L-/l	A/l	L-/l	A/l

**Figure 1:** Development of the degree of laterality



When examining **articulation** in April 2009 (at the age of 5 years 8 months), Monika showed mispronunciation of 15 sounds: U, B, D, L, Ř, SZC, ŠŽČ, ŤĎŇ and G. During speech therapy work with the girl, we managed to induce, fix and automate sounds U, B, D, L, Ř, ŠŽČ, ŤĎŇ and G in her spontaneous utterance. At age 12 years and 8 months, sound articulation disorder was still present. **Inconstant irregular pronunciation of SZC consonants** persisted. Failures were caused by irregularities of the teeth and jaws, which gained significance in some co-articulation connections. Correct pronunciation failed to be automated in some co-articulation connections. Phonological representation of words and articulation-motor program allow correct pronunciation of words, including polysyllabic words, words with consonant clusters, composed words, and words containing acoustic or articular similar sounds. Deficiencies in this area may be indicative of developmental phonological disorder at the level of words. In Monika, these problems occurred in spoken, written and read speech till the age of 12 years. In her production, it was possible to observe specific assimilations, transposition of syllables and sounds, elisions of consonant clusters and other changes in the phonetic structure of words. These problems in Monika were successfully corrected; at the age of 12 years and 8 months, the **developmental phonological disorder at the level of words is not present any longer**.

The results of the **sentence comprehension** subtest are given in Table 3. Monika, at the age of 10 years, successfully resolved 50%, i.e. 5 of 10 instructions from the sentence comprehension subtest. She processed 5 instructions incorrectly, failing to handle objects properly in accordance with the instructions. These instructions were as follows: “*The elephant, which is stroking the bunny, will jog the ass*”, “*The giraffe, which was caught by the hare, will bite the duck*”. She misunderstood instructions chronology expressed by the terms: “*before*”, “*after*”. At the age of 12 years and 8 months, Monika successfully resolved 80%, i.e. 8 out of 10 instructions. She processed 2 instructions incorrectly, failing to handle objects properly in accordance with the instructions. These instructions contained temporal relationships expressed by the terms: “*before*”, “*after*”.

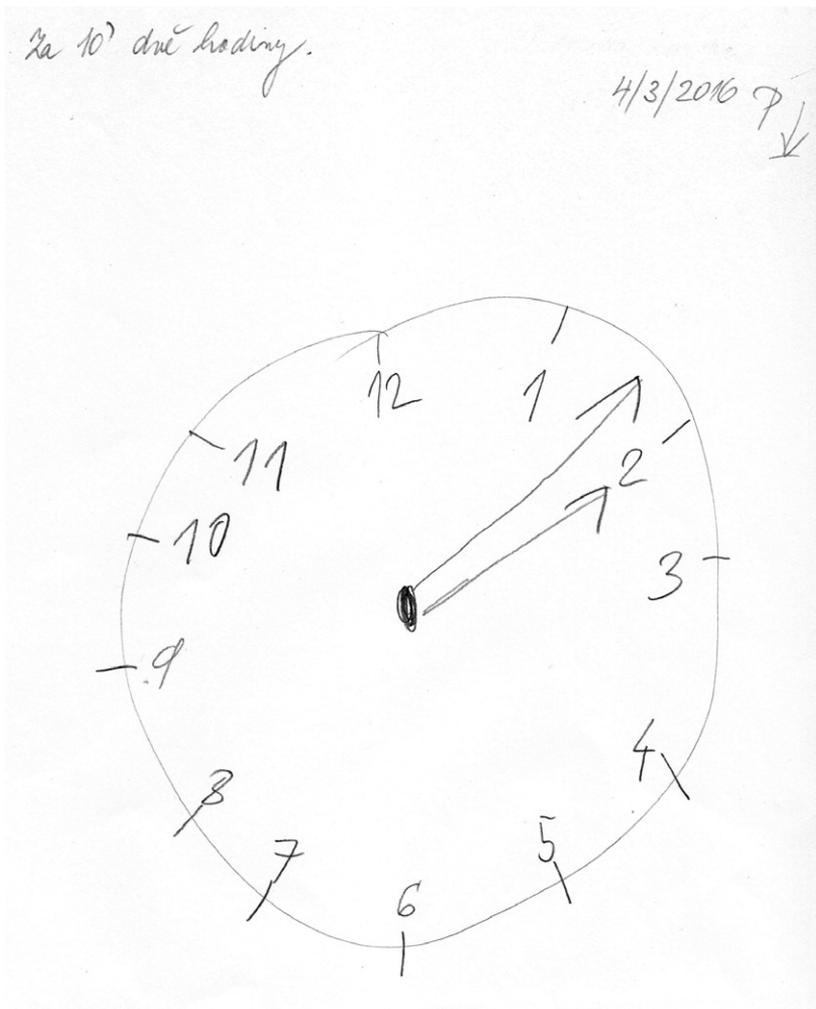
**Table 3:** Results in Sentence Comprehension Test

Age of the girl	Number of correct responses (n)	Relative number (in %)
10-years	5	50
12-years 8-months	8	80

According to Monika’s mother: “The concept of comprehension is very broad. For example, prefixes in words “*rozrušit*” (excite) and “*narušit*” (disturb) change

the meaning of words. Monika is oriented according to the common root of words and does not understand the literal meaning of the words. Prefixes in the words give Monika other information than we think. We assume that Monika understands the word, sentence and context, but it is not the case. Let's give an example in physics where Monika was to resolve the following task: What should we use to measure a pupils' book? She wondered and asked whether to write meter, millimeter, centimeter? She wrote millimeter.

**Figure 1** shows how Monika, at the age of 12 years and 8 months, resolved the instruction: "Draw a clock, draw 10 minutes to two."



**Picture 1:** "Draw a clock. Draw 10 minutes to two."

## Conclusion

During five measurements (age 6-years, 3-months; 7-years, 8-months; 9-years, 0-months; 10-years, 9-months; 12-years, 8-months) we noticed a change in a girl hand preference, in degree of laterality (A, L-, A, L-, A) and in the type of laterality (A/l, L-/l, A/l, L-/l and A/l). Interestingly, the girl writes and draws by the right hand, but the degree of laterality was never right hand preference. The girl preferred the left eye during all five measurements. During the period of 5 years and 8 months to 12 years and 8 months, we managed to adjust Monika's articulation of 12 sounds (U, B, D, L, Ř, ŠŽČ, ŤĎŇ and G). At the age of 12 years and 8 months, however, the sound articulation disorder was still present. Inconstant irregular pronunciation of SZC consonants persisted, mostly due to irregularities of the teeth and jaws. We succeeded in removing the developmental phonological disorder at the level of words, which is not present in her any more. We could notice improvement in the Sentence Comprehension Test, although deficits in receptive language – understanding were proved. Regarding speech comprehension, Monika showed improvements from the age of 10 years to 12 years and 8 months; however, deficiencies in the area of comprehension persisted and constituted a disadvantage in her education. Monika particularly struggled with temporal relationships expressed by the adverbs “before” and “after”, or abstract meanings of adjectives such as “amazing”. Ability to understand the content of the learning presented by the teacher in an ordinary way and with common speed of spoken speech may be endangered. Monika had the support of her family, yet had the motivation to learn and read encyclopaedias about horses; she would like to work with horses and her dream is to become the director of a riding school, horse trainer, assistant teacher, or a teacher in a primary school.

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# The case study of language competence in children with Asperger's syndrome

(overview essay)

Lucie Schwarzová

**Abstract:** *The contribution analyzes the language competencies in children with autistic spectrum disorder, specifically with Asperger's syndrome. To diagnose an autistic spectrum disorder, the diagnostic triad has to be met. The communication, imagination and social behaviour impairment has to occur in the individual's clinical picture. The main part of contribution is comprised of the case studies of two boys of approximately the same age (12 years 8 months and 13 years 1 month) which have been diagnosed with Asperger's syndrome. The case studies contain information on the diagnostic triad. The aim of the contribution is to show differences between children with the same diagnosis, especially in the communication area. To give the comprehensive picture, the case studies contain also the family anamnesis insight and the description of the current state of the children regarding their emotionality, social behaviour, play and motor activities.*

**Keywords:** *communication, autistic spectrum disorders, Asperger's syndrome, a case study*

## 1 Introduction

Communication is one of the most important life necessities participating in formation and development of each human being. It is generally human ability of using vehicles of expression to create and develop interpersonal relationships and to exchange information. Thorová (2012) rightly terms communication a golden key to learning and development of an individual. To communicate, various means can be used – listening, verbal, non-verbal or written way of communication, reading. The ability to communicate helps individuals in the course of their learning, creates and forms their interpersonal relationships, serves for thoughts and emotions expressing, facilitates the social functioning.

The comprehensive and primary means of communication is language in its written, spoken or sign form. The basic units of language are sounds whose combinations create meaningful words that can be then linked into sentences. The complex ability of speech consists of four language levels: phonetic-phonological, morphological-syntactic, lexical-semantic and pragmatic (Bednářová, Šmardová, 2011). The communicative abilities help children during their learning, creation and forming of interpersonal relations, expressing thoughts and emotions and last but not least they facilitate individuals' functioning in the society. (Klenková, 2006)

## 1.1 Autistic Spectrum Disorders

The autistic spectrum disorders are numbered among pervasive developmental disorders which represent the most serious disorders of children's mental development. The term 'pervasive' can be interpreted as existing in or spreading through every part of something which means that the disorder impairs the children's development deeply in many areas, afflicting all components of child's personality. Thorová (2012) considers the term 'autistic spectrum disorders' more appropriate given the specific deficiencies and abnormal behaviour which can be considered rather diverse than pervasive. From the pedagogical point of view, Průcha, Walterová, Mareš (in Pastieriková, 2013, s. 9) define autism as „the developmental disorder that manifests itself as the inability to communicate and get in touch with the person's surroundings; the afflicted person can express their wishes and needs only with difficulties and can not see that the others do not understand them. They enclose themselves into their own inner world and manifest themselves as extremely lonesome beings.“

In spite of the wide variety of the autistic spectrum disorders' symptoms, for the disorder being diagnosed their presence is required in three areas. Thorová (2012) terms them a diagnostic triad which includes communication, imagination and social behaviour difficulties. Vocilka (s. 16–17, in Říhová 2011) states that the fundamental symptom of autistic spectrum disorder is „the child's inability to behave appropriately in various social situations; the child perceives the direct physical contact, a move or a sound disturbing his closed off inner world as a painful interference and so they respond disapprovingly or even ignore it.“

Among the typical symptoms which are characteristic for the autistic disorders' manifestation Vocilka (1994) counts the limited ability or inability to make contacts with other people, expressing indifference to other people's display, inadequate realization of real danger, anxious behaviour in case of changes and their general refusal in daily routine, verbal and non-verbal communication's disruption, avoiding touches and physical contacts, excessive laughing or bursts of anger or even fury for seemingly groundless reason, motor agitation, unusual moves, liking for unusual

objects, inadequate eye contact, liking for rhythmic movement, impairment or even general limitation of imagination and improvisation in the course of play, tendency to identical and constantly repeated activities, reclusive behaviour and withdrawing into an inner world.

Within the 10th revision of International Classification of Diseases, the autistic spectrum disorders are embodied in the psychological development disorders whose typical features are beginning in an infant age or childhood, delay or impairment of developmental functions related to the biological maturation of the central nervous system and constant course without deterioration or temporary symptom disappearance. (<http://www.uzis.cz/cz/mkn/F80-F89.html>). The diagnosis code F84 covers following pervasive developmental disorders: Childhood Autism, Atypical Autism, Rett's syndrome, Overactive disorder associated with mental retardation and stereotyped movements, Other childhood disintegrative disorder, Asperger's syndrome, Other pervasive developmental disorders, Pervasive developmental disorder, unspecified.

## 1.2 Asperger's Syndrome

For the first time Asperger's syndrome was described by a viennese psychiatrist Hans Asperger more than fifty years ago. The symptoms determining Asperger's syndrome are specified by Vomisk, Bělohávková (in Pastieriková, 2013, s. 45). „Likewise in the case of childhood autism, the psychological development is imperfect in the area of social interaction, communication and imagination. The social skills are considerably limited and associated with delayed emotional maturity. The syndrome's typical feature is unequal skills distribution.“ Asperger's syndrome is more common in boys, that is in a ratio of 8:1 as Thorová says (2012).

The communication and social behaviour difficulties which do not correspond to the child's good intellect and speech skills are key for Asperger's syndrome diagnosis. Individuals suffering with this disorder have problems with establishing relationships, it is very difficult for them to understand nonverbal communication. Facial expressions and gestures are very limited in people with Asperger's syndrome, they have unusual interests, their responds to changes can be negative. It is characteristic for them that their logic and the ways they think can be quite specific. (Thorová, 2008)

According to Thorová (2008) the speech development can be slightly delayed in the children but by the age of five the delay is equalized. Nevertheless, their speech can give a strange impression though the children speak fluently without any pronunciation defects and using fine vocabulary. Their voice shows unusual prosody, it sounds strongly mechanical and laboured. Considering particular language levels, the pragmatic level is disrupted most. The speech does not correspond with the social context of given situation.

The Asperger's syndrome's diagnostic criteria are stated by Thorová (2012). She divides them into five areas:

1. The qualitative disruption of social interaction is the same as in an individual with childhood autism
2. Repetitive stereotypical ways of behaviour, interests and activities which are identical to autism
3. Disruption in social and professional functioning areas and in many other fields of life activities.
4. Speech development is without any delay. The first words occur before the age of two, the sentences carrying communicative meaning occur before the age of three.
5. Normal intelligence. Self-serving skills are adequate to the age, adaptive behaviour with the exception of social and explorative behaviour is motivated by curiosity.

Children with Asperger's syndrome have difficulties with integration into their peers' group. Firm friendships are created only sporadically. Other problems come when the children try to understand social rules. The opinion that these individuals are not able to experience higher emotions can be regarded as overcome. (Thorová, 2008)

## 2 Methodology

The character of the research part is qualitative because its main aim is to bring the all-embracing picture of two children of similar age, suffering with Asperger syndrome. A case study can describe individual cases with focusing on individuals, groups of people or institutions. It can be used to compare similar cases. (Maňák, Švec, Švec 2005)

The case studies included in the contribution contain personal and family data, the description of development and current state of social behavior, communication, motor skills, play, perception and emotionality.

To collect data on the boys with Asperger syndrome, several methods were used: the method of semi-structured interview with legal representatives and class teachers, the documents studies method and the method of observation, which was defined by Vašek (in Valenta, Müller, 2007, s. 63) as „a diagnostic method determining a specific kind of perception and thinking, focused to the diagnosed person or phenomenon and whose aim is to recognize the most significant features and qualities, just as the causes, giving them rise.“

The observation of each boy in his school environment took three days.

The work with children as well as the studies of their documents were carried out with their legal representatives' informed consent. To protect the personal data, the case studies do not contain any names and birth dates, any photographs or names of schools or institutions attended by the boys. It has been promised to parents the research would be going on anonymously.

### **3 Results and discussion**

#### **a) Case Study I**

A twelve years and eight months old boy diagnosed with Asperger's syndrome. According to his social behavior, he is the passive-friendly type, having his ability of the social and emotional mutuality kept. According to adaptability, he is the high-functioning type with mild symptoms.

#### **Family and personal history**

The father is a university graduate, without any health difficulties, the mother is a university graduate, healthy. The boy was born from the first pregnancy. Currently he has no siblings. His mother says that as a precaution, her pregnancy was monitored as risk. The baby was delivered in the 37<sup>th</sup> week in a cesarean section due to age of the mother (42 years). Postnatal adaptation without difficulties.

The motor development was delayed. From the 12<sup>th</sup> month they used Vojta Therapy for rehabilitation, the unassisted walking the boy started in his 18 months.

The social behaviour development: in relation to his parents, the boy showed interest in caressing but the contact was differentiated – the distinctive fixation to mother was apparent. To a small extent he was interested in social imitating plays, he imitated little in general and did not involve imitation in his plays. He required a companionship, bringing various things to show them. From the second to the fifth year of his age, he caught people's noses as a form of making contact with them.

Communication development: There were less facial expressions in his nonverbal communication. He tended obviously to the same expression, there were problems about the eye contact, gestures and shared attention. The speech development was delayed, the incorrect pronunciation persisted till his school age (8 – 9 years). The parents can not remember any milestones in his speech development, he used only single words when he was three years old.

His verbal communication reached higher degree when he was about five.

Play development: The spontaneous and creative play almost did not appear on its own, the boy needed somebody's leading. There was little constructive play, imaginative and pretend play were missing. He was spontaneously interested in clocks and in his six he was able to tell the time.

### **Pre-school and school care history so far**

The boy attended nursery since he was two and half year old, then he went on to the kindergarten where he was educated in an individually integrating way. There were no difficulties about his behavior. Compared to his peers, his development was delayed but progressed continuously. His compulsory education was postponed twice – the reason was his social immaturity, mother fixation and slight body build.

In his seven years the boy started attending a compensatory class of regular primary school, now he is in the fifth grade. His homework takes him about one and half or two hours a day.

### **Current behavior description**

*Social behavior:* The boy is friendly, his social behavior is immature. In his relationship to his parents, there is an ability of socially-emotional mutuality. He likes physical contacts but he does not offer consolation. Towards unknown people the boy is shy, kind, childish. He does not get in touch with them. His parents say he often responds inadequately to strangers, he is socially anxious. The school information mention that earlier the boy hated unknown people's touch, rejecting their caressing. His social adaptation takes rather long time, he reacts with inhibition. Towards his peers, the boy is little reciprocal, he is passive and never initiate the contact first. In his class, he has got two friends who share his interest in computers. He has no interest in his schoolmates' company in the classroom.

*Communication:* As for the nonverbal communication, the boy has got difficulties with the appropriate socially-communicative body posture (he greets people with his head turned away), facial expressions and gestures. Hypomimia manifests itself, there is tendency to wear still the same satisfied and indifferent facial expression. The social smile is used just because of parents. Though the boy makes eye contact, it is not fully consistent in various situations. Gestures are used minimally, the boy flails his hands inappropriately, using only those gestures he has learned by practice. He does not nod or shake his head to show he does or does not agree. The boy's vocabulary is below-average, it would correspond to the age of eight. The whole quality of communication is at worse level, dysgrammatism occurs – he does not use reflexive pronouns and omits words. The deficiency is obvious in the semantic-pragmatic level – the boy relishes verbal rituals, there is an undistinguished tendency to stereotypical and echolical expressing, perseveration in a demand regardless of the social context. The boy perseveres in time discussions. He talks to himself. His attitude to conversation is positive, the social aspect is not absent. Logical verbal expressing stagnates, if we need to get an information, we have to ask precisely to such a degree he could give us a precise answer, usually containing one or two words.

*Free play activity:* The free time content is limited in its context and creativity. The boy's interests show stereotypical and persevering character – bus numbers, a mobile, a databank, a calculator. In the short-term stretch, the interests are deflectable and they do not affect general functioning of the child and his family more seriously. The boy is not interested in fairytales and movies, on TV he watches competition shows mainly. Some elements of imitation play occur, the boy collects sales slips and sticks them into his notebook. Imaginative play is missing.

*Emotionality:* Most of the time the boy does not show emotions too much. He looks satisfied. Parents inform of episodic incongruent emotional reactivity and emotional facial expressions. The basic emotions description is vague, there is a tendency to answer 'I don't know'. The boy is not able to match emotions to corresponding situations. He shows ambition. Looking at the picture of him as a baby, he cries. He has got no affective attacks (they occurred in the past when he was three, during the defiance period). He is not negativistic. Actually, he seems to be too good to his parents, he is quiet and shy. When more motivated, he can function surprisingly better.

*Perception and imitation:* The sight perception and sight control is inflexible and inconsistent. The hearing perception is inflexible, too, the boy often gives no response to incentives or verbal instructions, sometimes he responds but with longer latency. The imitation during organized activities is sometimes problematic. Inaccuracy and small deflections appear, the performance is worsened by short-term memory deficiency. The boy can imitate activities and dialogues in his room without other people's presence.

*Motor skills:* There is a psychomotoric agitation in the boy's behaviour – he rubs his hands, twist his hair, he strokes himself behind his ear or starts jumping mainly when he is happy. The gross motor skills are immature, it is difficult for the boy to coordinate his movements, his ability to catch a ball is clumsy. At school there are significant problems in Physical Education. The fine motor skills are immature, as well. He is able to button his clothes up but he can not tie a knot on his shoelaces. He is able to cut out shapes. Spontaneous drawing of the boy is childish and schematic, with respect to form his drawing of a house is stereotypical. The human figure drawing is schematic and rather stereotypical, lacking details. In some of his figures the boy omitted important parts.

He writes in child cursive, his handwriting is not trained and neat, particular graphemes are big. In the course of writing he often crosses and rewrites words.

## 4 Conclusion

A boy diagnosed with Asperger's syndrome with mild symptomatics of autistic behaviour without intellectual and verbal abilities decreased. The disorder causes social interaction difficulties (deficient understanding of social situations, worsened peer contact, infantile and socially inappropriate responses) and communication problems (thematically limited communication, perseveration, lapses in common answers, verbal disinhibition, inability to lead a dialogue appropriately and imagination disorder which manifests itself as specific limited interests of persevering character (he is interested in numbers and technic tools)

### a) Case Study II

A thirteen years and one month old boy diagnosed with Asperger's syndrome. According to his socially-communicative behaviour, he is the mixed type, he has got great difficulties in his peer group contacts. According to his adaptability, he is the middle functioning type with definite symptoms.

#### Family and personal history

The boy grows up in a complete family. His father is a university graduate, he is healthy. The mother is a high school graduate, currently without any health problems, she underwent a serious depressive syndrome treatment in the past. The boy was born from her first gravidity, now he has got two brothers (the older brother has been diagnosed with the middle functioning childhood autism, the younger one is waiting for his diagnostic examination, there is suspected autism, too). In her first weeks of pregnancy, the mother was hospitalized for a few days at neurology department. Two weeks after the due date, the labour had to be induced due to the birth canal obstruction. The baby was born head first.

From three to nine months the Bobath concept rehabilitation was done for the hypotonic syndrome. As a baby, the boy was calm. Before he reached age two, hyperactivity and nightmares have developed in him. He often hit his head against the wall or furniture, he refused food. He was very negativistic and considerably affective raptures occurred. In his childhood, the boy suffered from repeated laryngitis, often being hospitalized. When he was two, he underwent adenoidectomy in general anaesthesia. Since the age of two, his speech was very pedantic, the boy showed noticeable interest in encyclopedias and means of transport. When he was nine, he had to be hospitalized in a mental institution for three weeks due to his grandmother's decease.

*Social behaviour development:* He used the social smile. He was not cuddly and he accepted a physical touch only for a short time. The separation anxiety did not occur

markedly, but the boy did not show joy when meeting his parents either. He rejoiced in interactive social even physical games. In the course of interactive play he tended to lead the activity, he was interested in browsing through books. His response to criticism or reproof was affective, he did not accept forbidding. He made contact with strangers very actively, developing the communication. He talked about his favourite topics. He did not differentiate between a close person and a stranger. He did not make contact with the same age children, he rather watched them without joining their games. Imaginative play was not present.

*Communication development:* Before he was two, the boy made an eye contact. Then he made it for a short time only. He used common gestures, his agreement or disagreement were accompanied with a corresponding head movement. The babbling was not missing in his speech development. The boy started using his first meaningful words in the age of seven months, he imitated the animals' voices. The simple sentences started to occur in the age of one. When he was about two, he spoke complex sentences. He often spoke to himself. From three to eight years the boy was in care of the speech therapist. His speech was pedantic, he required the standart language even from the others. He used literary expressions and repeated advertising slogans. Common instructions had to be repeated several times before he carried them out.

*Play development:* At an infant age the boy was interested in common toys. His favourites were toy cars and contruction sets. After the age of two he started combining toys and real things. Playing with a contruction set, he always had an elaborated plan what he was going to build and he always used all pieces of the set. At the age of four he was able to create constructionally complex buildings containing movable parts. He liked to join particular objects and pieces of furniture together with a string. Between the fifth and the sixth year he had a favourite game and he demanded playing it several times a day. He showed a distictive interest in means of transport and building machines. He had a favourite toy, a soft toy dog, which he wanted to have with him all the time. He did not play with figures and did not create his own scripts.

### **Preschool and school care history so far**

Before the age of three, the boy started attending the kindergarten for children with special needs. He did not make contacts with his peers, he did not join collective activities spontaneously. He preffered contacts with the adults. When he was seven, he changed to a speech therapy providing kindergarden which meant he had to stay there all day long. His adaptation was difficult, he had problems in the contact with his peers and demanded his own rules being kept. The compulsory education postponement was recommended twice. Before the age of eight the boy started attending

to a regular primary school – his adaptation was difficult, the teachers pointed out the behaviour problems. His study results were excellent and he became a member of the gifted children club. In the fifth grade he had become a victim of bullying and refused to go to school then. After changing the primary school, his adaptation was without any difficulties. Currently he studies with excellent results. For his academic knowledge he is not too popular with his schoolmates and he does not try to get in touch with them. He prefers working on his own.

### **Current behaviour description**

*Social behaviour:* The boy uses the social smile towards his parents. He looks for a physical contact, sometimes he makes it inappropriately. He is not able to tell other people's emotions, his empathic ability is lowered. He is egocentric. He can ask for help, he can thank. Being reminded, he says Please. He can share his things spontaneously, there is a social naivety in his behaviour. He often does not respect social norms, using vulgarisms in public places and having inappropriate comments. In his behaviour, he does not make a difference between close people and strangers. His social behaviour gives the impression of a younger child. He does not make contact with his peers and avoids places where there is a group of them. He prefers being alone. During the collective activities he demands following his own rules. He has got no friend. According to him, friendship is a shallow relationship. He can not cooperate with other children, he does not understand the social play rules.

*Communication:* The eye contact is markedly short-term and evasive. The social posture and social expression is weakened. The boy's vocabulary is above-average but there is also the semantic-pragmatic deficiency. The expression is formal, he requires the others to speak standard language. The delayed echolalia occurs, the boy repeats passages from advertisements or sometimes he keeps asking still the same question. There are expression difficulties, the boy answers questions very extensively. His sense of language - the ability to choose fitting words - is weaker, especially in the social interaction language. He does not communicate his experience spontaneously. In conversation, he clings to his preferred topics – building the shopping centre, means of transport. The verbally abstract notions understanding stagnates, the boy does not understand irony or hyperbole. He takes everything literally.

*Free play activity:* The boy prefers playing alone, with a tablet or a mobile phone. According to his parents, it is uneasy for him to differentiate reality from the game setting. He likes reading newspapers, magazines, handbills and all genres' books. On TV he likes watching documentaries without particular interest – he watches all spheres. He attends music school – he plays the piano and the flute. He changes

his favourite activities easily. He becomes enthusiastic quickly but loses the interest very soon. He responds with an affect if his preferred activity is being interrupted.

*Emotionality:* According to his parents, the boy is often in a negative mood. The increased insecurity manifests itself – the boy underestimates himself, expects the worse results, blaming people around. The long-term affect is his response to frustration, the interruption of his preferred activity, sudden changes or criticism – he starts screaming, kicking out his legs, beating and throwing things, using vulgarisms. He shows his delight with jumping, fluttering his hands or loud vocalisation. The boy worries enormously about his health so he is very cautious about himself.

*Perception:* The eye contact is short-term. It is uneasy for the boy to distinguish faces. He can not remember people and he often asks who it is - even if it is a close person. There are no conspicuities in his hearing perception. The boy often tears various materials out of the surface – unraveling clothes, splitted pieces of material, etc. He puts everything in his mouth.

*Motor skills:* His walk is less coordinated, he scuffs his feet. He often hits against people and objects. He can walk upstairs and downstairs alternating his feet. The movement coordination is worse when running. He can kick, throw and catch a ball. He likes individual movement activities. In his demeanour, there is the psychomotoric agitation and movement stereotypy – hand mannerisms, hand fluttering, hitting into his chest, rubbing his eyes. The fine motor skills are less developed. He can cut with scissors with difficulty. He can do and undo his clothes - buttons even zip fasteners, he can tie his shoelaces. His handwriting is less neat but well legible. His exercise books are neat and nice. The human figure drawing is slightly immature, there are no serious anomalies.

## **Conclusion**

A boy diagnosed with Asperger's syndrome with definite symptoms. The cognitive abilities appear to be in the middle above-average zone. His results are better in an individual contact, he has great difficulties in the group of his peers. Pragmatic deficiency manifests itself in communication, there are problems in the nonverbal communication and prosopagnosia symptoms occur. The boy is emotionally and socially immature. He has got encyclopedic and scientific interests.

## b) Summary

To sum up, there is a summarising table (tab.1) showing differences in both boys' communication. It is obvious that the same diagnosis of autistic spectre disorder, Asperger's syndrome, does not mean the same communication profile of a child, and it was the aim of the contribution to point out this fact.

**Table 1:** Communication Differences

	<b>Boy 1</b>	<b>Boy 2</b>
<b>Eye contact</b>	it is made but not consistent	markedly short-term, evasive
<b>Facial expression</b>	hypomimia – still the same satisfied indifferent expression	inappropriate - excessive grimacing
<b>Pragmatic deficiency</b>	Yes	yes
<b>vocabulary</b>	bellow-average	above-average
<b>Echolalie</b>	yes – verbal rituals favoured	yes – advertisements' passages repetition
<b>Perseveration</b>	yes – time discussions	yes – means of transport, building the shopping centre
<b>Defective pronunciation</b>	Yes	yes - r,ř, sibilant and palatal consonants
<b>The first words</b>	by 3 years of age	in seven months
<b>Contact with peers</b>	not interested in his schoolmates' company, he has got two friends who share his interest in PC.	does not make friends, he has not got any friend
<b>The speech specifics</b>	infantile and socially inappropriate responds; communication thematically limited; lapses in common answers; inability to lead a dialogue	pedantic speech; the standard language demanding; using literary expressions; inability to understand irony or hyperbole; speaking regardless of his listeners

## Conclusion

The subject matter of this contribution was first the theoretic introduction to problems of communication and the autistic spectre disorders. The research investigation within the contribution was oriented qualitatively since its aim was to give a comprehensive picture of children with Asperger's syndrome as one of the autistic spectre disorders.

Working on the case studies did not mean only examining documents and the pupils' work results but also complex descriptions of the individuals. Of course,

the documents study had its important role, too, because not all essential data can be acquired through observation. What was important for our research was information about the parents, the pregnancy and delivery process, the postnatal development of the baby. Both the information given by the representatives and the information gained by long-term observation of the boys in their school environment were significant.

Though the contribution contains case studies of two boys of nearly the same age and diagnosed with the same disorder – Asperger's syndrome, we can find both lots of similarities and many differences in it. We can see it is necessary to view each child as an individual having their own individual wishes and needs.

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# Student work placement in Build on Belief, a unique organization in London

(overview essay)

Tereza Houšková, Michal Růžička, Lucie Hrbáčová, Tim Sampey

**Abstract:** *The paper describes the functioning of an organization in London called Build on Belief (BoB), which, in a unique way, provides treatment to persons with substance addiction. This facility is special for its management, because the services are run by people who had gone through addiction and now abstain. The second distinctive feature of the organization is the attitude to clients. The person is always in the first place, only then a addiction problems come. There are no such organizations in the Czech Republic; the only equivalent in terms of services is the Kontaktní centrum (K-centrum). This paper is based on materials gathered during a two-month work placement in the BoB facility organized in cooperation with the Institute of Special Education Studies, Faculty of Education, Palacký University in Olomouc. The participants in the work placement analysed the BoB facility and made theoretical as well as practical conclusions in order to enrich the Czech practical environment.*

**Keywords:** *Build on Belief, BoB, work placement, workshop, training, addicts, comparison, human being, United Kingdom, Czech Republic*

## 1 Introduction

Build on Belief is a registered non-governmental organization based in London. Its clients are people who are addicted to alcohol or other non-alcoholic substances. A special feature of the organization is the staff consisting mainly of persons who had gone through drug addiction. The idea is based on their own experience with the target group of drug addicts and a higher degree of empathy towards these clients. The principle is also very supportive on the part of the clients, who are naturally motivated by seeing a chance of being cured and living without addiction.

The main idea of BoB is to give the users a feeling of a safe place, peace and acceptance, just as each family should provide. It is well known that usually it is the family of persons with drug addiction that does not work very well; therefore the objective of BoB is to represent a symbolic family for its users and offer them a helping hand.

This is not a therapeutic service, but rather a set of social services, through which the clients are supported to find their way to a life without drugs. The clients are welcome to come to the centre at any time during working hours and join the programme to a degree they like. The clients can use a food and beverage service and basic hygienic services; they can also join women's or men's non-coeducational groups. Additionally, the clients have an opportunity to develop their natural potential in a music and art workshop, use the PC and the Internet, join film clubs, attend yoga and reiki lessons or just have a chat. The whole idea of the organization is based on a strong community feeling, not making any differences between those who abstain and those who still use addictive substances.

## **2 Build of Belief**

The organization was originally a small badminton club founded by two friends who felt they had to do something to avoid falling into their long-lasting problem with addiction. Over time, the club changed into a service called the Service Users Drug Reference Group (SUDRG), which in the course of a few years has grown into seven branches located across London with a new name Build on Belief.

All centres are governed by the same philosophy, but each is distinctive in its own way. This distinctiveness is a result of not only various services, but also the approaches of the leaders and volunteers. In terms of time, the facility works in two ways: The first way is a usual weekday service, the other way is a weekend service, the primary objective of which is to provide services for drug addicts, who often visit other state institutes during the week. These institutes often provide space for weekend services delivered by BoB and especially by their inter-institutional partners. The use of the space seems beneficial for those clients who visit the same familiar environment. At the same time it is easy for these organizations (this particularly involves social and emergency centres) to cooperate in this way in addressing various cases and situations.

To ensure cohesion of the community, various thematic sessions or picnics are held. Naturally, the work is not just about friendship and entertainment, but mainly about support and help – not only mental but also social and material. One client services include exchanging used syringes, which goes hand in hand with advising the client about intravenous application of addictive substances, which might reduce the risks of diseases, and promotion of BoB among the clientele, who primarily come for a different reason.

The hierarchy of employees and volunteers is also very specific. Almost everyone, including the founders of the organization, used to be active users of addictive substances and went through numerous facilities offering help to people with addictions. This was the reason for establishing BoB; the founders tried to improve the services for drug addicts, which they themselves had missed on their way from addiction. For the employees of the organization their path was often similar, starting with a service of this kind. Sometimes the clients already abstain, sometimes they try to get rid of their addiction. There are also clients who are still unaware of their addiction and they use the organization as an escape from their daily stereotype. Once any of the clients decides to abstain, they are considered by the management of the organization as persons interested in the community life of the organization and are offered the role of a volunteer and can take part in a special training. The aim of this training is to teach the participants to communicate openly, listen to other persons, pay attention to their own mental hygiene, and cover many other topics associated with the mission of the organization. Even in case of volunteering for the organization the clients are provided with funding to cover their travel expenses to the organization and all services offered by the organization on that day. They also have an opportunity to take part in initial and final day sharing, in which they can express their feelings, opinions and ideas concerning potential improvement of BoB functioning.

If a volunteer is confident and reliable, he/she can take the role of a team leader. This position requires a sense of responsibility and knowledge of the way of functioning of the facility in terms of its philosophy, clients and technical aspects. The main job is to have an overview of the current situation in the centre and overall as well as individual tuning of the clients. The task of the leader is to develop and maintain a safe and secure place where all members feel accepted. In this way, beginning leaders have an opportunity to encounter many challenging situations, in which they test their own ability to respond, which in turn strengthens their values and qualities to be used in their future personal and occupational life.

The final step in the professional growth in BoB is to become the manager of one of the branches. This position is offered to individuals who have a desire to remain in the organization as an employee. This model of promotion clearly motivates the volunteers for professional growth.

### **3 Course of the work placement**

The first cooperation between Czech Republic and BoB started at 2009 in P-centrum which is a non-profit organization working in the field of drug dependency (counselling, CBT, follow up programs, primary prevention). During 3 years of sharing therapeutic activities the Brief intervention program for methamphetamine users was built up (Růžička, 2012).

The international work placement was organized by the Institute of Special Education Studies, Faculty of Education, Palacký University for the students of the Master's and Doctoral degree as an opportunity to develop their professional and language abilities and skills. A prerequisite for participation in the placement was knowledge of English and interest in the field, i.e. working with clients with addictive behaviour. Previous experience with similar clientele was greatly appreciated. The main opportunity was to learn about an organization led by former users of addictive substances. During the two-month work placement the students were supervised by the director Tim Sampey, who made it possible for the students to learn thoroughly about the whole facility including the positives and negatives it brings.

During the first month of the placement, apart from learning about the facility, the objective was to try out the position of a volunteer and a team leader. An integral part of the placement was participation in training seminars for beginning volunteers in BoB and learning about the organization's know-how and mission. The principle of the organization is an approach to people as human beings. Only then the clients are seen as persons with addiction. This attitude makes BoB a unique organization in the field. Even this paper could be a source of contradiction concerning the word client, which is frequently used for better understanding. However, the organization itself never speaks about clients but rather persons visiting BoB or BoB service users.

During the second month of the placement the students focused on their own contribution to the organization and developed several workshops primarily for the service users. The workshops were designed to encourage the clients to do common work, creative activities, to gain knowledge about the surrounding world and about themselves. The first series of workshops was designed as a knowledge test; the second series was a drama therapy intervention, which was called a drama workshop for better understanding. All workshops were organized as open groups, during which the clients were free to come or leave. The activities were designed so that the students had a natural opportunity to approach each person and support them in their knowledge and skills, develop their awareness in various personality and cultural aspects and strengthen or build their healthy self-esteem. The main component of the seminars was group dynamics and cohesion, which gradually formed into a stable core of the group.

Each workshop (i.e. the knowledge test and drama workshop) was held once a week. The topics of the knowledge test were tailored to the clients' interests; the drama workshops focused on social areas, which the placement participants believed to be appropriate. These areas included the following: Non-verbal communication, prejudices, establishing informal relationships and awareness of one's own problems. The preparation and delivery of the activities was often very demanding due to ethnic differences, a large number of subcultures in a single facility and various intellectual levels. However, as more seminars were organized, it became easier to tailor the

activities to the clients in the centre. Initially, the clients responded suspiciously to the title of the workshop. They were afraid of the drama part, of the fact that they would have to perform in front of other people. However, they understood very quickly that drama was not just about acting out and that this activity was not assessed or accompanied by ridicule or failure. The reward for the students' effort was positive feedback from both the clients and the staff of the centre. Even more valuable feedback was intensive discussion on the topic, which always started spontaneously after the workshops.

## 4 Discussion

In some aspects, BoB could be compared to the Czech Kontaktní centrum, which provides services in the field of prevention and treatment of addictive behaviour, and focuses on the area of counselling, professional support, social service, i.e. mediation of contacts, assistance in settling official matters with authorities, general assistance, information service, exchange programme (syringes), testing for infectious diseases, hygienic service and food service. All of these services are also provided by BoB. Therefore, the difference is not the scope of the services provided, but the way they are provided; professional qualification of the staff is not strictly required. Build on Belief has the following staff hierarchy:

- Volunteers – former clients, public
- Shadowing team leader – volunteer
- Team leader – promoted
- Branch managers

People who work in BoB usually do not have professional qualification, a fraction of the staff completed a social work course or are completing one. Most of their work experience comes from their drug user history. In the Czech environment it is unusual for abstainers to work in this field without appropriate qualification. Even if ex-users (former users of addictive substances) worked as therapists for example in a therapeutic community or after treatment programmes, they would have to be clear about their past and increase their qualification as well as work experience (Kalina, 2003). In available literature it is difficult to find a mention of an ex-user working in a K-centrum. The staff who work in these centres in the Czech Republic are divided into three groups:

- Social workers, special educators – employees with a university degree in the field
- Health professionals – nurses, employees with a medical degree
- Volunteers – students and public

According to a research study by Macková (2004), the reason for the non-employment of former drug users in services for addicts might be the large number of negative aspects emerging in the work of an ex-user without professional qualification dealing with the target clientele. Macková emphasises the blurred boundaries between the therapist and the client, insufficient detachment of an ex-user therapist and excessive empathy towards the client with the same problem. Another serious risk is the projection of own experiences into the client and a large number of the ex-user's own unresolved problems. On the other hand, an ex-user employee also brings positive aspects. Macková highlights the advantage of a positive model provided to the client represented by the ex-user; own experiences and knowledge of the issue of habit breaking might bring a great deal of sensitivity and tolerance with respect to the client. Despite these advantages, the work of a 'lay' ex-user is a rare concept in the Czech Republic, where emphasis is laid rather on adequate qualification and looking at the addiction from a bio-psycho-socio-spiritual perspective (Radimecký, 2006).

The overall location of care providing organisations in the Czech Republic and in London also differs. While in London the centres are located in places that need not necessarily be associated with the target clientele (usual busy parts of the city), in the Czech Republic these facilities are in remote streets where they do not attract too much attention.

An important difference between the British and Czech organisations is the way of funding. Although BoB is a non-profit organization, it has much better funding than any Czech non-profit organization working with drug addicts. BoB is funded by the state budget and other private contributions. According to the manager, each year there is a struggle for money in the state sphere, which is the same in the Czech Republic. In this struggle however, British centres seem to be more successful. In the Czech Republic, the Kontaktní centrum is governed by Act No. 108/2006 Coll. On social services. Therefore, it is included in the area of social prevention, which according to the law must provide basic social counselling. Still, without additional funding by private subjects, these centres in the Czech Republic would not be able to work as they do.

According to the director of BoB, most of the clients are addicted to cocaine, heroin, crack and alcohol, most of them are 30 to 40 years of age. In the Czech Republic, most users are addicted to methamphetamine, alcohol and medicines; the average age is 30 years.

## 5 Conclusion

During the work placement in Build of Belief, all participants had sufficient time to learn about the functioning of the organization. The whole centre is a developing subject open to new ideas, innovations and stimuli for further work. During

the placement the students had an opportunity of professional as well as language development. Working in a different language and with culturally different mentality moved the boundaries of perception of each participant. This development was also due to the challenging life situations of the clients, who were influenced by their substance addiction.

According to the head of the organization and the placement supervisor the work placement was beneficial not only for the students but also for the organization. According to Tim Sampey, the director of BoB, the organization appreciated the novel format of the workshops, which helped to reveal new ideas and perspectives of the clients' life situations. The participants – students of special education and future professionals – showed a professional attitude to the clients, quick adaptation in interaction with a wide range of clients and volunteers.

The most important thing the Czech students learned was the attitude to drug addicts, who are in the first place regarded as human beings. The problems that these human beings have and whether they are addicted or not should be considered in the second place. In this respect, BoB is a unique organization, not only in the field of theory but primarily by means of the personal approach of the staff, who had gone through similar life stories and know what exactly helped them.

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# HIV/AIDS baseline awareness and persons with visual impairments in Cross River State, Nigeria

(scientific paper)

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**Abstract:** *The objective of the study was to explore HIV/AIDS knowledge, attitude, behavior and interventions among persons with visual impairments in the Cross River State of Nigeria with a view to making HIV/AIDS services disability inclusive. Three hypotheses were formulated to guide the study. A sample of one hundred and fifty (N = 150) respondents were randomly selected from three Special Education Centers for the study. A four point Likers type questionnaire was the main instrument used to test the hypotheses. The data collected was analyzed using Pearson Product Moment Correlation statistical analysis at .05 level of significance. Result obtained revealed that persons with visually impairments are potentially vulnerable to HIV transmission due to social exclusion and poverty, lack of knowledge, gender norms and obstacles to accessing HIV/AIDS programs. In this way, findings convincingly revealed that deaf/blind, the blind and other severely visually impaired persons in particular and the disabled population generally people are vulnerable to contacting HIV/AIDS and lack access to information, testing and treatment. In conclusion, therefore, it was recommended that workshops be organized for special education practitioners, healthcare workers and other service providers in special education schools/centers who should be trained to undertake intervention strategies, voluntary counseling and testing for persons with special needs in the state. Neither government programs for HIV/AIDS pandemic nor organizations for people with disabilities in Nigeria currently address the risks, needs and preferences of people with visual impairments.*

**Keywords:** *HIV/AIDS, knowledge and attitude, interventions, vulnerability, Visual impairments.*

## 1 Introduction

In developing countries such as Nigeria, it is estimated that 10% of all people are living with a disability “physical, visual, hearing, intellectual and that one quarter of the extremely poor are disabled. Similarly, across the developing world, people with disability faced many challenges accessing services of all kinds including those for prevention and treatment of HIV/AIDS. In fact, though people with disability are a group that are particularly vulnerable to HIV, they are either not included or very little targeted and understudied they are often subjected to stigma, sexual violence and discrimination. Again, physical, socioeconomic and cultural barriers further inhibit the access of these group to essential services (A.D.A, 2014) People with sensory impairments experience certain channels of communications that are inaccessible. Otte (2004) reported that people with visual impairments experience hospitals and billboards as inaccessible. In support of this assertion, a one-time Kenya first lady Lucy Kibaki through a sign language interpreter stated that “anybody can get AIDS, including the disabled people; the deaf, the blind, the crippled, we must all protect ourselves, she advised. According to her, the problem is that the commercial has not reached many people in this groups yet.” Conversely, special education practitioners and rehabilitation personnel do believe and emphasize that Braille and audiotapes information is necessary to make HIV/AIDS services accessible to people with visual impairments. Wazakili (2004) makes similar claims about young people with physical disabilities. Their study reveals that the participants have limited factual HIV/AIDS knowledge and that their choices in sexual behavior are not informed by what they know. They emphasize that the sexual behavior of adolescents with disabilities is particularly influenced by their environment, schools, social clubs, homes and the society at large. The joint national association of persons with disabilities [JONAPD, 2016] in a communique observed that “individual with disabilities across categories especially girl child and woman suffer untold awesome abuse of sexual exploitation making them vulnerable to multiple infections including HIV/AIDS” the association in a clarion call appeal to government and other stakeholders in HIV/AIDS campaign to include the disabled population the HIV/AIDS awareness derive. Looking at disability more broadly, Banda’s (2005) study on HIV/AIDS transmission among persons with disabilities in Malawi yielded similar results and showed that “knowledge about HIV is basic”. Thirty-six percent of the respondents stated that HIV leads to AIDS, and 42.5% said that they could tell if someone had AIDS “by just looking” at the person and 70% responded that they did not know how HIV is transmitted.

The HIV/AIDS epidemic in Nigeria is complex and varies widely by region. In some states, the epidemic is more concentrated and driven by high-risk behaviors, while other states have more generalized epidemics that are sustained primarily by multiple sexual partners in the general population (Olayi, 2008). Olayi in a study

of Catholic diocese of ogoja in cross River Stat Nigeria found an alarming lack of knowledge and information about HIV/AIDS other sexually transmitted diseases and information relating to sex education. It is a living fact that Cross River Youths and young adults in Nigeria are particularly vulnerable to HIV/AIDS, with young women at higher risk than young men. There are many risk factors that contribute to the spread of HIV/AIDS, including prostitution, high-risk practices among itinerant workers, high prevalence of sexually transmitted infections, high-risk heterosexual and international trafficking of women and irregular blood screening ( Olayi,2008 &Smart, 2009).

Other studies reveal that volunteer counseling and testing staff, medical practitioners such as nurses are not able to communicate with the deaf/blind and the blind and again the blind lack braille and audio information to enhance their awareness and knowledge of the risk (Geoffrey, Chisholm, and Wendy, 1999). Consequently, confidentiality is often compromised. Hence, the blind must depend on listening to information read to them at the mercy of friends and relatives willing to do so. And the deaf relating on a mediating sign language interpreter to whom sometimes they must reveal secret meant to be kept themselves or a health worker. Socially people with disability are marginalized and stigmatized resulting to lack of attention and insensitivity on the path of health workers. In this context, professionals might treat people with disabilities particularly the visually impaired with insufficient respect or simply forget about them as they falsely believe that ‘these group’ are asexual.

## 2 HIV/AIDS Services

Surveys, not surprisingly, reveal that people with visual impairments have less knowledge about HIV compared to their sighted counterparts (Okoye, 2004). Many people with disabilities are subject to what is known as the “Triple Burden” of disability, poverty and HIV/AIDS. The most prevalent causes include: lack of access to service provision, lack of awareness of the disease, the social stigma and poverty that first goes along with being disabled and having contacted HIV/AIDS (Otte, 2004). The fact that the disabled are generally geographically scattered in urban and rural areas in Nigeria creates accessibility problems in terms of mobilizing and sensitizing them in groups for purposes of service provision. Those who live in the far rural areas where health care is more of a luxury than a right are not able to access health-care, social services and facilities. This greatly predisposes them and affects their level of awareness in matters pertaining to HIV/AIDS, thus making them prone to the vagaries of the scourge (Osowole, 2000). Part of the world survey provided data indicating that persons with hearing impairments for example are more likely to believe in incorrect modes of transmission like: kissing, hugging, touching or sharing dishes. The two studies conducted in Nigeria by Osowole (2000) and Banda (2005) used

comparison groups' revealed similar data about blind and low vision adolescents in Nigeria. The studies found that these adolescents are prone to believe in wrong modes of transmission and prevention. However, the same study found no significant differences in questions related to HIV/AIDS treatment.

In developing countries like Nigeria, HIV/AIDS has aggravated the poverty situation and has had a frustrating impact on the poor (World Vision Strategy 2002/4). Its effect has been felt in every part of the country and across all sectors of Nigeria's economy. It has been proved by the World Vision Strategy (2002) that transparency, political will and full participation of all concerned can help reverse the impact of HIV/AIDS and its calamitous effects on society. Lack of access to service provision and information is compounded by the levels of discrimination and stigma associated with being disabled and having HIV/AIDS. Disempowering cultural beliefs and practices, age-long stereotypes and stigmatization all serve to deny people with visual impairments the opportunity to be properly treated of their ailments and to speak out. Even when persons with disabilities are able to access services, problems arise. First, attempts to collect data on the disabled and HIV/AIDS are insufficient. A close examination of the cards given to Voluntary Counselling and Testing (VCT) clients clearly shows that attempts are not made at gathering and recording statistics on disability and disabled persons in relation to HIV/AIDS, thereby creating a void on informed approaches and designs about dealing with them. Secondly, there is an unintended consequence of VCT counselling ethics rules. Due to the principle of privacy, the deaf and the visually impaired are often excluded from counselling. Although it is well known that counsellors rarely know sign language, the assistance of an interpreter is still considered a breach of privacy. The glaring gaps in our understanding of the general health challenges that persons living with disabilities face in many African countries is exasperated by HIV/AIDS (Banda, 2005).

According to Otte (2004), people with disabilities in Nigeria are aware of the enormous commitment the country and various stakeholders have made in the struggle against HIV/AIDS and are also aware of the enormous financial constraints faced in alleviating the pandemic. But in the area of our national health policy and service delivery, there has been a tremendous oversight of the needs of people with disabilities in general and the impact that HIV/AIDS has on them. Great strides are made on HIV/AIDS programs in Nigeria for the general public and pandemic areas while the disability population are yet to get the basic services suited to their needs. Persons with visual impairments and other disabilities tend to face the challenges of double stigmatization. This is due to constraints of getting voluntary counseling that requires confidentiality. Inadequacy of risk perception on the part of the visually impaired has posed a problem among persons with visual impairments (Okoye, 2004). Evidently, lack of public awareness and voluntary counseling for the special

population in Nigeria has been a matter of great concern to those involved in special education services in various settings.

### **3 Purpose of the study**

Given this scenario, this paper investigated the baseline awareness, knowledge, attitude, behavior and intervention of HIV/AIDS among persons with visual impairments in the Cross River State of Southern Nigeria with a view to call for the inclusion of people with disabilities in the national HIV/AIDS programs at all levels. This effort is to ensure that the people with visual impairments are included in the HIV/AIDS information as equitable partners in the overall crusade to improve health service delivery to persons with disabilities in general. To achieve this, a study was conducted in three selected special education centers (N = 3) in the state.

The following research questions were raised to direct the study:

- Do persons with visual impairments have knowledge of various means of HIV/AIDS transmission?
- Does social exclusion/poverty influence the treatment of HIV/AIDS positive patients?
- Does lack of access to information on HIV/AIDS transmission have significant effect on the visually impaired population?

Three null hypotheses were formulated to guide the study:

- There is no significant relationship between lack of knowledge of HIV/AIDS and persons with visual impairments.
- There is no significant relationship between social exclusion/poverty and the visually impaired.
- There is no significant relationship between the lack of access to information on HIV/AIDS transmission and the visually impaired.

The only means of developing reliable data on the prevalence, causes and economic costs of visual impairments and HIV/AIDS services in these situations is by conducting community-based, nationwide and state prevalence surveys as appropriate. This is another possible way to provide reliable data on the level of economic development that followed regression of HIV/AIDS controls and the level of increased utilization of preventive measures and services to HIV/AIDS positive patients that followed trachoma and onchocerciasis control in endemic areas in Nigeria.

### **4 Methodology**

A survey research method was adopted for the study. A simple random sample of one hundred and fifty (N = 150) respondents were randomly selected from three special

education centres and two non-governmental agencies in the state. The main instrument used for data collection in this study was a four point Likers type questionnaire. The instrument was administered by the researchers. After explaining the purpose and conduct of the study, verbal consent was obtained. For each consenting person, data on age, sex and duration was collected since the identification of vision related to HIV/AIDS problems was recorded.

#### 4.1 Sample

All visually impaired and blind youths of secondary school age in the three special schools, age 15 to 17 years and adults above school age receiving rehabilitation services and the visually impaired employees in various professions were invited to participate in the survey. The questionnaire was divided into two sections. The first section required a personal data while section two was in two parts, the first part asked for background information concerning sex, age and religion. The second part required information on sexual behavior, knowledge on HIV/AIDS, sources of information and intervention. The instrument was validated by health professionals on HIV/AIDS and the reliability was based on first index validity.

#### 4.2 Data Analysis and Result

The statistical analysis utilized in testing the hypotheses at .05

Level of significance was Pearson Product Moment Correlation while simple percentages (descriptive statistics) were used for the research questions.

#### Result from Research Questions

**Table 1.** Opinions of Visually Impaired Students/Workers

L Lack of awareness of HIV/AIDS risk factors (125 responses out of 150) = 83%
Effects of social exclusion/poverty on HIV/AIDS positive patients (115resp) = 76.3 % IHHHp
f a Lack of access to counseling due to risk of confidentiality (100 resps = 66 .7 %
La Lack of access to information on HIV/AIDS transmission (80 resps) = 55 %
O Obstacles to accessing HIV/AIDS programs (50resps) = 33.3 %

Table 1 indicates the opinions of responses from the visually impaired students and workers on the factors affecting HIV/AIDS awareness among the visually impaired population in the Cross River state of Nigeria.

A greater percentage of respondents 83.3% (125 out of 150) indicated that lack of awareness of HIV/AIDS risk factors was prevalent among the special population in the state. There were 76.3% (115 out of 150) who felt that social exclusion and poverty among rural dwellers had effects on the disabled who were HIV/AIDS positive. 66.7% (100 out of 150) indicated that they did not accept voluntary counseling for fear of confidentiality. 55% (80 out of 150) were of the opinion that many visually impaired persons have no access to information on the HIV/AIDS services in the state while 33% (50 out of 150) were of the opinion that problems related to discrimination, stigmatization and cultural barriers were the obstacles to their inclusion in the HIV/AIDS programs in the state.

**Table 2.** Pearson Product Moment Correlation Analysis of the relationship between knowledge of HIV/AIDS and people with visual impairments (N = 150)

Variables	$\Sigma X$ $\Sigma Y$	$\Sigma X^2$ $\Sigma Y^2$	$\Sigma XY$	r.
Lack of HIV/AIDS Knowledge	2555	5342	70125	0.73*
Visual impairments	2511	5261		

\*Significant at .05, critical r = .159, df = 148.

### Hypothesis one

There is no significant relationship between knowledge of HIV/AIDS and those with visual impairments.

The result of the analysis as presented in Table 2 reveals that the calculated R-value of 0.73 is greater than the critical R-value of .159 at .05 level of significance with 148 degrees of freedom. The result of the statistical analysis is significant since the calculated value is higher than the critical value. With this result, the null hypothesis was rejected. This therefore means that there is a significant relationship between the lack of knowledge of HIV/AIDS and visual impairments.

### Hypothesis two

There is no significant relationship between social exclusion/poverty and visual impairments. Pearson Product Moment Correlation Analysis was considered the most appropriate statistical technique employed to test the hypothesis. The result of the analysis is presented in Table 3.

**Table 3.** Pearson Product Moment Correlation Analysis of social exclusion/poverty on HIV/AIDS services and people with visual impairments (N = 150)

Variables	$\Sigma X$ $\Sigma Y$	$\Sigma Y^2$ $\Sigma X^2$	$\Sigma XY$	r.
Social exclusion/ poverty	2720	5738	81207	0.89*
HIV/AIDS services				
Visual impairments	2511	5261		

\*Significant at .05, critical r = .159, df = 148.

The result of the analysis as presented in Table 3 reveals that the calculated R-value of 0.89 is greater than the critical R-value of .159 at .05 level of significance with 148 degrees of freedom. The result of the statistical analysis is significant since the calculated value is higher than the critical value. With this result, the null hypothesis was rejected. This therefore means that there is a significant relationship between social exclusion/poverty and people with visual impairments.

### Hypothesis three

There is no significant relationship between the lack of information/counseling on HIV/AIDS services and people with visual impairments. The result of the analysis is presented in Table 4.

**Table 4.** Pearson Product Moment Correlation Analysis of the lack of information/counseling and people with visual impairments (N = 150)

Variables	$\Sigma X$ $\Sigma Y$	$\Sigma Y^2$ $\Sigma X^2$	$\Sigma XY$	r.
Social exclusion / poverty	2720	5738	81316	0.86*
HIV/AIDS services				
Visual impairments	2511	5261		

\*Significant at .05, critical r = .159, df = 148.

The result of the analysis as presented in Table 4 reveals that the calculated R-value of 0.86 is greater than the critical R-values of .159 at .05 level of significance with 148 degrees of freedom. The result of the statistical analysis is significant since the calculated value is higher than the critical value. With this result, the null hypothesis

is rejected. This means that there is a significant relationship between the lack of information/counseling and visual impairments.

## 5 Discussion

The result of the first hypothesis reveals that there is a significant relationship between knowledge of HIV/AIDS and visual impairments. The findings of this study is in line with Okoye (2004) who found that young people with visual impairments have limited factual knowledge about the risk factors of HIV/AIDS and that their choices about sexual behaviors are not informed by what they know. The author emphasize that the sexual behaviors of adolescents with disabilities are influenced by their living context.

The result of the second hypothesis indicates that there is a significant relationship between social exclusion/poverty and visual impairments. This is equally in line with Otte, E. (2004) whose findings indicate that the most prevalent causes leading to HIV/AIDS transmission among persons with disabilities include: lack of access to service provision, lack of awareness of the disease, social stigma and poverty that first goes along with being disabled. Additionally, the fact that the disabled are generally geographically scattered in urban and rural areas, creates accessibility problems in terms of out-reach services to those in the rural areas.

The third hypothesis reveals that there is a significant relationship between adequate information/counseling services and visual impairments. The finding is in line with Banda (2005) who said that voluntary counsellors and nurses are often not able to communicate with the blind and the deaf due to issues related to confidentiality.

From the various sources of the data collected, lack of knowledge of HIV/AIDS risk, vulnerability to HIV/AIDS transmission, social exclusion, and obstacles to accessing HIV/AIDS programs, poverty and problems related to confidentiality were found to be the leading causes of risk and risks perceptions of HIV/AIDS among persons with visual impairments and/or blindness. Adults and youth identified for HIV/AIDS free test had problems related to their awareness of HIV/AIDS risk factors such as: confidentiality, privacy, lack of information on voluntary counseling and vulnerability of the visually impaired to contacting the deace.

Consistent with the trends reported in the literature, Otte (2004) reported that the strategies for early awareness of HIV/AIDS status among young and adults persons with visual impairments is the out-reach services through HIV/AIDS programs in the state with trained specialists for services to the special needs population. It should be noted that people with low vision and blindness are likely to succeed in life generally. HIV/AIDS screening, diagnoses, voluntary counseling and treatment is meant to help people with disabilities in general to be inclusive in all spheres of life in the society.

## 5.1 Conclusion

The ideas gleaned from the HIV/AIDS service delivery in Nigeria provide information as a contrast to the scientific research practices in advanced countries. In Europe and America new researches and new ideas on the collective fight against HIV/AIDS emerge on regular bases for all people. The key issues include political, cultural and social ills that seem to aggravate poverty, diseases and health-care problems related to exploitation, mismanagement and underdevelopment in sub-Saharan Africa. It is not unusual to see policy makers suggest that time, energy and resources should be first devoted to non-special needs population with the assumption that special needs population will be given attention as soon as the 'able' peoples' problems are solved.

It is recommended that the Nigerian government should embark on an extensive program to detect the prevalence of HIV/AIDS among the special needs population across states and provide services for them. The state government needs to provide the high level financial and material resources that are required for organizing workshops and public enlightenment on healthcare services to the special needs population in Nigeria. Overall, there is obvious need for sign language interpreters, information in Braille should be available at clinics/hospitals to explain complicated issues about HIV/AIDS, voluntary counseling and testing including medication for individuals with special needs

The general public should be sensitized to vulnerability of persons with visual impairments to contacting HIV/AIDS which creates double stigma in the society. HIV/AIDS infection is preventable among special needs population if there is political will and necessary efforts are made to help infected persons to live with it.

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# Analysis of early childhood occupational therapy intervention in a group of clients with low graphomotor skills

(scientific paper)

Barbora Kováčová , Ivana Lištiaková

***Abstract:** Early childhood occupational therapy is considered a comprehensive form of help, which is provided for children with risk development, children with potentially risk development and children with specific disabilities within the systems of their families. The presented paper comprises of the analysis of an occupational therapy intervention, a specifically constructed programme of occupational therapy that was designed for clients at the age of 5 to 6 with low graphomotor skills. In the methodological part of the article, the authors present statistically significant differences in data before and after the realization of the occupational therapy programme. As part of the verification we chose two standardized tests: the first one used was F-test, then Student's t-test comparing the means of two samples during pre- and post- assessment testing. Drawing from the analysis of the results of the long-term occupational therapy intervention, it can be stated that the conducted programme is useful and meaningful as it was proven by the factors of comparison in the test and re-test.*

**Keywords:** Research, developmentally oriented occupational therapy; graphomotor skills

## 1 Occupational therapy in early intervention

the primary goal of occupational therapy is supporting the clients' development, their independence and quality of life, as well as their emotionality with the focus on early age, up to their school enrolment, based on the requirements stemming from their current health conditions. The actual means of assessment, intervention and counselling used as parts of early childhood occupational therapy facilitate coping with the particular tasks of the child and family, overcoming barriers and feelings of limitation (Mojžíšek, Zátopková, 1982; Havigeová et al., 2013, 2014). In the context

of early childhood occupational therapy, the whole process runs in the following steps (see Table 1, Kováčová, 2014).

**Table 1** Tasks of occupational therapy

Early childhood occupational therapy (Tasks)	Description of particular tasks
<b>Identify significant contexts for activating mobility</b>	It is necessary for the professional to be able to select the context and the situations that act as activators for the child and that create opportunities for social interactions with the focus on the complex development of child personality. For children at early age it is suitable to choose situations that include simple activities such as tearing and sticking paper, or assembling simple puzzles. For children at preschool age, it is appropriate to play innovative games with a partner, for example creating a picture from waste materials, or creating objects by sewing.
<b>Provide effective means for mobility</b>	Each client in occupational therapy intervention has a specific problem connected with their mobility. By selecting appropriate means, it is possible to help the child integrate in everyday life.
<b>Prepare environment for accepting a child with particular difficulties in the area of motor skills</b>	It is helpful to create a situation for the child in which visual, auditory and motor skills are maximized. It is also good to find professionals and gain practical recommendations from them. Full interaction with the environment and the society is important. Children should be seated in front of the therapist, situated on the same eye level. The therapist holds the material in their hands in a way that it is visible for the child. It is necessary to use appropriate expression and voice intonation, suitable communication in every interaction with the child. It must be used at all times including all activities of daily living.
<b>Use appropriate strategies</b>	During the intervention, it is necessary to use appropriate approaches in all activities that are directed towards higher efficiency of mobility and the independence connected with it. During these activities it is necessary to provide children with time and space in order to give them time to think about how they are going to work. The professional needs to react to all the attempts of the child regardless of the results of the activity. Children learn best in a playful environment, in positive and pleasant atmosphere.

Source: Kováčová (2014)

Within parent counselling (Tichá, 2008), it is important to emphasise that motor activity does not develop instinctively but rather based on imitating. In case of delayed development in the area of motor skills, it is necessary to provide a goal oriented intervention (Kováčová, 2014).

Regarding dyspraxia, it is possible to assume that a child suffers from it if the movement coordination of a child in fine or gross motor skill tasks is significantly lower compared to their age norm. Based on research findings it is assumed that 5-8% of school age children suffer from dyspraxia (Golubovič, Slavkovič, 2014).

## 2 Activity training and evaluation of children in the area of motor skills

When occupational therapists focus on the assessment of hand movements in the area of motor skills, they must be able to assess the stages of grasp development (see Kováčová, 2014). In occupational therapy, the assessment of the stage of grasp is used from early age up to preschool age, when occupational therapy focuses less on manipulation with toys and more on manipulation with materials (Hadraba, 2007).

Regarding early childhood stimulation it is necessary to focus on the area of gross motor skills first and after that on the area of fine motor skills, improving dexterity of small muscle groups and the eye-hand coordination (Valachová, 2009, Fábry Lucká, 2014). After managing these partial areas, occupational therapists will focus on the development of graphomotor skills. As part of the (grapho-)motor exercises, it is necessary to differentiate particular appropriate exercises based on the age and disability of a child or children in a group. Based on that, there are three types of graphomotor exercises: manipulation, preparation and graphomotor exercises (see Table 3).

**Table 2** Categorisation of exercises focused on the area of graphomotor skills

Graphomotor exercises	Description of exercises	Examples of particular exercises in early childhood occupational therapy
<b>Manipulation exercises</b>	Manipulation exercises are designated for children up to two years of age. The exercises include stimulation of motor and manipulation abilities (support of gross and fine motor skills) through the means of pre-artistic materials described.	These materials allow children to: <ul style="list-style-type: none"> <li>- manipulate with water – pour, spill, mix, dissolve, and observe (development of the awareness of cause and effect, means and goals);</li> <li>- manipulate with sand, clay, or flour – sift, dig, kick, bury, make mud, and get dirty;</li> <li>- and manipulate with various natural materials such as stones, sticks, or beans (development of tactile perception).</li> </ul>

<b>Preparation exercises</b>	Preparation exercises in the development of graphomotor skills are typical in groups of children from three to four years old.	They are performed on large sheets of paper or cardboard using a pencil. Also, sidewalk is used as a space without strictly set borders for drawing. The preparation exercises include relaxation exercises of the whole arm and body (gross motor skills). Further on, the relaxation exercises are focused on finger and palm coordination.
<b>Graphomotor exercises</b>	Graphomotor exercises focused on supporting the development in the graphomotor expression are not only mechanical training of certain graphic components.	The stimulation of graphomotor skills through the graphomotor exercises is performed based on these aspects: <ul style="list-style-type: none"> <li>- verbal support (as a motivation a short story, an open sentence, riddle, rhyme or a poem is used); it is not recommended to use descriptive instruction such as “connect these two points” or “connect these four curves”;</li> <li>- tactile support (based on tactile perception of a particular object that has the same outline/shape as the component being practiced);</li> <li>- motor support (based on imaginary movement in the air similar to the component being practiced), and</li> <li>- visual support (based on colourful or highlighted beginning and ending of a shape).</li> </ul>

The training of creating and drawing shapes is usually applied by the occupational therapist in directions: left-to-right, bottom-to-top, and top-to-bottom. If a child has problems manipulating the pencil it is helpful to use a board with sand surface. Sand, flour or other fine materials stuck on a board put pressure against the fingers and slow them down. Children can therefore observe the movements of their own hands, experiment with lines or create shapes.

### 3 Occupational therapy programme

occupational therapy includes rehabilitation as part of supporting under-developed body functions regarding gross motor skills of children. In occupational therapy intervention, play activities must fulfil a certain therapeutic intention, based on which children with disabilities become active. They select from a range of certain activities offered by the adult/therapist. The core principle is activating and enhancing children’s engagement in meaningful activities. In the programme of occupational therapy described in detail in the research part of the article, the occupational therapist focuses on various tasks in the individual topics, e.g.: naming and matching body parts, correct attribution of objects to the body, perception of the human body when looking from the front or from the back, specific body parts used when walking,

climbing over barriers or catching a ball. Children are supposed to match individual body parts correctly (e.g. in a puzzle) – which creates foundations for drawing the human body. The actual development of motor skills happens gradually and it is fluid. Therefore, it is important to modify, supplement and extend the tasks in the occupational therapy programme. It is useful to repeat some activities more often and by doing so, lead children with disabilities towards the opportunity of strengthening and fixating the newly gained knowledge correctly – e.g.: recognizing and drawing a graphic shape or remembering and performing the order of partial tasks in an activity. Children learn to see themselves, feel their body and use it in a way appropriate for the situation that they happen to be in or often act in.

## 4 Methodology

### 4.1 Methodological indicators

The goal of the presented research was the verification of a long-term support-oriented occupational therapy programme for clients with disabilities with the focus on the area of graphomotor skills.

#### Research Tasks

To perform and to evaluate the supportive occupational therapy programme as a long-term (lasting during a full school year), regular intervention in the occupational therapy office (a group session once a week and an individual session once a week).

#### Research Sample

The research sample included eight children with disabilities at the age from 5 to 6.8 years, regarding gender it was a heterogeneous group. It was a closed group consisting of clients with disabilities who live in complete families and each client has at least one sibling (Table 3). They are of Roman-Catholic denomination and they meet in a parish in the western part of Slovakia.

**Table 3** Research sample description\*

Gender Female (Age of the client)	Health conditions of the client	Gender Male (Age of the client)	Health conditions of the client
C1 (5)	dyspraxia, obesity	C3/5,5	behavioural disorder (aggressive symptoms), attention deficit disorder, scoliosis, astigmatism, eating disorders

C2 (5,5)	delayed speech development, scoliosis, symptoms of dyspraxia	C4/ 6	cerebral palsy, hyperopia, epilepsy, symptoms of dyspraxia
C5 (5,7)	communication disorder, onychophagy, neurosis with neurasthenic symptoms obesity	C7 (6)	dyspraxia, suspected dyscalculia, attention deficit disorder, scoliosis, astigmatism, dyslalia in producing "r"
C6 (5,9)	symptoms of dyspraxia	C8 (6,8)	attention deficit disorder, scoliosis, astigmatism, myopia, dyslalia in producing "r" and "s"

\*The names of the clients are not stated in order to secure their privacy.

Research sample selection was based on these criteria (Table 4).

**Table 4** Criteria for including the client in the occupational therapy programme

1.	Regular professional care of special or therapeutic educator in a public or private centre.
2.	Diagnosed dyspraxia or symptoms of dyspraxia stated by a professional based on observation.
3.	The opportunity to participate in regular occupational therapy sessions (time and mobility possibilities of the parent).
4.	Expected to enter the first grade.
5.	Attending a regular or a special-education kindergarten.
6.	Disability (excluding intellectual disability).

## Hypothesis

The values in the area of graphomotor skills in the pre-tests will be statistically less significant in comparison with the post-tests after the occupational therapy programme.

## 4.2 Used research methods and their evaluation

For the purposes of gaining the data at the beginning and at the end of the programme these methods were used:

1. Nottingham developmental assessment (CEECA, 2007) – Motor development – Fine motor skills – assessment of 28 items in child development (Gazarková, Kováčová, 2015).

In order to gather the data, individual items of CEECA (2007) were assessed on a numeric bipolar scale with a 5-point rating. Number 1 assessed the observed phenomenon as unmanaged, number 2 as managed with difficulties and substantial help of another person, number 3 as managed with a high error rate,

number 4 as managed with rare smaller errors and number 5 as fully managed. The assessment consists of three parts – for the purposes of this research the part for motor development was used (Gazarková, Kováčová, 2015). The evaluation of pre- and post-test values was conducted by standard mathematic methods including statistical testing for the purposes of confirming the statistical significance.

2. K-ABC-Kaufman Assessment Battery for Children (Kaufman et al., 1983, issued by Psychodiagnostika, Bratislava, 1999). From this testing battery, two sub-tests were used for the evaluation: Hand Movements and Triangles. In the subtest of hand movements, a child must see and perceive a sequence of movements in space and time and needs to remember them for a short time in order to repeat them using their hand. In the subtest of Triangles, the task of the child is to assemble several identical triangles (yellow on one side and blue on the other side) to match an abstract form. The evaluation of pre- and post-test values was conducted by standard mathematic methods including statistical testing for the purposes of confirming the statistical significance.
3. Non-standardised observation sheet for occupational therapy assessment evaluating general readiness for the process of writing from the perspective of occupational therapy. It assesses the stage of grasp, the level of working stamina, concentration of attention, muscular strength of the fingers, muscle tone, laterality and spontaneous drawings. Individual tasks are assessed based on a five-point scale (Kováčová, 2014). This observation sheet was not evaluated in this study considering the fact that there is a large amount of analysis of individual tasks.

### 4.3 Occupational Therapy Intervention

The occupational therapy programme consisted of 11 blocks. The activities were divided into group activities (Table 4) and individual occupations (Table 5). The group activities were conducted before the individual sessions. The individual sessions were not focused on training or repeating the tasks that were not managed in the group sessions. The goal of the group sessions was to prepare for the communication with the educator in the context of tasks that are connected with the process of writing and reading in the school environment. The total of 86 sessions was conducted from September to August (excluding holidays). The attendance of the clients at the group sessions was 85 % and the attendance of individual sessions was 94 %.

**Table 5** Content of the occupational therapy programme – group form

Block	Content of the group occupational therapy sessions
1.	Introductions. Space orientation in the office (naming and getting to know the material). Body work in macro- and micro-space.

2.	Occupations using hands. Prints. Creating group collages of a fishing pool and the life in it.
3.	Occupations using paper – tearing and rolling. Group activity.
4.	Occupations using paper – cutting, sticking. Working in small groups.
5.	Occupations using paper – cutting, sticking, puzzle from pieces. Group activity.
6.	Occupations using paper – cutting, drawing, and folding paper. Working in small groups.
7.	Occupations using wire. Creating shapes according to a model. Working in small groups.
8.	Occupations using wood. Assemblage. Working in small groups.
9.	Occupations using plastic. Using different types of scissors. Working in small groups.
10.	Occupations using glass. Experimenting with glass paint. Group work.
11.	Post-intervention assessment of the level of fine motor skills and graphomotor skills according to the described research methods. Final evaluations. Portfolios and works exhibition.

**Table 6** Content of the occupational therapy programme – individual form

Block	Content of the individual occupational therapy sessions	
1.	Informing the client about the goals and content of the programme. Pre-intervention assessment of the level of graphomotor skills in specific standardised and non-standardised tests (maximum of three sessions).	
2.	Each further individual session was focused on one topic and the therapist assessed the level of performance based on a 5-point assessment scale ** Each individual session was focused on supporting graphomotor skills supplemented by manual occupations.	Movement. Fast and slow movements. Recognizing objects. Planning of movements.
3.		Gestures based on verbal instruction. Movement alphabet (e.g.: copy me or make a movement based on instruction). Movements and ideas.
4.		Intentional action based on instruction (in the area of independence – e.g.: combing hair, closing a zipper, grabbing a pencil).
5.		Working with templates. Tracing shapes.
6.		Working with templates. Finishing shapes.
7.		Working with graphic shapes – full straight line. Collage from circles. Using scissors.
8.		Working with graphic shapes – lines in various directions. Working with templates. Creating a picture.
9.		Working with graphic shapes. Combination of curved line in horizontal and vertical direction. Sewing.
10.		Working with graphic shapes – experimenting with lines rising diagonally, heart-shaped lines, upper and lower snip and upper and lower loop. Turning. Scrolling.
11.		Post-intervention assessment of the level of graphomotor skills in specific standardised and non-standardised test (maximum of three sessions).

\*\* Number 1 assessed the observed phenomenon as unmanaged, number 2 as managed with difficulties and substantial help of another person, number 3 as managed with a high error rate, number 4 as managed with rare smaller errors and number 5 as fully managed. The assessment sheet is divided into three parts – for the purposes of this research the part for motor development was used (Gazarková, Kováčová, 2015).

The occupational therapy intervention was conducted in the period of one school year as part of supporting children during preparation for entering the first grade of regular school in the following school year. Since the primary diagnoses of the children varied (table 3), the therapist used a combined form of intervention – a group form as well as individual form of occupational therapy.

## 5 Research results and analysis

results gained from the pre-test and post-test data were verified using statistical significance (F-test and Student's t-test) before and after conducting the support-orientated occupational therapy programme.

### Data Evaluation and Interpretation

**Research Task :** To perform and to evaluate support-oriented occupational therapy programme as a long-term (lasting during a full school year), regular intervention in the occupational therapy office (a group session once a week and an individual session once a week).

#### a) Nottingham Developmental Assessment

The comparison of pre- and post-intervention values of the whole group is processed in the tables (Table 5). The distribution of individual evaluations was 0.51 in the category of writing skills and 0.85 in the category of work skills.

**Table 7** Total scores in the area of fine motor skills

Area of development	Category	Average value in the group		
		pre-intervention	during intervention	post-intervention
Motor development	Writing skills	3.08	3.64	4.22
	Work skills	3.15	4.00	4.51

Both group and individual evaluation points out a positive change in both categories – in the category of writing skills it is +1.14 and in the category of work skills it is +1.36. The table evaluation is valid for the evaluation of the group with an average count for each client. Despite these values, the testing did not prove a statistically

significant change in the group; however, the progress of two clients was statistically significant.

### a) K-ABC-Kaufman Assessment Battery for Children

Processed in the tables (Tables 6-11) we present the comparison of pre- and post-intervention values in the group of clients – for each of the above described subjects individually.

## The Subtest of Hand Movements

**Table 8** Total score in the subtest of Hand Movements in K-ABC

	Median	Minimum	Maximum	Modus	Average	Std**	Variance
<b>Test</b>	9	0	20	9	9.188	5.344	28.563
<b>Re-test</b>	16	0	25	16	14.125	8.007	64.117

**Table 7** Statistical values for a two-tailed F-test for variance in the subtest of Hand Movements in K-ABC

	Test	Re-test
<b>Mean</b>	9.2	14
<b>Variance</b>	30.6	68.4286
<b>Observations</b>	15	15
<b>Difference</b>	14	14
<b>F</b>	0.4472	
<b>P(F &lt; = f) (1)</b>	0.0721	
<b>F crit (1)</b>	0.4026	

**Table 9** Statistical values for two-tailed paired t-test for the means in the subtest of Hand Movements in K-ABC

	Test	Re-test
<b>Mean</b>	9.2	14
<b>Variance</b>	30.6	68.4286
<b>Observations</b>	15	15

<b>Pears. correlation</b>	0.8538	
<b>Hyp. difference of mean values</b>	0	
<b>Difference</b>	14	
<b>t stat</b>	-4.0678	
<b>P(T &lt; = t) (1)</b>	0.0006	
<b>t crit (1)</b>	1.7613	
<b>P(T &lt; = t) (2)</b>	0.0012	
<b>t crit (2)</b>	2.1448	

On the set level of statistical significance of  $\alpha = 0.05$  (in case of two tailed test  $\alpha/2$ , in case of one tailed test  $\alpha$ ) we found out again that  $F < F_{crit}$  and  $p > \alpha/2$ , which means that two samples dependent on the input and the output have the same variances. Student's t-test for the mean value in case of two tailed as well as in case of one tailed test showed that  $t > t_{crit}$  and  $p < 0.05$ . The results point out to the fact that differences in means in two dependent samples are statistically significant.

### The Subtest of Triangles

**Table 10** Total score in the subtest of Triangles in K-ABC

	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Modus</b>	<b>Average</b>	<b>Std**</b>	<b>Variance</b>
<b>Test</b>	1	0	2	1	0.8125	0.75	0.5625
<b>Re-test</b>	0	0	1	0	0.25	0.44721	0.2

**Table 11** Statistical values for two tailored F-test for variance in the subtest of Triangles in K-ABC

	<b>test</b>	<b>Re-test</b>
<b>Mean</b>	0.25	0.8125
<b>Variance</b>	0.2	0.5625
<b>Observations</b>	16	16
<b>Difference</b>	15	15
<b>F</b>	0.3555556	
<b>P(F &lt; = f) (1)</b>	0.0268845	
<b>F crit (1)</b>	0.4160691	

**Table 12** Statistical values for two tailed paired t-test for the mean values in the subtest of Triangles in K-ABC

	Test	Re-test
Mean	0.25	0.8125
Variance	0.2	0.5625
Observations	16	16
Pears. correlation	0.5465944	
Hyp. difference of mean values	0	
Difference	15	
t stat	-3.576237	
P(T <= t) (1)	0.0013784	
t crit (1)	1.7530503	
P(T <= t) (2)	0.0027568	
t crit (2)	2.1314495	

With the statistical significance set on the level of  $\alpha = 0.05$  (in case of two tailed test  $\alpha/2$ , in case of one tailed test  $\alpha$ ) we found out that  $F < F$  crit and a  $p > \alpha/2$ , which means that two samples dependent on the input and the output have the same variances. Student's t-test for the mean value in case of two tailed as well as in case of one tailed test showed that  $t > t$  crit and  $p < 0.05$ . The results are statistically significant.

### 3) Non-standardised observation sheet for occupational therapy assessment

This observation sheet was not evaluated considering the fact that there is a large amount of analysis of individual tasks. With the statistical significance set on the level of  $\alpha = 0.05$  (in case of two tailed test  $\alpha/2$ , in case of one tailed test  $\alpha$ ) we found out that  $F < F$  crit and a  $p > \alpha/2$ , which means that two samples dependent on the input and the output have the same variances. It can be stated that there is a statistical difference in the group in the category of writing skills. Student's t-test for the mean value in case of two tailed test as well as in case of one tailed test showed that  $t < t$  crit and  $p < 0.05$ . The results are statistically significant.

The effectiveness of the supportive occupational therapy programme focused on the development of graphomotor skills was observed in achieving statistically

significant differences in all evaluated categories. Based on the hypothesis worded as – *The values in the area of graphomotor skills in the pre-tests will be statistically less significant in comparison with the post-tests after the occupational therapy programme* – is confirmed.

## 6 SUMMARY

The theoretical background of early childhood occupational therapy draws from the knowledge of developmental psychology, early childhood intervention in education and therapy (specifically from the transaction developmental model described by Tichá, 2008), and from counselling focused on families (on the support of parent competencies; on the support of the quality of life of children with disabilities in the area of life competencies as described by Havigeová et al., 2013; Truhlářová et al., 2015), and from the generally perceived occupational therapy (Krivošíková, 2011).

Children and their development through offered occupations become the centre of attention. Meaningful occupations are considered main means of help in early childhood occupational therapy. In this system of help, the needs of children and their parents are fulfilled system-wise with the focus on future successful continuation. The presented occupational therapy programme is suitable as an inspiration; and based on its proven success and achieved progress, it may serve as a model for further occupational therapy interventions focused on the stimulation in the graphomotor area.

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# Research on training of special education teacher in China

Wang, Yan; Xiao, Fei

(book review)

Reviewed by Shangwei Li

As the first book about training of a special education teacher in China, “*Research on training of special education teacher in China*” was written by the professors Wang, Yan and Xiao, Fei in Beijing Normal University, who were good at special education training and research; and systematically introduced the history, status, features, trends and policy recommendations of training of special education teacher, which mainly is involved in four chapters (preface does mainly research meanings and fifth chapter does appendix).

First, from international perspective in the first chapter, the authors completely showed the developmental history, policies and laws, system (including purposes, modes and courses of pre-service and in-service training), features and trends of training of special education teacher in China (including Taiwan and Hong Kong), America, England, Japan and Russia; and make the readers clearly know the overview of pre-service and in-service training of special education teachers in China and some developed countries. If introduction to history, status and features make the reader deeply understand the past of training of special education teachers in some countries, prediction about international trends make the readers clearly feel the “spring” of training of special education teachers in the world.

Second, basing on the Chinese reality in second, third and fourth chapter, the authors systematically investigated and analyzed the developmental status (mainly involving in gender, age, teaching years, educational background, title; professional knowledge, skills and attitudes; professional development; influencing factors; etc.), features, problems, and policy recommendations of special education teachers; history, status (including pre-service, in-service training), influencing factors and policy recommendations of inclusive teacher education; and the status (including number, ages, educational background, degree majors, titles, research fields, in-service training, academic communication and cooperation of the educators; number, genders

and employment of the educated; and training purposes, training methods, curricular system; etc.), features and policy recommendations of special education programs in higher education institutions. On the one hand, the status investigation and features analysis of special education teachers, inclusive teacher education and special education programs make the readers truly face up to achievements, difficulties, problems and challenges of training of special education teachers in China. On the other hand, policy recommendations make the managers, educators and researchers of special education deeply understand the future responsibilities and working purposes of training of special education teachers in China.

Third, due to involving in limited research object, the book, to some extent, did not completely represent the status and features of training of special education teachers in China. For example, cases about inclusive teacher education in third Chapter mainly involve Beijing and Henan Province, and investigation fields in pre-service training of special education teachers in fourth chapter do not involve master and doctoral study programs.

In one word, the book perfectly united the history with reality, international with local views, theory with practice, and qualitative with the presence quantitative research, which has completely showed professional personalities and deeply academic qualities of the authors. Although the book was published in 2012 and involved limited object and fields, and some new features and changes have happened in training of special education teachers in the world (including China, America, England, Japan and Russia, etc.), history has not disappeared and challenges will forever exist. Thus, it is very necessary and important to deeply read, research and reflect on the book "Research on training of special education teacher in China".

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# Dictionary of special education terms

KROUPOVÁ, Kateřina a kol. *Slovník speciálněpedagogické terminologie*. 1.vyd. Praha: Grada, 2016. ISBN 978-80-247-5264-8.

(book review)

**Reviewed by Lenka Dzidová**

Currently, the orientation and understanding of terminology within the different specialized educational fields is on the front burner due to the interdisciplinary overlap in special education. This publication is processed as a professional text to approach this discipline to students, experts of related fields, the general public and the others interested in. It also acquaints us with the knowledge of special education theory and practice in our country and brings current foreign experiences, too.

This publication is divided into 10 chapters according to individual fields of special education. Chapters are related to the terminology of special education of persons with a visual impairment, speech impairment, people with hearing disabilities, with limited mobility, with mental disabilities, psychosocial hazard and disruption and the terminology of specific learning disabilities.

Specialized text is enriched by a chapter regarding key concepts in the education of children, pupils and students, thereby it follows the current world trends. The opening chapter is composed by general special educational terminology and last chapter is focused on the terminology of therapies in special education, which fully covers the demand connection of theory and practice. The content of the book is supplemented by the list of passwords for quick and effective orientation in professional texts and even without the knowledge of the special education in which the password belongs to.

Each chapter is handled by another author which is aimed to this issue and supplemented by the list of literature which references to particular key terms of each chapter. Given passwords are ordered alphabetically and completed by terminological equivalents in English and Latin language which is considered as very helpful because it is useful for following work with Internet resources nowadays.

The book is written by 10 authors who have provided us with well arranged and sufficiently saturated information based on current trends and special education

needs. Individual chapters are handled by qualified professionals engaging in selected fields. Each chapter contains general and specific information such as anatomical passwords, best known syndromes, categorization within some passwords interpretation, explanation of known abbreviations, names of famous therapies, concepts and methods, the contents of the most famous tests and scales used in practice as well as organizations and associations respectively a list of services in the given field of special education.

**The first chapter** is devoted to general concepts and some parts of it is dedicated to frequently mentioned the International Classification of Diseases, the International Classification of Functioning, Disability and Health and major organizations - such as the Disabled People's International, the European Disability Forum or associations such as the Czech National Disability Council including their abbreviated content.

**The second chapter** includes terms related to the care for people with visual impairment and there are also mentions of occlusive therapy, pleoptic and orthoptic therapy, the instruments and techniques used in this field. There is also an outline of the organization such as Tyfloservis and Tyflocentrum, their content and differences in the providing of social rehabilitation service.

The **third chapter** is concerned with terminology of communicative disability which is enriched with a description of the formation within individual consonants. There is also mention of the tests used in clinical speech therapy practice, next mention is for example of discussed therapy Chirophonetics that doesn't have many supporters in the Czech Republic. There are also mention of instrumental methods like electropalatography, videofluoroscopy or visible speech.

**The chapter four** includes key concepts for people with hearing impairments and explains the concepts related to clinical examinations such as BERA (Brainstem electric response audiometers), CERA (Cortical electric response audiometers), OAE (Otoacoustic Emissions), SSEP (Steady state evoked potentials) concisely and comprehensively. The incomprehensible difference between the concepts such as Czech signed language, signed language and sign language is also expressed for the layman very well.

**The fifth chapter** concerns the terminology of persons with mobility disabilities. There are some terms associated with symptoms of physical disability, the most frequently rehabilitation concepts and language programs such as Makaton or Sign to speech. We can find there some surprising and new terms like Boccia, one of Paralympic sports.

**The sixth section** is devoted to the terminology of persons with mental disabilities that acquaint the public with services such as Sheltered housing, Job club, Personal assistance, Day care, Supported employment, Respite care and it is a great asset. Clarification of the terms is associated with a diagnosis of ASD and it has an importance according to the increase of incidence recorded worldwide recently. Special

attention is given to in practice very commonly used programs such as Applied behavior analysis method, Structured learning, TEACCH program, Visualization.

**The seventh chapter** relates to persons with psychosocial hazards and disruptions and there are the key concepts enriched with mention of Cognitive behavioral therapy and their methods such as Problem solving training or Parent management training.

**The eighth chapter**, specific learning disabilities, gives knowledge about the methods used by pupils with these disabilities such as the Method of coloured cuboids, Method of coloured letters, Method of good start, Fernald method, Tracing method. The list of the most commonly used scales and tests of reading, auditory analysis and synthesis is beneficial.

**The ninth chapter** includes key terms of the education of children, pupils and students exceptionally gifted. It is now very discussed field, full of frequently used but little cleared expressions such as Brainstorming, Mentoring, Tutoring, etc. We can assess the list of some alternative programs of talented individuals education and classification system of education aims very positively. The important part is devoted to the understanding of intelligence tests and their diagnostic risks. Also in this chapter, the reader can get acquainted with organizations for talented individuals.

**The last chapter** is devoted to the terminology of the therapy, that has theoretical framework adequately supported by practical dimensions. The author of this chapter gives a reasonable list of current therapies. There is also a clarification of the role of some skilled professionals such as Play specialist, Clown clinic, Co-therapist and others.

We meet with a number of abbreviations that can be understood by experts from highly specialized fields as part of the orientation of special education. It is quite difficult to keep up with terminology for others and it's certainly depressing even for the helping professions and family members of persons with disabilities. These terms are used in spoken and written form, therefore it is very important to understand these concepts. Although the authors recognize the considerable terminological diversity of the terms and transience due to requirements for timeliness terminology, so the publication may be beneficial not only for the aforementioned individuals and students, but it could enrich all who are interested in this issue.

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# Dignity: Human identity and need

Badeng Nima, Liu Chong. *Study on the Rebuilding of Culture and Construction of a Harmonious Society*. Beijing: People Press. 2016. ISBN 978-7-01-016214-0  
(book review)

## Reviewed by Bu Qiong

The volume *On Dignity – Study on the Culture Rebuilding and Harmonious Society Construction in Earthquake-stricken Wenchuan* is an academic monograph which is expanded and improved on the basis of the general report of the project *Study on the Culture Rebuilding and Harmonious Society Construction in Earthquake-stricken Wenchuan*, a major bid subject of the National Social Sciences Fund led by Professor Badeng Nima. As the author of the book, who is a nationally renowned teacher, educator who is of Tibetan nationality, and doctoral supervisor on pedagogy, Professor Badeng Nima has been dedicated to research into such fields as multicultural and national education, the theory of multicultural education, and a comparison between educational and social development regions. By applying the Stratification Theory to the exploration of the nature of education, he has engaged himself in studies of anthropology, sociology, and pedagogy for cultural and educational development in ethnic minority areas. In the aftermath of the severe earthquake in Wenchuan, he flew immediately to the disaster-hit area during the earthquake relief period for dozens of days. He experienced the critical period of disaster response and temporary settlement together with the earthquake victims. During the recovery, reconstruction, and development of the disaster area, he led his research team in several in-depth investigations to collect large amounts of first-hand data.

The book is divided into eight parts. The preface provides an overview of the basic issues concerned and defines such key words as identity, need, dignity, and status as basic explanatory points of the present study. It states that: “the several issues in question are not intended to give close-ended answers but to bring more attention to the issues concerned and engage more people in the exploration of the roots of these issues, and in the pursuit and construction of the dignity of Chinese ethnic peoples and national harmony and civilization.” In the Introduction, the rationale, methodology, results, benefits, and academic value of the present study are described

in detail, and issues to be studied further are proposed; in the first chapter, through investigation and review of the current situation and existing problems in the disaster area during different periods of the disaster response and temporary settlement, recovery and reconstruction, and development, major problems during reconstruction are analyzed; the second chapter mainly discusses references to international experience and implications regarding the post-quake cultural and social rebuilding; the third chapter discusses the “culture-society” base for the reconstruction of the disaster area, analyzes the relationship between culture and society, and proposes that cultural construction is the most fundamental element of the construction of a common cultural psychology for social development; the fourth chapter addresses the reflections on the post-disaster construction as a life process of nations and humans from the perspective that “people first” is the objective of cultural construction, its core is human dignity, and it is the central axis of the construction of a harmonious society; the fifth chapter discusses the implications for the pathways to China’s education after a disaster through explorations of the origin of educational problems and educational dignity, and in the sixth chapter, specific suggestions are put forward from eight aspects, such as “‘people first’ as the reason to be followed during relief efforts” and “involvement of residents in the disaster area in all relief efforts associated with post-disaster life”.

After the submission and publication of the project results as the basis for the book, they were widely recognized in educational circles and were published and recommended in *China Science and Technology Achievements* (No. 13, 2016). This article describes four aspects of innovative academic achievements. They are: (1) the study of dignity, which is included in cultural studies. Culture is human behaviour and all of its consequences. It can be de-structured into four levels of belief, value, behaviour, and system. Understanding life defines who we are and then how much we are worth and what we need physically and psychologically. Dignity is a combination of human identity and need. Human dignity gained from equal status is the core of cultural construction and also the starting point of the construction of a harmonious society; (2) interpretation of the connotation of society and its relationship with culture. Individual behaviour and interpersonal interaction are the foundation for social construction and also the starting point of social structure and the social system. Society exists to ensure human survival and reproduction, whereas culture is the result of human behaviours. With an outlook on life and values imbued by culture, a human faces various conditions in real society and chooses and reflects on his way of existing. Society is humanity’s group structure mode, while culture is the result of group acts. Both are subject to selection and filtration through education and remain to be shared by all humans and affect the future; (3) dignity is the basis of social equity and justice. Social equity is targeted at the homogeneous and homologous lives of humankind. Every human enters society as an equal being and

enjoys natural resources and opportunities in an equal way. Justice is a principle recognized by everyone and the basis for the construction of social institutions and systems. The relationship of justice to equal dignity determines that people are equal, enjoy the same rights under the protection of their countries, and have the same obligations and bear the same responsibility despite their background, qualifications, environment, and nationality; (4) a new interpretation of the connotation of education. Education is a process of gaining wisdom to process and use knowledge for humanity as a whole and for individuals to obtain the dignity that they deserve. It is intended for people to win their dignity as humanity. "Wisdom" is the sum of the concept, strategy, and ability to process and use knowledge, while "knowledge" is the result of humanity discovering and creating culture as a result of its desires. School education is a cause of people consciously and purposefully promoting the benefits of education outlined above.

These academic achievements are the main reason I recommend readers to carefully read, think about, and digest the book. I believe readers will be itching to find the book and will not put it down until they finish it.

The book provides research experience with basic theory, applied theory, and practical recommendations for multidisciplinary, cross-cultural and cross-regional comprehensive research in the field of research in the social sciences; it gives a new understanding and interpretation of theoretical issues such as cultural connotation, social structure, and the role of education in the construction of a harmonious society; it enriches and completes the understanding of the relationship among culture, society, and education for such subjects as cultural studies, sociology, and pedagogy, and provides new theory and methodology for similar studies. Therefore, the book is a very valuable source for readers interested in studies of society, culture, and education.

I am very excited to recommend the book to those who work in and do research on culture and education. I also refer it to the administrative staff involved in culture and education, and would like students undergoing education and every reader capable of reading to have it. It is to be hoped that every reader experiences a happy and dignified reading trip and has a dignified life.

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# Information for authors



## Basic information about the JEP

*Journal of Exceptional People (JEP)*, should be based on twice a year publishing period in both electronic and traditional – printed form. To guarantee professional standards of the Journal we have applied to the front of special needs teachers, psychologists, therapists and other professionals in the U.S., Finland, Spain, Slovakia, Hungary, China, Russia, Poland and other countries. Above mentioned scientific journal aspires to be registered into the international database of impacted periodicals (Journal Citation Reports).

*Journal of Exceptional People (JEP)* will provide research studies and articles on special education of exceptional people. This area covers individuals with disabilities and, on the other hand, gifted persons. The *Journal* will focus on publishing studies and articles in the field of education, social science (sociology) and psychology, special thematic issues and critical commentaries. The publishing language of the *Journal of Exceptional People* is to be English exclusively.

The periodical is going to be published since the year 2012 by the **Institute of Special – pedagogical Studies at Palacky University in Olomouc**.

## Instructions for authors

Scope of the article is strictly given – must not be more than 12 **pages** formatted according template (including list of references, images, tables and appendices). The body of the text shall be written in letters of Times New Roman size 11 b. Different styles are undesirable, use the normal template and also please avoid numbering of pages. The final version of the articles ought to be formatted to the paragraphs. The Editorial Board reserves the right to refuse contributions.

The file should be saved under the same name with the surname of first author and sent in a format with the extension doc or docx (MS Word 2007 and upper versions). Before sending a file with the paper it is required to scan for possible infections or viruses. Authors are responsible for content and linguistic aspects of the contributions. Please, do not number pages. Images, graphs and tables should be numbered according to the example (**Figure 1: Preparatory exercise** [Times New Roman 11 b, italics]).

It is highly recommended to spend the necessary time correcting the paper – every mistake will be multiplied. Posted papers unsuitable for printing will not be published! Ensure appropriate division and balance between the various parts of the contribution and aesthetic placement of pictures and diagrams as well as their quality. Terminological correctness and formality are required.

Please note that publication of papers in the Journal will be free of charge.

Section headings should be numbered and written, as described in following manual: standard signs, symbols and abbreviations are to be used only. Monosyllabic preposition are ought not to figure at the end of the line, but at the beginning of the next line – they can be shifted using the “hard returns” CTRL + SHIFT + SPACE.

The list of literature and references to resources ought to follow these norms and directives: ČSN ISO 690 and ČSN ISO 690-2 or Publication Manual of the American Psychological Association APA.

Completed contribution shall be sent in an electronic form to the mail address: **dan.bibaged@centrum.cz**. In the subject line of the email note: JEP – contribution

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