



Journal of Exceptional People

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



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Introduction

Dear readers,

you are just reading the autumn number of our JEP magazine, which contains a wide range of contributions from authors focusing on the various topics. The very first article we publish deals with resilience of people with disabilities in the northern region of Ghana (M. Opoku et al.). Following is the contribution of the Spanish authors (I. García-Martínez et al.), which will give readers an idea of the problems of integrating ADHD students into ordinary classrooms not only in Spanish Andalusia. Another article by Nigerian authors focuses on assessing the roles of various media platforms that affect the daily life of the blind and visually impaired in the southern part of Nigeria (J. Olayi et al.)

Another article is a literature review from various sources of terms such as inclusive culture, inclusive policy, inclusive policy and inclusive practice.(S. Kumar). K. Červenka from Masaryk University in Brno describes the results of two qualitative researches focused on the situation of children with emotional and behavioral disorders and in the following interesting article called *Women in Private Sex Business perspectives of relationship level* we encounter issues of sexual services (Southern Bohemia) in the context of often disturbed social relationships between family and partner.

The Chinese author, L. Xianmei, deals with the current issue of autism and the success of applied psychosomatic methods of intervention. Another article by Kazakhstan authors (S. Aubakirova, K. Mukatayeva) gives an overview of how future teachers in this country are ready for inclusive education. In the following article Czech writers A. Hiršová and D. Finková chose the lifestyle of visually impaired people as a topic of their contribution and they introduce us to the results of the extensive research that was realized in the spring of 2017 and the final contribution (J. Langer, M. Rypka) reports on the results of research focusing on the subjective

assessment of the perception of complexity of signs of CSL from the perspective of potentially hearing students.

A number of papers conclude three more reviews of interesting books on inclusive education and qualitative research interviewing.

The actual conclusion of the magazine itself is devoted to the usual information concerning the formal pages of contributions. Our editors put into this November issue texts from authors from seven countries in Europe, Africa and Asia. We continue to bring special pedagogical themes closer to the reader not only in the vertical plane but also in the horizontal plane.

Pleasant reading

Pavel Svoboda, Jan Chrastina – executive editors

“They think we are all beggars”: The resilience of a person with disability in Ghana

(overview essay)

Maxwell Peprah Opoku, Naomi Gyamfi, Eric Badu, Wisdom Kwadwo Mprah

***Abstract:** In this study, the authors employed a single-participant approach to investigate the resilience of persons with disabilities in the face of discrimination and marginalisation. An interview was conducted with a woman living with physical disability in the capital of the Northern region of Ghana. The study found that despite barriers erected against a person with disabilities in the study area, the individual has striven to live independently by engaging in productive activities. The discussion of the study focused on the urgent need for society to empower persons with disabilities to enable them to utilise their inherent capabilities to allow them to become productive members of the society.*

***Keywords:** Self-determination, persons with disability, inclusion, employment, resilience, Ghana*

1 Introduction

The Convention on the Rights of Persons with Disabilities [CRPD] makes it mandatory for signatory states to create an enabling environment that would promote full inclusion of persons with disabilities. Given this, discourses at the international level have mainly revolved around how the best states could open up respective societies and create opportunities for their population living with disabilities (Anthony, 2011). However, consistently, persons with disabilities have limited opportunities to participate in most activities available in the society because of prolonged barriers erected against them (Avoke, 2002; Kassha, Kassah & Agbota, 2014; Forlin, Lau, Chan & Peters, 2012). For instance, in Ghana, they have been reported to have limited access to necessities of life such as education, employment, and health care (Anthony, 2011;

Badu, Agyei-Baffour & Opoku, 2016; Kassah, 1998; Opoku et al., 2016). Despite these barriers, the resilience of the few persons with disabilities who have made substantial contributions when it comes to the development of self-esteem is rarely reported as the emphasis is always placed on their challenges. Thus, this brief report aims to focus on the strength in disability which drives them to participation in economic activities despite the existence of barriers.

The challenges of persons with disabilities encounter can be traced to several factors – a major one being negative perceptions people hold about disability. In most societies in Ghana as well as in many countries, disability is not tolerated due to negative perceptions of people (Avoke, 2002; Kassah et al. 2014). Largely, people attribute the occurrence of disabilities to spirituality or explain regarding other superstitious beliefs (Agbenyega, 2003; Baffoe, 2013). Thus, when a child is a disabled, the most likely reason for this is that the gods are annoyed (Baffoe, 2013). Consequently, such individuals are labelled and sometimes segregated from other members of society and thus, limiting their ability to live independently like any other members of society (Avoke, 2002; Kuyini, Alhassan & Mahama, 2011; Naami & Hayashi, 2012). For instance, labelling persons with disabilities as sick, stupid person, idiot, dumb, imbecile, and river children create challenges for them and limit opportunities for them to use their potentials (Avoke, 2002; Agbenyega, 2003; Baffoe, 2013). This works against their self-worth and individual capabilities to support themselves and engage in productive activities.

Society has low expectation for persons with disabilities because of doubts about their capacities. The deep-seated stereotype views about disability have accounted for the lack of support to persons with disabilities in societies to enable them to participate in areas productive areas that would see improvement in their lives. The popular assumption in most societies has been that persons with disabilities are unproductive and thus limited to a life of dependency (Avoke, 2002; Munyi, 2012). Especially, persons with disabilities are not given the necessary support, and opportunity to have access to necessities such as education (Kassah et al. 2014; Naami & Hayashi, 2012). Consequently, lack of education means limited opportunity to acquire skills to participate in socio-economic activities (Crowley et al. 2013; Opoku et al. 2016b). Therefore, it is not surprising that many persons with disabilities have resorted to begging in the streets to survive.

Street begging has further worsened the plight of persons with disabilities as society looks down on them as individuals who have to rely on the generosity of others to make a living. In an effort towards achieving an inclusive society in Ghana, commentators are searching for supportive measures to institutionalise in societies for persons with disabilities. On top of that recommendations have been made on the need to project persons with disabilities and celebrate their achievements as part of awareness creation. Therefore, the purpose of this study is to share the story of

an individual who defied the odds to make a living by utilising the little resources at her disposal. The study adopted a single case study to investigate the barriers the individual has been able to overcome and engage in income earning activities.

2 Disability and theory of resilience

The physical and social barriers faced by persons with disabilities are widely reported in the literature, and it is mainly investigated from the perspectives of socio-medical models of disability which highlight limitations encountered based on impairments. This study adopted the theory of resilience which provides a useful framework to analyse context and individual variables which may impact or serve as motivation to persons with disabilities to overcome barriers they face in societies. The theory is a strength-based approach to analyse capacity of persons with disabilities to overcome the obstacles erected against them in the society (Zimmerman, 2013). The theory underscores the ability of an individual to adapt to society in the face of adversity or barriers erected against their equal social participation (Ledesma, 2014; Southwick et al. 2014).

The expectation and stereotype views about persons with disabilities have contributed to a limited avenue for them to explore opportunities in societies. Society has their biases against persons with disabilities. Therefore, efforts have to be made before persons with disabilities could have access to opportunities available in the society (Carter et al. 2015; Frankland et al. 2004). In the midst of scarcity, major determinants of resilience in the field of disability have been linked to social barriers erected against persons with disabilities (Ledesma, 2014). Persons with disabilities are endowed with innate abilities which could only be teased out once their strength and capacity have been identified (Field, Server & Shaw, 2003). As discussed by Zimmerman (2013), the availability of assets such as self-esteem and self-efficacy determines how far persons with disabilities would be able to respond to barriers. To roll-out policies which would have an impact on the lives of persons with disabilities, it is important to find out how they think about themselves so as to figure out the best way to reach out to them (Wehmeyer & Garner, 2003). The support could be in the form of creating an enabling environment for them to explore opportunities available in the society.

Society has to acknowledge the primary role persons with disabilities could play to support their lives and that of the society. Until people are educated about the individual abilities and capabilities of persons with disabilities, they would always be regarded as second-class citizens who have to depend on society to survive (Field et al. 1998; 2003). The quest to attain an inclusive society depends on realising the capabilities of persons with disabilities, then, provide the platform for them to exhibit their talent (Field, 1996; Frankland et al. 2004). Despite these barriers, the resilience

of the few persons with disabilities who have made tremendous achievements in life is underreported. This study takes the campaign of supporting persons with disabilities further by presenting the account of a person with a disability, who in the face of limited resources, has worked to make a living.

3 Method

3.1 Study design

The study was descriptive narrative research which used both observation and face-to-face interviews to collect data. The design provides the opportunity to closely study a private life of the interviewee with the aim of drawing inferences for the general well-being of the society (Muylaert, 2014). It encompasses the study of individual sharing their life story which has the potential to influence others or bring about transformation (Muylaert, 2014; Sandelowski, 1991). In achieving inclusive society in Ghana, it is important to project the image of persons with disabilities. Consistently, studies have reported the challenges faced by persons with disabilities (Avoke, 2002; Agbenyega, 2003; Baffoe, 2013; Kassah, 2008) without reporting on issues which could encourage them to live independently. In this study, our objective was to report on success stories of person with disability who has succeeded in a field of endeavour despite societal barriers. From a constructivist perspective of representing reality from the participant's perspective (Etherington, 2013), we documented the life story of a woman with a disability with the aim of gaining an understanding of how she became independent to encourage others who find themselves in a similar situation.

The participant for this study was Rahi (who agreed that we used her first name in writing the report) a 38-year-old married woman with two kids living with physical disabilities. She is a renowned seamstress who has committed herself to train other women with disabilities without a job in the community. She was born with her disability which she believed was caused by polio.

3.2 Data collection and procedures

We led discussions with executives of disabled people's organisation [DPO] in Tamale, which is the capital of the Northern Region of Ghana, to assist us in identifying any member of the association who has excelled in field of work. Rahi was recommended, and we met her in June 2016 and discussed the study objective with her and sought permission to use her for this study. As reported by Muylaert (2014), studying the life of an individual require close observation to corroborate the story of the participant. Due to this, we spent one week in the community observing and gathering information from family and friends in the community. We arranged a face-to-face interview at her place of work on the seventh-day of our observation.

We did not use structured interview guide which according to Muylaert (2014), is ideal for a narrative study in order to keep the conversation flowing. The interview centred on her daily routine, family support, access to education, job opportunities, her personal motivations, her views on begging and her appeal to the government for support. The interview was conducted by the first author and lasted two hours which was audio-recorded with permission from the participant.

3.3 Data analysis

Since Rahi could not speak English, we conducted the interview in the Twi language which is the dominant language spoken by most people in Ghana. After the interview session, we played back the audio to Rahi to make a decision on content which we could include in our reporting. Since the study was done from a constructivist perspective, it was important that we allowed the participant to listen to the taped conversation to make sure that her story is rightly reported (Creswell & Miller, 2000). The audio data was then transcribed verbatim into English by the first and second author separately. They met and condensed the two documents together before typing in Microsoft Word for analysis. We followed Muylaert's (2014) steps to analyse data in the narrative study. In Microsoft Word, we drew a table which was split into three columns under the following headings; transcription, reduction and keywords. We extracted key categories from the interviews which were assigned codes. These were pulled together to form the story in the analyses.

4 Results: Rahi's story

I could not go to school due to my disability. The school was very far, and I could not crawl such a long distance to attend school. I was able to go in the morning, but due to the sun, I found it difficult to come home when I close. The distance was too far. I told my father that the school is very far for me so I wanted to stop. Looking at how I was suffering, he accepted, because he did not have money to support my transportation. Even my health care was a problem sometimes my sister would come and tell him to take me to the hospital, but my father would refuse due to lack of money. My parents are good such that I cannot compare my mother to anybody. My mother does not have money, but she considers my disability and help me with the little she has. It would be better for family members to help us so that we become useful with our lives.

Even though I was not able to go to school, that did not deter me from pursuing my dream in life. I move from where we were to Tamale where I came to learn vocational training. When I came, somebody introduced me to DPO, and I have been a member ever since. While learning the training, I was also farming and selling bread

in front of our house and was able to raise money to pay for my hospital bills and also support my training. I am now a seamstress. I work for a company. What I have realised is that persons with disabilities are mainly poor because many employers do not want to employ them. When I was looking for employment, my employer told me I am disabled, so I will not be able to do the work. I responded that I could do the work since it is not my legs which I will use to work. When I was accepted, they shared responsibilities for us (employees). I did not exclude myself but agreed that all of us would do the sweeping. I accepted responsibility because I wanted to prove to them that disability is not inability. It hurt me that they were using my disability as a basis to deny me a job because I did not create myself so there is no need for people to judge me based on how I look. Besides my disability fits me and that is why God made me as such. Everyone could be disabled at any time so we should not use disability as a basis to discriminate between others. Even with my disability, I have been able to work effectively and now I have been able to buy my wheelchair. I do get money on my own, so I can buy whatever I want. I am proud to be employed, very happy to be working and can work like any other person.

I am now financially independent. People in this community see every disabled person as a beggar. They think we are all beggars. They have made it general to cover everyone. At times someone will see me in my wheelchair going to town or moving around, and they will come and give me money. I have been rejecting such things. I believe those who beg on the road side need help. However, they can also help themselves. My fellows with disabilities, my advice is stop begging and do something because everything starts small. I was selling bread on a small table in front of our house. That is how you should begin, and it will surely grow with time. With that, I was able to generate money to support my training. I did not rely on people. It took determination to get to where I wanted to be. So you also can. I have married, but I have not given birth, but I take care of one child and also help my siblings and their children.

I tell you that if you have disabled yourself, they will call you disabled but if you are active, no one will call you a disabled. No one calls me a disabled because I have decided to work hard. Where I am living now, there is no tap water in the house, so when I close from work, I take my bucket and go out and fetch water and cook for myself. If you are not disabling yourself, your neighbours will not call you a disabled. I really work hard and sometimes if I tell people the kind of work I do, they doubt about me. I work on the farm, I crawl and work on the farm. I do not consider my disability, but I always try to work hard. So when you go to where I stay and make enquiries about me, they will tell you I can do everything. I sometimes wake up at 4:30 am or 5:00 am and do my house chores, and by 6:30 am I will be at work because my work starts at 7:30 am. We should keep in mind that disability is not an excuse to be lazy, dependent and unproductive. This is because some disabled persons sleep and

wake up at 8:00 am or 9:00 am so if you have to send your child or sister to school or you need money to work, and you sleep like that how that can be possible? I want all disabled persons to behave like me! I want those who are not working to come to us and learn the sowing. I tell you, because of how hard I have worked, my employer now recruits other disables who are walking without jobs. Now there are other disables working with us. If I speak like this, some disabled will say I am working that is why I am saying that. However, they do not know how I suffered to come by this job. So, friends, you have to struggle for yourself because very few people and organisations are willing to help disabled people.

People always say that there are so many NGOs who are helping disables, but many NGOs support non-disabled than us. They spend much money on non-disabled and neglect us disables. Many of the disabled are not having money to feed, so I am pleading with authority to help create opportunities for disables who are beggars to find something to do. Even if they cannot take part in skilled training, they could be supported to do business. Also, I implore NGOs to help disables. Because I went to one NGO when I was aspiring for Assemblywoman in my village, but they didn't help me. They told me they would help me but they did not until I finished my campaign. Anyway, I lost, but I will try again next time. I campaigned, but no one voted for me.

5 Discussion

Resilience theory discussed the strength in disability which policy makers could capitalise on and support persons with disabilities in societies. Ghana has ratified international and domestic legislation in an effort towards achieving equal rights for all persons in the society. One major recommendation has always been awareness creation for societies to recognise the abilities of persons living with disabilities. However, persons with disabilities have endured systematic discrimination despite the existence of both local and international legal laws aimed at protecting their rights (Anthony, 2011; Opoku, 2016). As documented by other studies, there are barriers faced by persons with disabilities in most developing countries in which Ghana is no exception. Barriers such as negative perception, limited access to education, jobs and other necessities hinder the inclusion of persons with disabilities in societies (Agbenyega, 2003; Kuyini et al. 2011; Munyi, 2012; Opoku et al. 2016a; 2016b; Naami & Hayashi, 2012). It is unsurprising that the resilience of persons with disabilities has received less attention in contemporary disability discourses.

Persons with disabilities have endured many years of marginalisation, but many of them have been able to survive, which underscores their spiritedness. Historically, persons with disabilities have not been favoured in societies because cultural interpretations were given to their impairments (Avoke, 2002; Baffoe, 2013; Kassah, 1998). However, their resilience is undoubted as they have been able to endure the

harsh environmental conditions while striving to make a livelihood. The reduction of persons with disabilities to individuals who feed on the benevolence of society was a major boost for the participant to overcome this erroneous notion. Persons with disabilities need to motivate themselves to reduce negative perceptions about them. As demonstrated by the participant, they have to fight and participate in social activities for society to see their ability.

The support Rahi had at the family level was invaluable which urged her to exploit her potential in life. The family provides invaluable support to its members with disabilities which are an essential resource, and motivation individuals need to enable them to unearth their talents (Kassah, 2008; Kassah et al. 2014). The acceptance of persons with disabilities at the family level would allow them to discover their potentials and confidence to go over barriers in the society (Abgenyega, 2003; Kassah et al. 2014). Despite the fact that Rahi's family did not have enough financial resources to enrol her in school, they supported her to acquire vocation skill to enable her to earn a living. With some push from family members and determination to make a living, Rahi supported herself through farming and petty trading to make a living. It is advisable that poverty or limited support from the family should not be a basis for persons with disabilities to sit idle and depend on the benevolence of society.

The needs of persons with disabilities are mainly ignored by society as they are looked down upon and expected to continue to maintain their status quo. Adverse perceptions about persons with disabilities have been a basis for their exclusion in societal activities (Abgenyega, 2003; Avoke, 2002; Kassah, 1998; Baffoe, 2013). Consequently, the inaccessibility of education indicates the absence of opportunities for persons with disabilities. In Ghana, special schools are found to be few and access limited to few children with disabilities (Opoku et al. 2016a; 2016b). This brings to bear the need for government to prioritise the implementation of inclusive education for persons with disabilities to expand their career opportunities in life. However, the implementation of the policy has been found to be facing challenges which mean that the government would be unable to extend the programme to other parts of the country (Anthony, 2011; Opoku et al. 2016a). Largely, their needs are overlooked and unable to benefit from jobs opportunities or engaging in productive ventures education open for the larger citizenry. It was not surprising that persons with disabilities have taken up begging as an alternative means of livelihood (Kassah, 2008). Due to the widespread of begging among persons with disabilities, they are seen as needy persons who may be unable to attain higher heights.

The absence of jobs has contributed to most persons with disabilities engaging in begging which seems to be the most easily available jobs. This kind of mentality further weakens persons with disabilities about aspiring to achieve higher heights. The engagement of most persons with disabilities in the begging business might have led to a generalisation that they are all beggars. It is important to state that not every

person with a disability are enthused about this kind of disability-begging synergy as they are motivated to feed on their sweat. As Rahi said, some people tried to give her money thinking that she is also engaged in this act which she said she refused all times. Rahi has demonstrated that most persons with disabilities are capable of supporting themselves and change the erroneous notion of society against them. Persons with disabilities could attain the self-worth in society in the event they are supported either by family or at the national level to overcome social barriers and engage in productive activities.

6 Conclusion

The study was only limited to only one person in the Northern Region of Ghana who has defied the current social obstacles and involved in activities reserved for other members of the society. Also, we relied on accounts of executives of the DPOs in the study area to settle on the participant, and we are unable to tell if she is the individual who have excelled in her field of work. Therefore, it is recommended that future studies look at the broader spectrum of society and engage persons with disabilities who have been able or do something to support themselves. Despite the limitation of the study, it provided a rare opportunity for an individual with a disability to share her life experiences.

The study has demonstrated that there is the ability in disability. Thus, policy-makers should focus on effective ways to support them to exhibit their talents in life. To achieve an inclusive society, the creation of space for persons with disabilities to participate in societal activities is inevitable. Persons with disabilities are capable of working as any individual so society, especially the family, should give them necessary support to enable them to become productive (Kassah et al. 2014; Naami & Hayashi, 2012). When such opportunities are given to individuals with disabilities regarding having access to education, vocational training or life skills, they will not become a burden on society (Baffoe, 2013; Crowley et al. 2013; Kuyini et al. 2011). On the other hand, person with disability has to be proud of their disability and not demeaning themselves. Once they accepted their disability and determined to work like any other person, society would open up spaces for them. It is not their destiny to depend on others to make a living as with the necessary training; they could work to support themselves.

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Does pedagogical coordination through the leadership influence Attention Deficit Hyperactivity Disorder (ADHD)? An international review

(overview essay)

Inmaculada García-Martínez, José Luis Ubago-Jiménez, Mohammed El Homrani

***Abstract:** This article proposes a literature review about the problems faced by the teachers when they have to achieve the inclusion of students who are diagnosed with ADHD. While searching the resources, we have also found that the establishment of collaborative work climate among teachers, the establishment of common goals and shared responsibility, are factors that favor the work with this type of students. In addition, these factors have been found to occur in contexts where shared and distributed leadership prevails.*

***Keywords:** Attention Deficit Hyperactivity Disorder (ADHD); distributed leadership; school improvement*

1 Introduction

The aim of the school is the improvement of student's learning. Work on behalf of the student is the emblem on that any teacher must be located (Seashore-Louis, 2007). The current school, far from being a place watertight and homogeneous, must move forward at the same time as society. On this matter, the teachers must recognize the diversity of their students and develop their professional capital (Fullan, 2010). Through the promotion of good practices and the collaborative climate among teachers, the fan will be opened towards the use of other strategies which encourage the inclusion (Hargreaves and Fullan, 2012).

2 Pedagogical Coordination and Leadership in Spain

For a better understanding, we introduce as an example the pedagogical coordination design of the Educational Spanish system. Thus, the Spanish Educational System maintains the same structure of levels and educational stages designed in the Organic Law of General Management of the Educational System (LOGSE, 1990). Although reforms of structure, curriculum, faculty organization and the centers themselves are being attempted, such reforms are still on paper until an education pact between political parties is achieved, which seems very difficult.

In relation to the structure, we can differentiate between *General Education* and *General Regime Teachings*. The first one includes early childhood education, primary education, secondary education (comprising compulsory secondary education, baccalaureate and intermediate vocational training), higher vocational training and university education. It also contemplates the adequacy of these teachings to students with special educational needs, distance education for students who cannot attend regularly to a teaching center and adult education. The second one, for its part, refers to the artistic teachings and the language teaching.

Focusing on the Educational purposes that are established in the educational laws, teachers and the educational community must work cooperatively for training the citizens of a future society, facilitating the inclusion of all. This will promote autonomous learning, critical thinking and the ability to learn throughout life.

To guarantee the proper functioning of schools, the educational law establishes the type of relationships that must exist between the various organs or organizational units of the school. These relationships can take different forms, depending on the organizational model; But in general, in every educational center, a vertical or hierarchical structure and a horizontal or functional structure are appreciated. In practice, there are no vertical or horizontal models, they are usually the result of a mixture of both. But why is pedagogical coordination so important among teachers? The pedagogical coordination provides a cohesive and integrated vision of learning that takes place in the schools. If there was no coordination, each group of students would build a different learning. In addition, teachers would be able to replicate the content taught by others and miss the possibility of achieving comprehensive and comprehensive teaching and learning processes.

To ensure an appropriate pedagogical performance, Spanish schools have the *Teaching Coordination Bodies* (see Table 1). They are coordination groups formed by teachers, whose objective is for students to acquire global and integrated learning. Due to the demands of providing quality teaching to the students and the work they entail, it becomes clear that teachers need to work within the framework of working groups.

Table 1: Spanish teaching Coordination bodies

Teaching Coordination bodies	
Cycle teams*	Didactic Departments**
Commission for pedagogical coordination**	Tutors and teachers' group meetings Cycle teams Composition and operation***

* **Kindergarten** and / or Primary Education.

****departments of** didactic coordination, orientation department and department of complementary and extracurricular activities when they impart Secondary Education.

*** **Kindergarten**, Primary Education, Secondary Education and bachelor's degree.

The relationship which appears between teachers in which bodies must be collaborative and characterized by trust and respect. All the curricular decisions taken are a matter for all teachers, which contributes to teachers being responsible for the teaching and learning processes of all their students, especially those who have special educational needs to achieve their inclusion. When schools staff get it, a distributed leadership exist at schools, that allow the school improvement.

3 Leadership and its implications on students' inclusion

In this regard, a factor that has been studied extensively on a global scale appears: pedagogical leadership (Pont, Nusche and Moorman, 2008; OECD, 2009; Leithwood, 2009; Hargreaves, 2001; Spillane, 2006; Bolívar, 2012; 2014; Bolívar and Ruano, 2013). Recognizing the multiplicity of meanings and variants of this factor in vogue, numerous studies have stated its positive effect on the improvement of the school results (Mulford, 2006; González, 2007; Peacock, 2014; Klar, 2012; Poultney, 2012). This hypothesis is what has led us to consider the research that we raised in this article. If the educational leadership shows better results in the improvement of the students in general, would it also display them in the case of pupils with Special educational needs (hereinafter SNE)? Does the teacher who works with such students supply his/her teaching by leadership, in its distributed form, in his/her professional career? Is there any relationship between leadership and improvement of performance of students with Attention Deficit Hyperactivity Disorder (hereinafter ADHD)?

In parallel, there are various studies that confirm the global prevalence of ADHD estimating that it is the same everywhere – 5.29% (Spencer, Biederman and Mick, 2007), with increased frequency among men than among women, in a proportion of 3 to 1 (Valdizán, Mercado and Mercado-Undanivia, 2007). It is estimated to affect between 2 and 5 per cent of the child population in Spain (Molina-Carballo, Naranjo-Gómez, Uberos, Justicia-Martínez, Ruiz-Ramos, Cubero-Millán,... and Muñoz-Hoyos, 2013) and can be defined as a persistent pattern of symptoms of inattention and/or hyperactivity-impulsivity that is more frequent and more serious

than the usually observed in people with a degree of similar development. These difficulties are started in early childhood and are associated with a deficit in the conduct governed by rules and a certain pattern of performance (Barkley and Russell, 1990). The disorder persists during adolescence in the 50–80% of the diagnosed cases throughout childhood and in 30–50% of cases diagnosed during the adult stage (Barkley and Russell, 1990).

These difficulties reflect a lack of the will of the individual or his inability to self-control its own conduct during a space of time, and to keep in mind the goals and implications for the future. ADHD is associated with a developmental disorder, since it involves evolutionary patterns different in affected people. The symptoms could also vary in every affected person. This disorder has biological origin with manifestations in the expression of psychosocial elements, affecting the family, school, work and socio-economic of individuals who are diagnosed. This is recognized by the scientific community on a global scale. The main symptoms of the individual with ADHD are the lack of attention, hyperactivity and impulsivity excessive according to age. In the same way, it is a chronic disorder because once the symptoms are manifested, they tend to be maintained throughout the life of the individual while modifying their resenation feature depending upon the different evolutionary moments.

The diagnostic process can be performed by the medical specialist or by the clinical psychologist with specialization in ADHD. In this regard, the Official Bulletin of the Cortes Generales of 12 December 2012, collects: “It is very important to solve problem of the current infra diagnosis, since not every active child suffers from ADHD; therefore, it is necessary to delve into the manifested symptoms [...] that can affect the learning and the relationship with other children” (p. 53). To do this, the diagnosis must be substantiated through a specialized consultation based on the collection of all the information about the individual. Numerous studies affirm that an inappropriate treatment of individuals with ADHD have negative consequences such as series of risks that threaten the mental and physical integrity (De La Peña, Palacio and Barragán, 2010).

At the age at which students begin to be diagnosed with ADHD, educational background turns to be as important as family background. In addition to the growing demand in the academic aspects, belonging to a peer group becomes a pressing priority. Students with ADHD usually have learning difficulties in curricular content, and also difficulties to achieve their integration in the group (Rabiner and Coie, 2000). In our case, the updated information, participation and leadership of teachers are necessary to carry out the diagnosis of ADHD as well as for the development of interventions of educational therapeutics (Vile Junod, DuPaul, Jitendra, Volpe and Cleary, 2006), otherwise the ADHD would increase to a large extent and the possibilities of developing school failure, problems of self-esteem and self-perception would be more likely to happen (Rodríguez and Caño, 2012).

The importance of the school context and the teaching team is obvious, since the students spend a lot of time at schools. In fact, the symptoms are being detected clearly due to these circumstances. We consider that it is common to associate low academic improvement, non-conclusion of a task started or distraction, to the profile of a child with ADHD, but this profile is observed in a high percentage of students of compulsory secondary education who do not suffer from ADHD. Another clear example is when teachers constantly command order and silence among their students; in that case they only want pupils who do not speak or move in their class. On the other hand, sometimes the teacher is excessively permissive to the continuing disruption of the child, associating it with temporary condition or lack of maturity (Gadow and Sprafkin, 1995). These are just some examples of the casuistry we can find at schools. All of them prove a demand of evaluation of ADHD (Félix, 2006).

Academically, students with ADHD are more likely to have worse qualifications and low scores in standardized tests (Loe and Feldman, 2007). They are also more likely to have a higher rate of absenteeism, and three times more likely to repeat school years during the period of the primary school. They are at a greater risk of dropping out of high school than their peers who don't suffer from ADHD (Barbarese, Katusic, Colligan, Weaver and Jacobsen, 2007). It is evident that the improvement of the academic success of students in general and, especially students with ADHD, is related with the schools that offer their teachers the possibility to get trained about the aspects of students with special needs.

Quality, achievement and qualifications take precedence in the current society and at schools. The results that students achieve are important, but we must keep in mind that not all students or groups are offered the same opportunities. This fact can have negative affect on ADHD students' school careers assuming, in many cases, a loss of educational, personal and social opportunities. In this sense, the distributed leadership provides a development of the capacities and strengths of the pupil, giving teachers a "feedback" in relation to their own effort. According to Bolívar (2010: 92) "leadership distributed [...] it is part of an organization, it is understood as an organization that learns or, more recently, as professional learning community".

These organizational and structural changes that are possible thanks to distributed leadership, influence directly on the training needs of the teachers, providing them with better resources, possibilities and exploitation of the spaces depending on the students' needs. Inter professional relations are the cross shaft in order to ensure an improvement in the inclusion of students with ADHD. Thus, "the teacher has to manage the organizational structure of their students, adapting resources (human and material) to their needs (own space, available time, curriculum adapted, etc.)" according to Fernandez and Hernandez, (2013: 98).

So, to work with students with ADHD, because of lack of social conscience and teachers' practical knowledge, it is necessary to create guides. We can make cards or

posters that remind the teacher what is each thing used for, and when it has to be used. It is advised to use a clock at your table and divide the working time, so that it splits up the tasks into stages when working with children with severe hyperactivity.

The teacher must deal with the child using a motivating voice tone, he/she must learn behavior modification techniques and try to standardize the problem as much as he/she can (DuPaul, Gormley, and Laracy, 2014). In this regard, the needs of the students are those establishing the preferences and the objectives to be achieved. At the time that the educational needs of students become more specific, teachers' vocation emerges to help their peers and learners to handle these situations. It is necessary that the teaching staff is committed to innovation and change towards the common goal. In this way, the cooperative working climate will encourage making decisions that have a positive influence on the entire student body and, more specifically, students diagnosed with ADHD. Then, teachers who are part of the same ship will be able to give coordinated common answers. Under this educational leadership, understood within the terms of the distributed leadership, we assume the existence of a close collaboration in teaching that will be rewarded by the feedback among teachers as a propulsion engine of creative and motivating initiatives that arouse the curiosity of the students with ADHD. "The probability that the teachers to exert leadership roles also increases when they have access to professional development oriented to develop the skills and knowledge needed to assume these roles effectively" according to Leithwood (2009: 99). Hence the importance of professional development in regard to the acquisition of skills particularly as the innovation, creativity, communication, group work or research must be stressed (Harris and Lambert, 2003).

In the arduous search for techniques and methodologies that promote meaningful learning for the student, we can glimpse that the distributed leadership implies a specific importance on the reduction of the negative effects on social and family environment; it exerts positively on the group in general (Knapp, 1995), even on students with ADHD. Innovations are more relevant within the classroom because the students have a greater tendency to learn when their teachers use a variety of resources, techniques and contextualized tasks (Bauermeister, 2014).

In the Burns and Mason (2002) study, concluded with their results obtained among the students of homogenous and heterogeneous classes, students reach the best results in heterogeneous classes. They similarly found strong evidence that managers deliberately attached students who presented deficit of attention to the multi-grade classes, thus being able to establish a clear link between the actions of managers, the composition of the class and school performance. The study also stands out as the most effective strategy that involves supportive behaviors that are based on the motivation and the active strategies of teaching/learning. This helps students with ADHD to focus their attention and keep their involvement and interest in the tasks (Bartlett, Rowe, and Shattell, 2010).

Those students with ADHD experience many difficulties in their everyday life because of the executive and motivational deficits. In particular, the influence on academic outcomes is very negative. Schools and special education services are facing serious challenges when they have to respond to the needs of the growing number of students with ADHD (Berenguer, Roselló, Miranda, Baixuli, Palomero, 2016). People who must pay proper attention and support to them are their parents and teachers.

Synthesizing, students with ADHD need the motivational support of their closest adults and teachers who should use active teaching strategies. In this context, it is essential that the educational professional leadership advice parents about the best way to help ADHD students to obtain academic success.

4 Conclusion

Taking into account that students with ADHD find greater allies in parents and teachers, the transformation of schools into professional learning communities can be a solution to strengthen the bond between the family and the school. In this regard, it has been strongly emphasized in the international literature that one of the facilitators of such a transformation is once again the implementation of horizontally-based leadership in schools. On top of that and focusing on students with NEAE, it would be a matter of paying attention to the students as a whole. Speaking of students in general, including the previous one in the same group and recognizing that they have specific and / or special needs at any given time, is one of the many challenges that the 21st century school has to face.

In addition, inclusion requires more qualified professionals to respond to heterogeneous group of students. The development of professional teaching capacity is a branch of research on which great emphasis is being placed today. Among its possibilities of development, we recognize the implementation of leadership as a way of collaboration and the teacher's professional growth. Cooperative work, exchange of good practices, feedback among teachers, the search for joint solutions and the shared responsibility for the learning of all students, including students with ADHD, will guarantee success, as we have found in the resources that we have revised for the elaboration of this work.

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Impact of social media on students with visual impairment a study of south-south region of Nigeria

(scientific paper)

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Abstract: *This study was undertaken to ascertain the role the various media platforms play in the daily social and educational development of students who are blind and visually impaired. The study area was south-south Nigeria, 10 higher institutions was selected across the zone, 25 visually impaired student participated in the study. 5 research questions were generated to aid this study. 15 item questionnaire was the main instrument used to elicit responses, bar chart statistical tool was employed to analyse the data obtain. The result reveals that in hierarchical order of preference email, Facebook and Whatsapp are top most preferable platform used by the visually impaired. The study recommended that students and working class visually impaired should be encouraged to explore the benefit of social media platform to enhance their educational and social interaction using the various devices as may be available to them.*

Keywords: *Impact, Social media, Visual impairment*

1 Introduction

The adverts of information and communication technology have broadened the means of communication and exchange of information in the 21st century. Information can therefore be obtained through different platforms like the internet oriented social media such as Facebook, Whatsapp, twitter, email, YouTube. This new media is actually propelled and driven by the internet, which provides platforms for social interactions between and among users in such a manner that no older platforms/media can boast of. The new media according to Adaja and Ayodele (2013) display such potentials that the only limitation to the dynamism is ignorance or illiteracy in

terms of the inability to use the hardware and/or software for maximum effects in the realm of communication, education, politics, economics, social or technology.

2 Purpose of the study

The purpose of this study was to find out which one of the social media platform in any way has impact on the daily development of person with visual impairment in the south-south region of Nigeria.

3 Significant of the study

Significantly, the study stands to benefit stakeholder, including parents of students with visual impairment, the students and the communication provider.

4 Research questions

The following research questions were generated to guide the study, which are

- Which social media is mostly used by the visual impaired?
- Which social media meets the social engagement and interaction needs of the visual impaired?
- Which social media meets the educational purpose of the visual impaired?
- Which social media meets the entertainment needs of the visual impaired?
- Which social media helps the visual impaired to maximise access to the environment.

5 Literature review

This review is focus on the benefit of social media platform.

Social media are media that allow users to meet online via the internet, communicate in social forum, it permit users to generally interact by sharing news, photo or ideas and thoughts or respond to issues and other contents with other people (Buhari, Ahmad & Hadiashara, 2014). Social media is also considered by Bryer & Zaratarro (2011) as technologies that facilitate social interaction, make possible collaboration and enable deliberate by stakeholders across boundaries, time and space. These technologies include: blogs, wikis, media (audio, photo, video, text) sharing tools, networking platform and virtual worlds. The common examples of social media are the popular social networking site like Facebook, Myspace, YouTube, flicker, twitter, 2go etc.

The rise of social media sites as another platform on the internet has gained popularity over the decade. The sites have attracted millions of users worldwide due to the fact many people are changing the outlets where they search for news, information, business and entertainment. These social media sites let those who use them create personal profiles, while connecting with other users of the sites. Users can upload photographs and post what they are doing at any given time (Boyd & Ellison, 2007; Pemppek, Yemolayeva & Calvert, 2008 in Buhari, Ahmed & Hadi Ashara, 2014). Social media by their nature have the capabilities of educating, informing, entertaining and inflaming the audience. Above all, they possess a contagious and outreaching influence which the conventional media lack. This potential is most likely what Oshahenge (2011) refers to as "unstoppable power of the social media."

Persons with disabilities, particularly those with visual impairment, have gained a lot from smartphone technology and mobile devices which can be used to implement assistive software such as audio-based multi-touch interaction techniques that enable blind users to access touch screen applications. However, a study conducted by Qiu, Hu and Rauterberg (2015) shows that an increasing number of persons with blindness and visual impairment are gradually involved in mobile social media along with the popularization of mobile devices. Their recent statistics in the Netherlands shows that more than 100,000 blind and visually impaired individuals own an Apple iPhone since the introduction of a screen reader (voiceover) in 2007. Still, mobile social media continue to pose barriers to people with blindness as they must constantly re-learn how to navigate these systems. Laptops, desktop computers have also received adaptation in keyboards and assistive software like jaws, open book etc. which enable persons with visual impairment to access social media. Abubakar, (2011) posits that social media which include blogs (political blogs), video sharing (YouTube) with large text conversation are laptop or desktop computer based. This is to say interaction in social media is not only done with mobile phones but can also be possible with any type or size of a computer.

However, a study conducted in 2013 to find out students' use of social media in Nigeria revealed that students view social media for the purpose of leisure as entertainment, watching films, to expose themselves to pornography, discuss serious issues like politics, economy and religious matters (Ezeah, Euphemia, Asogwa & Obiorah, 2013). Today in Nigeria there are over 1000 social media networking sites, which include social, educational, entertainment and gossip. The mass appeal of social media on the internet could be a cause for concern, particularly, undergraduates in Nigeria spend more time on Facebook, Twitter and other social media sites through smartphones that are now in abundance among them and most of them cannot go for two-three hours without checking and updating their profiles on these social networks even at the detriment of other activities such as education and career pursuit (Idankwo, 2011) this is not different to student and the working class

individual with visual impairment. In fact, in a study to ascertain the usefulness of deploying assistive technology devices for teaching and learning in Nigeria higher education for the benefit of students who are blind or severely visual impaired, a and iolayim2009 noted that there is a overwhelming support by visually impaired student to the deployment of assistive technology devices and the utilisation of social media platform for teaching and learning, information dissemination, socialisation, political awareness, economic enhancement, leisure and recreation as well as entertainment. Of its importance and advantages, numerous problems of social media usage have recently been the major focus of attention worldwide. Issues of fraud, identity thefts, pornography and countless other negative influences associated with social networking in general have been a cause for concern for scholars and authorities worldwide. There are increasing concerns over the use of social media for internet crimes ranging from hacking to recruitment for terrorism.

1) Methodology

The study was a survey design and cover 10 higher institutions within the south-south institutions of Nigeria. Participants were all visually impaired students. The sample population was purposive and included the all visually impaired student in the 10 higher institution selected for the study, in all 25 visually impaired students were involved. The instrument for this study was a 15 item questionnaire well validated by two experts in research and statistics who as well ensure the reliability of the instrument. The study was conducted by face-to-face administration of the instrument on respondent by two members of the research group and all completed questionnaire were retrieved. A bar chart statistical analysis tool was used to interpret the information obtain.

2) Data analysis and result

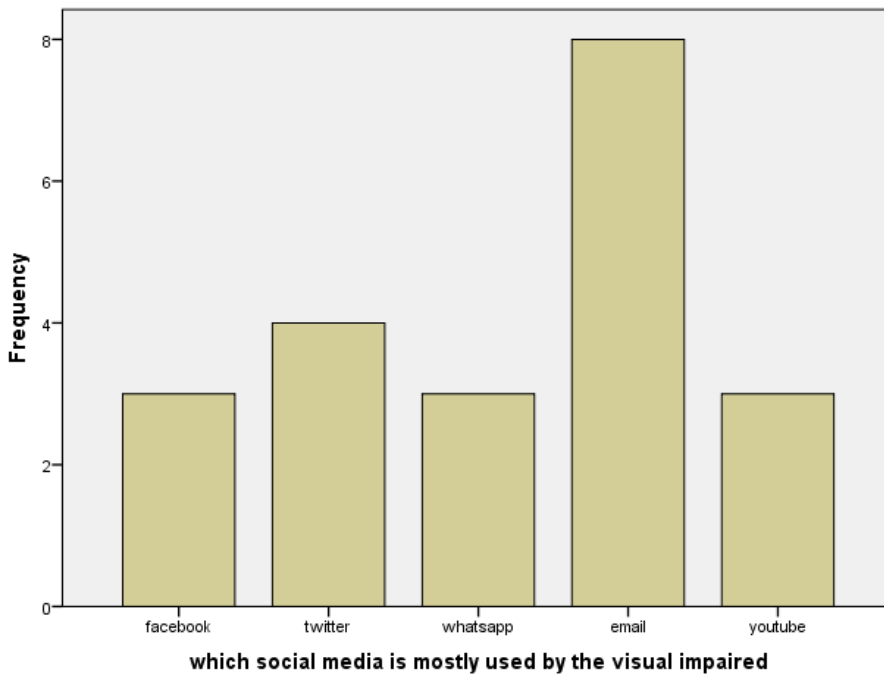
Presentation of result

Research question one

Which social media is mostly used by the visual impaired? To answer this question, frequencies and bar graph was used. The result showed that the most social media used by visual impaired students is email represented 38% followed by twitter 19% and then Facebook, Whatsapp and then YouTube respectively. The result is presented in Table 1.

Table 1: Frequencies of the most used social media among the visual impaired

which social media is mostly used by the visual impaired				
	Frequency	Percent	Valid Percent	Cumulative Percent
Facebook	3	14.3	14.3	14.3
Twitter	4	19.0	19.0	33.3
Whatsapp	3	14.3	14.3	
Email	8	38.1	38.1	85.7
YouTube	3	14.3	14.3	100.0
Total	21	100.0	100.0	

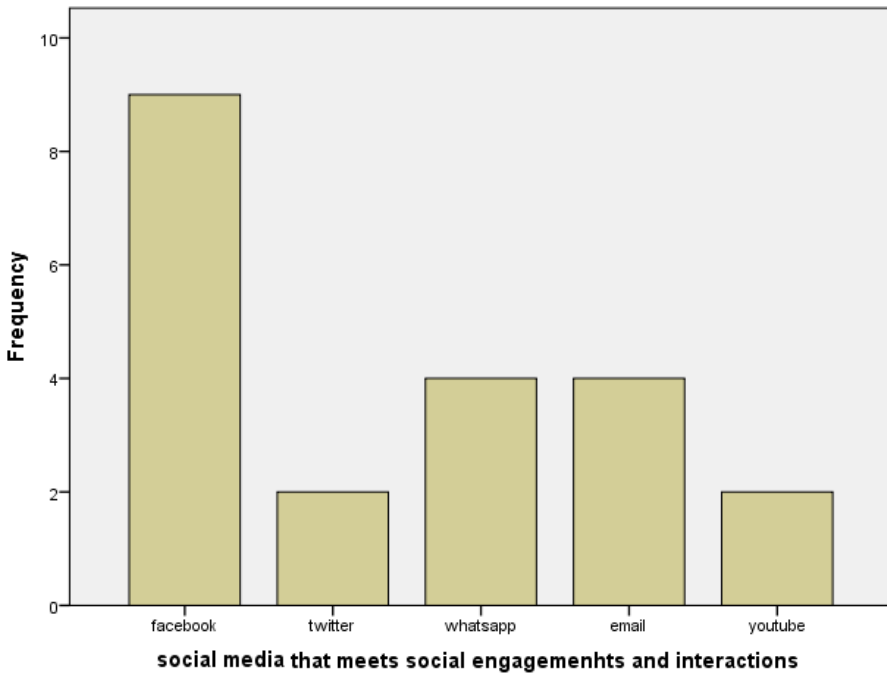


Research question two

Which social media meets the social engagement and interaction needs of the visual impaired? To answer this research question, frequencies and bar graph was used. The result showed that the most social media that meets the interaction needs of the visually impaired is Facebook represented with 42.9%, followed by Whatsapp and Email tool with 19.0%, and then YouTube and twitter. The result is presented in Table 2.

Table 2: Frequencies of social media that meets the social engagements and interaction needs of the visually impaired

social media that meets social engagements and interactions				
	Frequency	Percent	Valid Percent	Cumulative Percent
Facebook	9	42.9	42.9	42.9
Twitter	2	9.5	9.5	52.4
Whatsapp	4	19.0	19.0	71.4
Email	4	19.0	19.0	90.5
YouTube	2	9.5	9.5	100.0
Total	21	100.0	100.0	

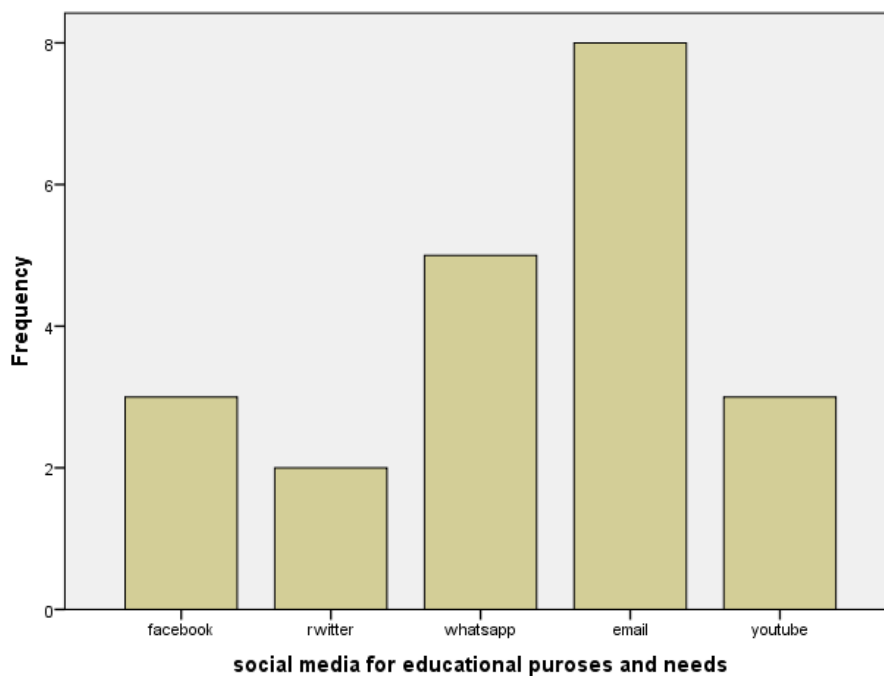


Research question three

Which social media meets the educational purposes of the visual impaired? To answer this research question, frequencies and bar graph was used. The result showed that the most social media that meets the educational purposes of the visually impaired is mostly emails represented with 38.1%, followed by Whatsapp with 23.8%, and then YouTube with 14.3% and Facebook with 14.3%. The result is presented in Table 3.

Table 3: Frequencies of social media that meets the educational purposes of the visually impaired

social media for educational purposes and needs				
	Frequency	Percent	Valid Percent	Cumulative Percent
Facebook	3	14.3	14.3	14.3
Twitter	2	9.5	9.5	23.8
Whatsapp	5	23.8	23.8	47.6
Email	8	38.1	38.1	85.7
YouTube	3	14.3	14.3	100.0
Total	21	100.0	100.0	

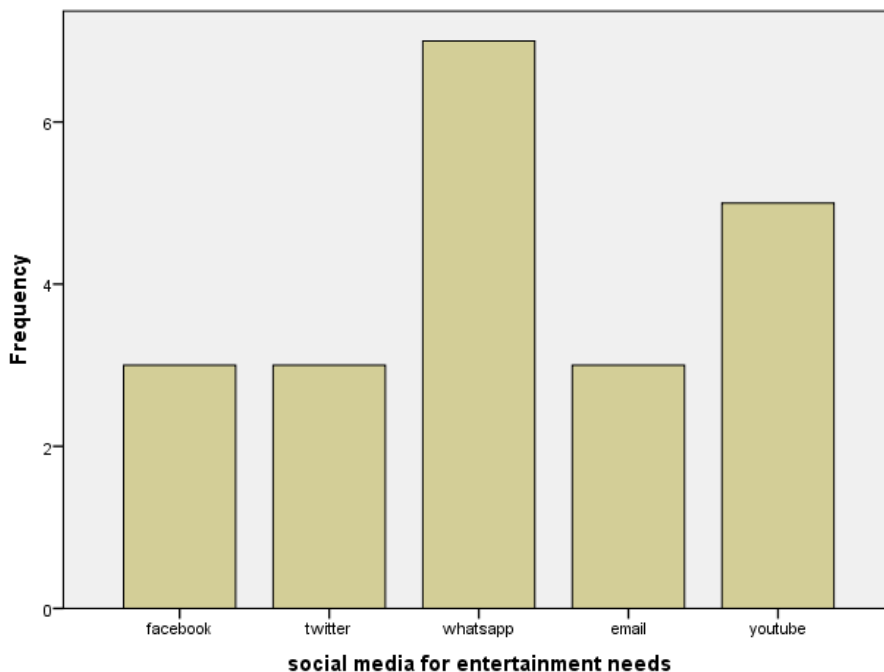


Research question four

Which social media meets the entertainment needs of the visual impaired? To answer this research question, frequencies and bar graph was used. The result showed that the most social media that meets the entertainment needs of the visually impaired is Whatsapp represented with 33.3%, followed by YouTube with 23.8%, and then emails and Facebook with 14.3%. The result is presented in Table 4.

Table 4: Frequencies of social media that meets the entertainment needs of the visually impaired

social media for entertainment needs				
	Frequency	Percent	Valid Percent	Cumulative Percent
Facebook	3	14.3	14.3	14.3
Twitter	3	14.3	14.3	28.6
Whatsapp	7	33.3	33.3	61.9
Email	3	14.3	14.3	76.2
YouTube	5	23.8	23.8	100.0
Total	21	100.0	100.0	

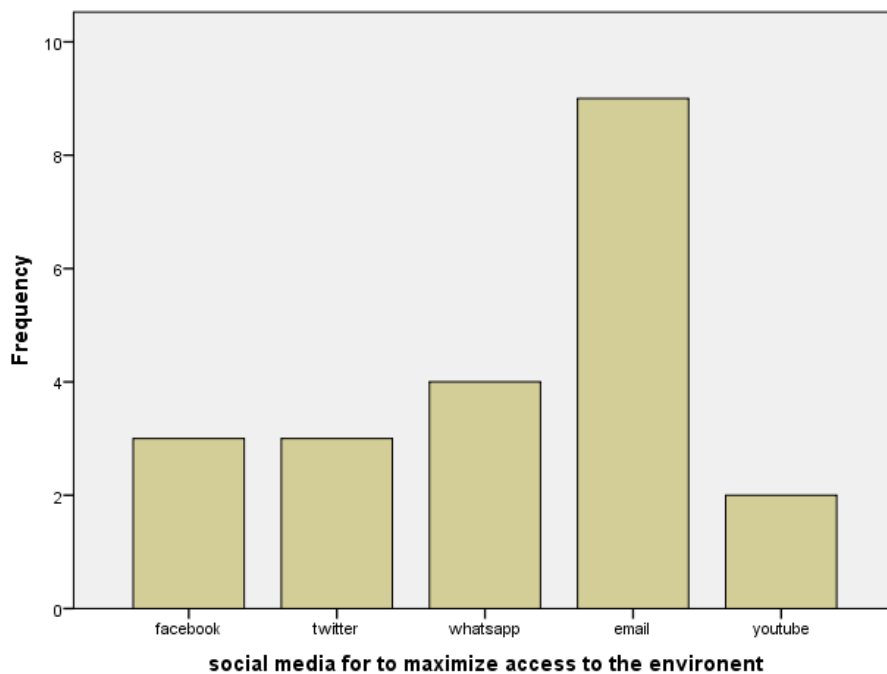


Research question five

Which social media helps the visually impaired to maximize access to the environment? To answer this research question, frequencies and bar graph was used. The result showed that the most social media that visually impaired to maximize access to the environment is email represented with 42.9%, followed by Whatsapp with 19.0%, and then twitter and Facebook with 14.3. The result is presented in Table 5.

Table 5: Frequencies of social media that helps the visually impaired to maximize access to the environment

social media to maximize access to the environment				
	Frequency	Percent	Valid Percent	Cumulative Percent
Facebook	3	14.3	14.3	14.3
Twitter	3	14.3	14.3	28.6
Whatsapp	4	19.0	19.0	47.6
Email	9	42.9	42.9	90.5
YouTube	2	9.5	9.5	100.0
Total	21	100.0	100.0	



3) Discussion

Generally, the study presented a clear picture of the importance of the internet including associated social media platform to communication and information dissemination to all especially to person with visual impairment in areas of education, social life, interaction, economic enhancement and political awareness. This is in agreement with Agba and Olayi (2009) and Adaja and Ayodele (2013). On which social media platform is most preferable and used, the study revealed that email top the chart affirming the claims by Agba and Olayi 2009 that email is most used by visually impaired to access information and communication. similarly, Facebook and Whatsapp are confirmed to be mostly the platform of socialisation and entertainment by the visually impaired just as their sighted counterpart is view is upheld by Ezeah, Euphemia, Asogwa & Obiorah (2013).

4) Conclusion

From the outcome of this study, it can be concluded that the visually impaired just as their sighted counterpart in the zone understudy derived pleasure and great attachment to the use of the internet and the social media platform daily to enhance social interaction, sending and receiving information, economic enhancement, political update, entertainment and overall educational attainment. Thus, these platforms can be interesting means for contact and studying as well as favouring both inclusion and personal growth.

5) Recommendation

The study recommend that in view of the fact that the internet service and the social media platform have offer immeasurable opportunities for student who are visually impaired to cope with life long struggle s in socialisation process stakeholders in the communication industry especially in the area of information and communication technology [ICT] should do more to improve network services to users including students with visually impairment.

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Inclusive education: culture, principles, policies, and practices: a literature review

(overview essay)

Sunil Kumar

Abstract: *Inclusive education is a process and schools around the globe are still in the process of implementing the inclusive ideologies. This paper is a literature review from various sources of terms like inclusive culture, inclusive principle, inclusive policy and inclusive practice. The review of literature analysis suggests that Inclusive education can be harnessed successfully in schools by creating inclusive culture, principles, policies and practices. This can only be strengthened when all the stakeholders in education start to collaborate together. The State, Districts, Ministry of Education, Schools, Leaders, Teachers, Parents and Students should all work cooperatively to meet the diverse needs of students in the schools and classrooms. Hence it is all about commitment, dedication, hard and smart work from the stakeholders to flourish inclusive education in our states and regions.*

Keywords: *beliefs, culture, democracy, diverse needs, inclusion, inclusive education, normalization, marginalization*

1 Introduction

Inclusive education in schools is a global phenomenon and is stipulated as a process that can have positive consequences for the general school climate and for the right of students to study in an inclusive environment. In addition, according to Opertti and Brady (2011) an inclusive education structure at all stages is not one which responds separately to the needs of certain categories of learners but rather one which responds to the varied, precise, and exceptional features of each learner, especially those at risk of marginalization and underachievement under common structures of settings and provisions. Moreover, Inclusive education has been defined, amongst other complementary perspectives, as being closely associated with international

efforts to achieve and sustain the Education for All (EFA) agenda by Ainscow and Miles (as cited in Operti and Brady, 2011). However, Ainscow and Sandill (2010) stated that the issue of how to develop more inclusive forms of education is debatably the major encounter facing school organizations all over the world. Since Inclusive education is a very broad topic we should narrow it down to own context and bring inclusion on a smaller scale in our education system so that it is implemented well at all levels of education. Upon achievement of this, we can bridge other gaps of Inclusive education and make our own schools move towards meeting the diverse needs of students in this 21st century.

To establish inclusive education in my literature survey I looked into Culture, Principles, Policies, and Practices of inclusion. These topics can enhance one as an educator or those interested in Inclusive education to broaden their horizon in Inclusive education. However, there are many concepts that are underpinned with the topic Inclusive education which is not discussed in this literature review but we may come with some overlapping ideas.

2 Method

The methodology employed in literature search involved wide variety of worldwide literature related to Inclusive education in terms of culture, principles, policies, and practices. For this systematic review, a wide spread of literature search was conducted using physical search in text books, electronic databases and Google scholar with no year of article limitations. The key words used in this search included “Inclusive education” and similar, “Inclusive culture” and policies, principles, and practices involved. In addition, Boolean operators, ‘OR’ and ‘AND’ were used to connect my search words together to narrow or broaden my set of results. Only articles in the English language were selected.

3 Results

The search strategy and article screening process are illustrated in Table 1 below. The search generated 30 articles. After abstract reading and full-text reading 25 articles were included and a concluding collection of 22 articles which were concerned pertinent was done to fit the objectives of the study. Among the 22 studies 6 were research articles, 9 papers were reviews, 2 textbook reviews, 1 was a conference paper, 2 were Ph.D. theses and 2 were international documents.

Table 2: Pertinent literature review

Author	Title	Sample	Data collection method	Findings relevant to my topic
Ainscow, M., and Sandill, A.	Developing inclusive education systems: the role of organizational cultures and leadership	n/a	Drawing on research evidence from a range of international literature	Role of leadership in fostering Inclusive Cultures
Björn, P. M., Aro, M. T., Koponen, T. K., Fuchs, L. S., and Fuchs, D. H.	The Many Faces of Special Education within RTI Frameworks in the United States and Finland	n/a	Comparative analysis of RTI in both countries	Inclusive practice: Response to intervention
Egan, M	Inclusive education policy, the general allocation model and dilemmas of practice in primary schools	Three distinct mainstream classroom. 14 Teachers	A mixed methods approach to data collection, semi-structured interviews were conducted	Inclusive education policy
Foreman, P.	Inclusion in action	n/a	Text Book	Legislation, Principles, policies and practices
Hall, T.	Differentiated Instruction. Effective Classroom Practices Report	n/a	Report	Differentiation strategy
Hay, J., and Beyers, C.	An analysis of the South African model of inclusive education with regard to social justice. Africa Education Review	n/a	Document analysis	Social justice
Heacox, D.	Differentiating instruction in the regular classroom: How to reach and teach all learners, grades 3–12	n/a	Text book	Differentiation strategy

Elizabeth B. Kozleski, Ting Yu I, Allyson L. Satter, Grace L. Francis, and Shana J. Haines	A Never Ending Journey: Inclusive Education Is a Principle of Practice, Not an End Game	5 Elementary schools and 1 middle school	Focus groups interviews at each school with school principal/leaders and teachers	Open communication between all stakeholders is central to building this common vision and trusting school climate. Student voice, engagement, and empowerment. Families Involvement. Students are active participants in the tools, strategies, and outcomes of learning.
Mentz, K., & Barrett, S.	Leadership and Inclusive Education in South Africa and Jamaica: A Comparative Analysis	n/a	Analysis of documents and literature review	Overcrowding and lack of resources can threaten the integrity of policies.
Morningstar, Allcock, White, Taub, Kurth, , Gonsier-Gerdin, and Jorgensen,	Inclusive Education National Research Advocacy Agenda	Participants of 2012 TASH Conference in the USA	Focus group data collection methods elicited both multiple and distinct perspectives, as well as the views of different audiences (i.e., researchers, practitioners, advocates, family members)	Systems-Level Capacity Building. Building and Classroom Capacity. Student Learning and Development
Mulroy, H., and Eddinger, K.	Differentiation and literacy	n/a	Analysis of documents and literature review	Differentiation strategy
National council for special education	Literature Review of the Principles and Practices relating to Inclusive Education for Children with Special Educational Needs	n/a	Literature review of the Principles and practices relating to Inclusive education	Principles and practices relating to Inclusive education

Renato Opperetti and Jayne Brady	Developing inclusive teachers from an inclusive curricular perspective	n/a	Outcomes of the 48th session of the International Conference on Education (ICE) UNESCO and findings from other authors	Definition of inclusive education in light of the Education for All agenda. Developing inclusive teachers from the perspective of an inclusive curriculum which seeks to address the needs of all learners. Key policy discussion areas which must be addressed if inclusive educational reforms are to be sustained.
Paliokosta, P. and Blandford, S	Inclusion in school: a policy, ideology or lived experience? Similar findings in diverse school cultures	43 stakeholders	Semi structured interview	School culture as a barrier or facilitator, Differentiation as a barrier, Time limitations as a barrier, Teachers' knowledge and conceptualizations as a barrier.
Shaddock, Giorcelli and Smith	Students with disabilities in mainstream, Classrooms a resource for teachers	n/a	Text Book	Inclusive Practice
Shogren, McCart, Sailor and Lyon	All Means All: Building Knowledge for Inclusive Schoolwide Transformation. <i>Research And Practice For Persons With Severe Disabilities</i>	11 schools	Survey and interviews with teachers and principals	Co Teaching , Differentiated instructions and Family-professional partnership and Inclusive culture
Theroux, P.	Differentiating instruction	n/a	Authors ideas and literature review	Differentiation strategy
Tomlinson, C. A.	Deciding to teach them all. <i>Educational Leadership</i>	n/a	Authors ideas	Differentiation strategy
Tomlinson, C. A.	Grading and differentiation: Paradox or good practice?	n/a	Authors ideas and literature review	Differentiation strategy

UNESCO	Guidelines for inclusion: Ensuring access to education for all.	n/a	Constructive, valuable feedback And critical insight from individuals with experiences and knowledge of Inclusive education	Inclusive education ideologies, culture principle and practice
Wahab, A.	Preparing teachers for multi-class teaching: a case study from Fiji Ph.D. Thesis	Pre-service teachers, associate teachers and visiting lecturers	surveys, semi structured interviews, observations, document analysis	Policy support literature review
Zollers, N. J., Ramanathan, A. K., and Yu, M.	The Relationship between School Culture and Inclusion: How an Inclusive Culture Supports Inclusive Education	Urban Elementary school, 9 Teachers and staff, 4 parents, Principal for Formal interviews.	Participant observation, interviews (formal and informal) and document reviews	Three components of the School culture that contributed to the success of inclusion: inclusive leadership, a broad vision of school community, and shared language and values

4 Discussion

Inclusive Culture

School culture plays a pivotal role in meeting the daily business of schooling. It enhances holistic development of students, building capacity and meets the demands of societies at large. Thus to meet the learning needs of diverse learners schools have to harness inclusive approach at the organizational level.

An inclusive culture is one nurtured by constant development of staff capacity to include students, collaborate with other professionals and work in partnership with parents. Such a positive culture also fosters team planning, collaborative teaching, cooperative learning and transition planning for students as they progress through schooling (Shaddock, Giorcelli & Smith, 2007, p.4).

According to Kozleski, Yu, Satter, Francis and Haines (2015) capacity building enhances inclusive culture, when there is dynamics of relationships between the principal, school staff and families and it can be harnessed very well in the schools when the principal has a strong personality, is dedicated, committed to the students, families, families and the staff.

A research conducted by Zollers, Ramanathan, and Yu (1999) found three components of the School culture that contributed to the success of inclusion: inclusive leadership, a broad vision of school community, and shared language and values. Each of the following is discussed below in the paragraphs.

The first one is **Inclusive leadership**, when the school leader used the democratic approach in which he valued participatory democracy and in which the core element was collaborative decision making which created a high level of interdependence among the entire community of the school. The school leader has a very strong belief in inclusion, valuing people with disabilities and protecting their rights within the school community. The leader also shaped and shared the belief of inclusion in nearly every interaction which characterized him as a value-driven leadership. Lastly, the school leader as an exemplary role model also influenced everyone in the school community.

Secondly, **A broad vision of school community**; the school members shared a profound interest in including families as well as the outside community in every aspect of the school so that they share the responsibility and the best educational and social outcomes of students can be achieved, whereby families, faculty, and students were nourished with personal attention and respect. The school also created the home based partnership and it empowered all the members of the community and gave them a voice in the school.

Lastly, **Shared language and values**, the Faculty, Staff, and Parents speak the same language about their school motto stating that they are all special and describe the school for everybody. They also entertain multiculturalism in the school where everyone becomes an integral part of school events which promotes multiculturalism.

In addition, open communication between all stakeholders is the central element in building a common vision and a trusting school climate (Kozleski et al., 2015, p.227).

In contrast to the above, a study conducted by Paliokosta and Blandford (2010) found that school culture can become a barrier when:

- Teacher's impression is insufficient to deal with all methods of learning.
- There is no association amongst the managements teams struggle to raise standards and the special educational needs departments practice.
- Discussion amongst teachers and teaching assistants is not evident.
- Inclusion is not regarded as of importance by the senior management team of the schools.
- Teaching assistants' work is not valued and recognized by others which creates a low self-perception amongst them.
- Members of staff at a strategic level and operational level openly talk about the disparity in the school organization due to the admission of a high amount of learners with special needs.
- Stakeholders choose a medical model to address special educational needs. (Paliokosta and Blandford, 2010 p. 181 and 182)

According to Shogren, McCart, Sailor & Lyon (2015) study for the Schoolwide Integrated Framework for Transformation which integrated research on inclusive educational practices and critical features of systemic school reform as a framework for schools, districts, and state education agencies to promote lasting and sustainable change all the schools had firmly rooted school culture: culture of sharing responsibility to serve all children by including staff members and families, all the members had a strong belief that all students should be valued, provided with support to be successful, all students learn differently and their ultimate goal was to celebrate differences.

Thus, inclusive culture should be embedded in schools and realistic goals can be achieved if all the stakeholders in education especially around the child with diverse needs start to collaborate, share values, responsibility and display teamwork, then will the inclusive ideologies arise smoothly in any school context.

Hence we all know that school is a platform for building capacity, sustainable education for our future generation. To build this future generation we have to cater the learning needs of diverse students, we also have to get those students into classrooms who lack access to education. We as leaders, educators, teachers, parents and community members should create a positive culture, committed and dedicated environment, democracy, a visionary approach and when all this collaboration and networking is done in a conducive way, the schools will definitely succeed in Inclusive education.

Inclusive Education Principles

There are numerous principles that have formed a platform for policy and practice for inclusion of students with disabilities. In addition, these policies are widely used in any educational settings, from the system level to school level, finally to classroom levels for application of this in teaching and learning programs.

The four key features of inclusion by UNESCO offer an expedient summary of the principles that support the inclusive practice. These components are:

- Inclusion is a process. It has to be seen as a never-ending search to find better ways of responding to diversity. It is about learning how to live with differences and learning how to learn from differences. Differences come to be seen more positively as motivation for nurturing scholarship, between children and adults.
- Inclusion is concerned with the identification and elimination of obstructions. It involves gathering, comparing and evaluating data from multiple sources in order to plan for improvements in policy and practice. It is about using evidence of numerous varieties to inspire creativeness and problem-solving.
- Inclusion is about the attendance, involvement, and success of all students. 'Presence' is concerned with where children are educated, and how consistently and promptly they attend; 'participation' relates to the excellence of their

involvements and must incorporate the views of learners; and 'achievement' is about the outcomes of learning across the curriculum, not just test and exam results.

- Inclusion invokes a particular emphasis on those groups of learners who may be at threat of marginalization, segregation or underachievement. This indicates the moral responsibility to ensure that those 'at risk' are sensibly scrutinized and that steps are taken to ensure their existence, involvement, and accomplishment in the education system (UNESCO, 2005, p.15).

Hence, we should make differences in the scholarship journey of students, so that whatever obstructions they have is accomplished and they become part of the education system, latter to the community and society at large.

According to Foreman, 2011 five underlying principles are outlined below:

I. Principles of Social justice and human rights

Everyone is born with a divine right but the circumstance and situation in our life at times makes it miserable. Constantine, Hage, Kindaichi and Bryant (as cited in Hay and Beyer, 2011, p.234) stated that "Social justice can be described as a fundamental search for equity and fairness in resources, rights, and treatment for marginalized individuals and groups of people who do not have equal power in society ". In addition, Foreman (2011) suggested that inclusion in education is often as much a rights issue as it is an issue of what works best in all circumstances. Thus its social justice and human rights should be essential components of Inclusive education.

II. All children can learn

Every child is unique and they are born with talents. However, before 1970s students were classified as educable depending on their IQ test and were provided with education in the public education system and others were regarded as medical cases, since 1970 there has been a widespread acceptance that all children can learn and recently in inclusive settings or inclusive classroom (Foreman, 2011). Thus we as teachers need to tap the capabilities of our learners in the real classroom situation.

III. Normalization

Normalization is best defined as making people with disabilities live a normal life by giving roles and responsibilities to them in their daily life. According to Foreman (2011), the concept of normalization embraces the belief that people are entitled to live as normal as possible a lifestyle in their community and in relation to education students with disabilities can choose their own schools. (P.10). Moreover, Wolfensberger (as cited in Foreman, 2011 p.10) suggested that we must value the social roles

of people with disability, if they are genuinely included in the community, so that the social roles are valorized by giving them roles and opportunities.

Moreover, in the normalizing process, those students at risk in other schools became part of the expected mix of abilities, histories and experiences and skill levels with the school. (Kozleski et al., p.223). Hence normalizing should start at schools so that the students with diverse needs are included in the schools around their own community so that they feel that they are accepted within their own community. Thus, these will develop self- esteem and self- confidence amongst the children with disabilities and without disabilities.

IV. The least restrictive environment

Environment plays a very important role in human development. The concept of the least restrictive environment is based on the principle that some environments are intrinsically more restrictive than others. In addition vigorous research regarding LRE placement is needed, given the variability both within and across states, as well as practices that seize or stimulate family involvement and how districts interpret policies and procedures that influence placement is an essential question (Morningstar, Allcock, White, Taub, Kurth, , Gonsier-Gerdin,& Jorgensen, 2016).

V. Age – appropriate behavior

Students with disabilities should be given roles that are valued by the school community. They should actively participate in the daily activities of the schools and wherever possible, perform roles that are seen positively by peers and are valuable. The principles of normalization and social role valorization suggest that student's activities should be appropriate to their age. (Foreman, 2011 p.15)

Furthermore, according to the National Council for special education (2010) “underpinning principle of inclusive education is that all children and young people, and without disabilities or other special needs, are learning effectively together in ordinary mainstream schools, with appropriate networks of support. This principle means that we enable all students to participate fully in the life and work of mainstream settings, whatever their needs”.

Thus everyone's right is that any educational setting should be respected. Students with disabilities should be given roles and responsibilities so that they live with their daily life within their own community. Best place to harness this will be schools where everyone is treated equally which creates positivism and students may become successful.

Inclusive Education Policy

Policies are guidelines that give a sense of direction and outline an organization's goals and desired effects. It is important that the state, Ministry of Education, Universities, Teacher Education, Schools and local community have policies that clearly stipulate the terms and conditions of Inclusive education.

Therefore at its core, inclusive education policy answers the question what is the purpose of inclusive education in a society, and how can we best fulfill that purpose in meeting the needs of diverse students in this 21st century of education.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) has created a chain of reports and policies in the preceding 20 years that constantly discusses inclusive education practices (Foreman, 2011 p.45). Education for All (EFA) promotes recognition of the need to expand quality education to all children in the world irrespective of where they live (United Nations, 2010). Little (as cited in Ali, 2011, p.27) stated that "most Governments in the world have become signatories of EFA and have initiated programs in their own countries to allow all children to have free and compulsory primary school education". Inclusive schools are seen as an effective means of achieving the EFA goals of improving the education of children in isolated circumstances, and for ethnic minorities. Having legitimate policies in Inclusive education means taking a holistic approach to education reform and tackling the exclusion system that exists in the education system.

As such, teacher education institutions and ministry of education need policy documents to guide them in the development of pertinent inclusive education program materials and authenticate the dissemination of such a program. However, simply having policies in place will not solve the problem faced by Inclusive teaching; policies need to be implemented. Therefore, Fullan (cited in Ali, 2011) stated that educational change or reform is not just about putting the policy in place but is based on the improvement of relationships between policies and the people implementing the policy. In many countries "policy development is mired by bureaucratic procedures and lack of commitment by those in power" (Ali, 2011, p.27). In addition, according to a comparative analysis of leadership and Inclusive education by Mentz and Barrett (2011) concluded that the measures of access increased in the policy documents in South Africa and Jamaica are very well expressed, however, it can be challenged by overcrowding of students in the class and lack of resources. In addition a study conducted by (Paliokosta and Blandford, 2010, p.183) found that there is inconsistency amongst theory and authenticity whereby time was presented as a severe obstacle to inclusive policy execution because a teacher and tutor explained that teachers are not able to carry out differentiation due to not having enough time within the lessons. Therefore, who will be accountable for these challenges? Whenever there is any design of policy, the policy makers should involve all the stakeholders of education

so that all the challenges are discussed and meeting these challengers are forecasted in the policy itself.

Interestingly, with regard to policy intention and implementation, Gomez (as cited in Egan,2013,p.14) suggests that policy implementation can be resisted due to lack of participation from key stakeholders such as teachers, a view that is shared by Coughlan (as cited in Egan,2013,p.14) with regard to Irish education policy. All too often, it is a small group with a certain knowledge (power /agency) who are involved in devising policy with little consultation or participation from those involved in its implementation. The current study embraces teacher participation. It focuses on teachers and the implementation of policy texts because according to O'Brien (as cited in Egan, 2013, p.14) the key resource to successful inclusive education lives inside teachers' heads. Barton (as cited in Egan, 2013, p.14) observes that the professional opinions of teachers, their values and voices have been consistently ignored within the process of devising and implementing education policy. Therefore, it is essential to reveal teacher attitudes, beliefs, and values. It's true that teachers are not involved in decision-making process when designing policies at state level teachers are the best resources to guide policy makers so that we can have an authentic policy, it's not just moving with the global education but moving within our own context.

According to Morningstar et al., (2016) their findings articulate that research aligned with school-wide transformative approach is needed. In particular, understanding systems unifying general and special education, including policies to scale-up, generalize, and sustain inclusive practices and models, is critical. Research is needed to scrutinize how policy and regulatory language support or hinder quality practices.

Inclusive Practice

A recent study in the UK by Ainscow, Booth, and Dyson (as cited in Ainscow and Sandill, 2010,p.403) found that to develop inclusive practices in schools social learning process at a workplace that impacts individuals achievement and the thinking that informs this achievement should happen. In addition, they sought a deeper understanding of Wenger's framework that analyses the development of practices in social context and found that whatever strategies we have at organizational level becomes clear when it is used and discussed amongst colleagues. (Ainscow and Sandill 2010). Furthermore, Paliokosta and Blandford (2010, p.184) found that teachers knowledge and conceptualizations can also become a major drawback in inclusive culture and which will not facilitate effective implementation of differentiation as an inclusive practice. Therefore, we cannot work in isolation, we have to share knowledge by sharing knowledge there is an expansion of Knowledge and with this expansion of knowledge we can harness inclusive practices in our diverse classroom.

Furthermore, according to Shaddock, Giorelli and Smith (2007) described inclusive practices as following

- All efforts made by the school and its community to make students and their parents feel welcome.
- Inclusive practice implies that if participation becomes an issue for any student, whether rising from disability, gender, behavior, poverty, culture, refugee status or any other reasons than desirable approach is not to establish special programs for the newly identified individual or group need, but to expand mainstream thinking, structures and practices so that all students are accommodated.
- Inclusive practices involve a change in mindset about how society, schools, work together to allow all students to achieve meaningful individual and group learning outcomes.
- For students with identified disability, inclusive practice requires innovative ways of thinking about disability, differences, interdependence and they have a right to be educated with their siblings and peers at their schools of choice.
- It requires school leadership and vision that foster a sense of community and emphasize the importance of relationships.
- Inclusive practice begins with each teachers understanding the importance of being personally inclusive of students, parents, and others; treating each student as an individual; disregarding labels; learning from good practitioners and best practice research; and reflecting on their own performance as teachers.
- Inclusive practice describes a host of strategies that support the inclusion of students with disabilities. Teachers willingness to engage in co-teaching and to find creative ways of working together with others to support students with disabilities in the mainstream are hallmarks of effective inclusive practice.(Shaddock, Giorelli and Smith, 2007.p.4)

However, to really practice inclusive teaching we must look at varieties of teaching strategies that we can cater for diverse needs of students. Which will be discussed below

A. Co- Teaching

Co-teaching is a model that highlights cooperation and communication amongst all members of a team to encounter the requirements of all students. It is also called cooperative teaching and collaborative teaching. According to Shogren et al (2015), the schools accomplished collaborative teaching by changing job descriptions of teachers who were originally appointed to serve in separate settings, enabling them to serve in a co-teaching or supporting role in a general education classroom. The other schools worked to organize supports for students who needed more intensive intervention not based on disability label, but on student need. Schools also identified

that they used paraprofessionals in several ways, including supporting any student with a need, often delivering direct instruction to students while a general or special education teacher took primary responsibility for the teaching and learning process.

B. Differentiation strategy

Tomlinson (2005), a leading expert in this field, defines differentiated instruction as a philosophy of teaching that is based on the premise that students learn best when their teachers accommodate the differences in their readiness levels, interests and learning profiles. To differentiate instruction is to acknowledge various student backgrounds, readiness levels, languages, interests and learning profiles (Hall, 2002). Building on this definition, Mulroy, and Eddinger (2003) add that differentiated instruction emerged within the context of increasingly diverse student populations. Within the learning environment permitted by the differentiated instruction model, teachers, support staff, and professionals collaborate to create an optimal learning experience for students (Mulroy and Eddinger, 2003).

One of the three ways to differentiate instruction is through changing the content. The content of the lesson is the curriculum that is being taught. Heacox (2002) identified several actions that teachers can take to differentiate the content for their students. One way teachers can differentiate the content or the curriculum they teach by providing students with the opportunity to choose a subtopic within a main topic or unit of their own interest. Secondly, differentiating the process/activities incorporates learning activities or strategies that provide appropriate methods for students to explore concepts of the content (Theroux, 2004).

Lastly, a product is what a student develops to show their understanding of the content which was taught. Differentiating the product encourages students to demonstrate what they have learned in a wide variety of forms that reflect knowledge and ability to manipulate an idea. This phase of differentiating is identified as evaluation (Tomlinson, 2003).

Hence, curriculum differentiation provides a planned and documented curriculum that is adapted to take into account the needs and abilities of groups of students with particular educational needs.

Recent studies outlined by Kozleski et al (2015) p. 223 suggest that “students are no longer passive recipients of a curriculum and pedagogies but rather active participants in the tools, strategies, and outcomes of learning. The more they are involved in learning, the more their creativity and individual capacity can be harnessed to produce powerful learning.”

C. Response to Intervention (RTI)

Response to Intervention (RTI) has evolved into a systematic tool for implementing identification, evidence-based instruction, close monitoring of student progress, and decision making for all levels within the system, including administration, teachers, and parents (Björn, Aro, Koponen, Fuchs, & Fuchs, 2016). In addition, according to Sullivan & Long (as cited in Björn, *et.al*, 2016) stated that as for the effectiveness of RTI, in terms of academic achievement, it may be deemed an early intervention approach that can improve the academic performance of at-risk students (Thus, the following examples describe how RTI can be used to prevent reading problems and identify children who need support for reading. According, to Fuchs, Fuchs, & Compton (as cited in Björn, *et.al*, 2016) in the three-tier RTI Smart model, Tier 1 is for all students. Screenings are conducted several times per year to perform a timely identification of at-risk children. Each at-risk student's progress is closely monitored. If the child does not respond to the first level of group-oriented interventions and other instructional support (such as differentiated instruction), he or she typically moves to the next RTI level (Tier 2). Tier 2 the student then receives research-based instruction, sometimes in small groups, sometimes as part of a class wide intervention. The length of time spent in Tier 2 is longer than in Tier 1, and the intensity of the interventions is greater. If the child does not respond adequately to the interventions in Tier 2, then a third level (Tier 3) becomes an option for continued, yet more intensive, often individual research-based intervention (Björn, et al., 2016).

In addition, Opertti and Brady (2011) stated that inclusive pedagogies, practices, and tools imply, amongst other things, a move away from overloading students with theoretical and formal academic knowledge towards a focus on active student participation and learning. They imply that teachers are able to develop a more flexible and relevant range of objectives, methods, media, activities, and assessment. Research on learning reminds that students are no longer passive recipients of a curriculum and pedagogies but rather active participants in the tools, strategies, and outcomes of learning. The more they are involved in this work, the more their creativity and individual capacities can be harnessed to produce powerful learning (Kozleski et al p.223). Thus, contemporary strategies like co-teaching, differentiation strategy and response to Intervention, can be applied to real classroom teaching and learning process. However, there are lots of innovative strategies that can meet the demands of the diverse classroom. These might include cooperative teaching and learning, collaborative problem-solving, mixed-ability groups, and individual education plans developed in line with the rest of the curriculum, along with cognitive instruction, self-regulated and memory learning, multi-level teaching, competency-based approaches, and interactive, digital teaching tools (Opertti and Brady, 2011, p.465). To harness this, teacher preparation and professional development will be equally

important. Thus it is necessary to examine and clarify the dispositions, knowledge, and skills of educators to support inclusive practices (Morningstar et al., 2016). Therefore as teachers and educators, we must be fully versed with all the new strategies so that we can make the difference and a successful learning journey for our students. Hence, inclusive practice is about feelings, mindset, knowledge, vision, reflective Practitioners and innovation, if these ideologies are in calculated in teachers and the teaching process inclusive education, will be implemented in schools and the needs of students will be met productively.

5 Conclusion

Hence as we develop the ideologies of inclusive education in schools to meet the diverse needs of students, it is obligatory to identify that the arena itself is puzzled with doubts, disagreements, and paradoxes around the globe. Therefore a smaller scale implementation of inclusive education concepts as per our own context will be the fundamental platform of reaching inclusive education goals. The core topic of inclusion: culture, policies, principles, and practices are interrelated. For inclusion to occur in schools this topic should be given the top most priority so that some realistic goals in inclusive education is achieved in schools. Every school around the globe is unique with its geographical location, human resources with different perceptions and ideologies and priorities from states in terms of education but the ultimate development of a country and the universal truth is that education is the key hub for development. If inclusive education is cultivated from the beginning of learning journey of an individual learner, the individual learner's progress will create a big difference of a state's progress in creating a peaceful and prosperous nation.

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Boundaries and perspectives: needs of children with emotional and behavioral disorders from the perspective of children and educators

(overview essay)

Karel Červenka

***Abstract:** The text links selected findings of two qualitative researches and thus two perspectives of the situation of children with emotional and behavioral disorders. The first is based on the perspective of children with EBDs. Various types of adaptation strategies of children to their “problematic” situations are presented. The second perspective is based on the point of view of educators from educational facilities and it is represented by two educational needs of children with EBDs, which the educators consider to be one of the most important. The result of the interconnection of these views is the intervention triangle, which illustrates the relationship of the three factors in the context of the behavioral disorder intervention: the child’s attitudinal response to his/her situation, the child’s behavior and the intervention response of the educators.*

***Keywords:** Education of children with emotional and behavioral difficulties, labeling, stigmatization, coping strategies, educational needs, qualitative research*

1 Introduction

The following text integrates the results of two of my qualitative researches that focused on the issue of children with emotional and behavioral disorders (“EBDs”). The first was focused on insights into the children’s own experience and on their own “problematic” behavior and self-perception. The second research focused on the experience of educational professionals from school educational facilities (behavioral disorder experts, educators, teachers from diagnostic institutions, educational institutions, children’s homes with schools, counseling care centers) and their view of the children they work with and the behavior of these children. In this text I will provide a look at the educational needs of the children from two perspectives: from

the perspective of the children themselves and from the perspective of people working with them in educational facilities (educational professionals).

In the following text I will link some of the conclusions of the two researches as they follow and complement each other. In the conclusion to the first research (from the point of view of children), I formulated four adaptation strategies that can be observed in children with emotional and behavioral disorders. These strategies are the result of a combination of two typical attitudes that emerged during the data analysis: 1) the attitude of the child towards changing his/her “problematic” behavior towards conformity (the *will to change*) and 2) the attitude of the child to the possibility of this change (*belief in change*). (Červenka, 2010)

In the conclusion to my latter research (from the point of view of educational professionals), I formulated two types of EBD children’s needs, which emerged as the most fundamental in the research interviews: 1) the need for (positive) boundary setting (*boundaries*) and 2) the need for open perspective and identity (*perspective*). (Červenka, 2016)

The structure of the following text is based on the so-called informed intervention process (Vojtová & Červenka, 2011), where 1) the first step is the identification of relevant characteristics (*difference*) of the child (2) the second step is the interpretation of these characteristics in terms of their impact on the child and the formulation of his/her individual educational needs (*need*) and 3) finally, the third step is intervention in the situation of the child in order to meet these needs (*intervention*).

Firstly, I will introduce four adaptation strategies as the characteristics (differences) of children with emotional and behavioral disorders. Then I will focus on the topic of boundaries and perspectives as to the needs of children with EBD (need). In the end, I will link both topics.

2 Briefly on the methodology of both researches

The first research, which resulted in two types of attitudes and four adaptive strategies, focused on the attitudes of children at risk and with behavioral disorders, on their insight into “being problematic”. The research took place in a preventive educational facility (counseling care center). The data was collected mainly by the technique of semi-structured qualitative interviews with eight children (eight weeks in the center), by analyzing personal documents (texts created by the participants on *My CV*), field notes, focus groups and long-term stay in the field as an employee of the facility (educator, behavioral disorder expert). The data was collected primarily in 2001-2002.

The second of these surveys took place in 2012-2015. This qualitative research was generally focused on the experience of the so-called educational professionals, namely on their view of children with EBDs. Qualitative interviews with a total of

fifteen participants (managers, educators, behavioral disorder experts from diagnostic institutes, educational institutions, children's homes with schools, centers of educational care) had a secondary objective to examine special education process of education and intervention in children with emotional and behavioral disorders. The main thematic areas of the research were: 1) the significance attributed by educators to their relations with children with EBDs (in terms of their influence on the social inclusion of the children) in the context of behavioral disorder intervention, 2) the educational needs of children with EBDs considered by educators to be essential (Červenka, 2016). In addition to semi-structured interviews, the data material was also collected by observation techniques, three pre-research group interviews, and by field remarks.

The data analysis method was very similar in both surveys. Atlas/Ti software was used. The data analysis was based on ethnographic approach (see Emerson, Fretz & Shaw, 1995) and the analysis was conducted at the level of open and focused coding. Major research findings were published in two research monographs (Červenka, 2014, 2016).

3 Pairs of attitudes and four adaptive strategies or differences of children with EBDs

3.1 Two attitudes of children with EBDs towards changing the “problematic” situation

Data from the first research revealed two typical attitudes of children towards changing their “problematic” situation. I labeled the first one, which relates to changing the situation proper, as *will to change*. The second, concerning the possibility of change, as *belief in change*.

The attitude of *will to change* closely touches upon the identity of the child. It is about how the child feels, how he/she thinks, how he/she thinks about him/herself, and how he/she thinks that others think about him/her. Identity means the sum of the child's external and internal identities. Goffman (2003) considers three identities of the actor: social, personal and self-identity (ego identity). The first two types of identities represent two levels of the actor's social status (who others believe that he/she is). The third, self-identity (ego identity) refers to the actor's self-concept. The notion of identity in this sense allows us to grasp the state and dynamics of the inner and outer levels of the individual's life.

The self-identity of an individual participates in decisions and life choices and it is manifested in behavior. Behavior of an individual is one of the bases on which an actor's external identity stands, on which the neighborhood conceives the concept of who the individual is and how others will react to him/her.

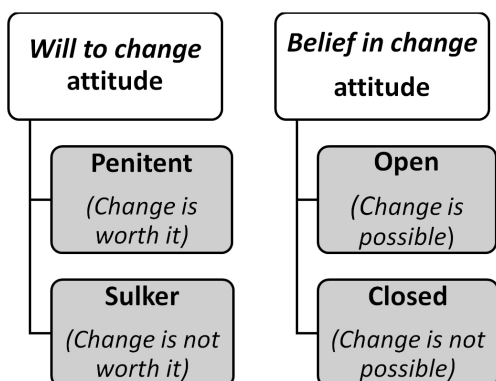


Figure 1: Two attitudes of children towards the „problematic“ situation (Červenka, 2012)

The attitude of the *will to change* the situation refers (in terms of the child’s identity) to the extent to which the child identifies him/herself with his/her “problem” status (a *problem child*, a *child with a behavioral disorder*) as far as he/she understands it as part of his/her self-identity. This attitude has two variants: the attitude of the Penitent and the attitude of the Sulker. The attitude of the Penitent represents the child’s willingness to change his/her problem situation and reject the status of a “problem child”. The position of the Sulker, on the other hand, points to the acceptance of the “problem child” status into internal identity and, to a greater or lesser extent, internal identification with this status (see Figure1).

“There are people here [in the counseling care center] who want to do something about it. There are people who do not want to do anything about it and they show it a lot. And there are people here who do not want to do anything about it, although they pretend they do.” (An excerpt from an interview with a client of a center for educational care)

The second attitude, the *belief in change*, concerns the child’s conviction of the extent of the *possibility* of changing his/her difficult life situation and his/her “problematic” behavior and status. While the attitude of will to change refers to the *identity of the child*, the attitude of belief in the change refers to the topic of *future life perspectives*.

“I have a rotten life... that’s clear. It will never be better... I keep getting in trouble. If they expel me from the preventative educational facility, they’ll put me back in the psychiatric ward.”

“I’ll end up in jail anyway... So why would I even try? They all say so. My parents do not give a damn and I cannot do anything about it.”

3.2 Four typical adaptation strategies

By combining the variants of the two presented types of attitudes, we obtain four attitudinal complexes, or four variants of a typical adaptation strategy to a “problem” situation and status:

- 1) Open Penitent (has the will to change and sees it as possible)
- 2) Closed Penitent (has the will to change, but does not see it as possible, does not believe in it)
- 3) Open Sulker (does not have the will to change, does not want it, but thinks that he/she chose it, it would be possible)
- 4) Closed Sulker (does not want change and does not see it as possible, does not believe in it).

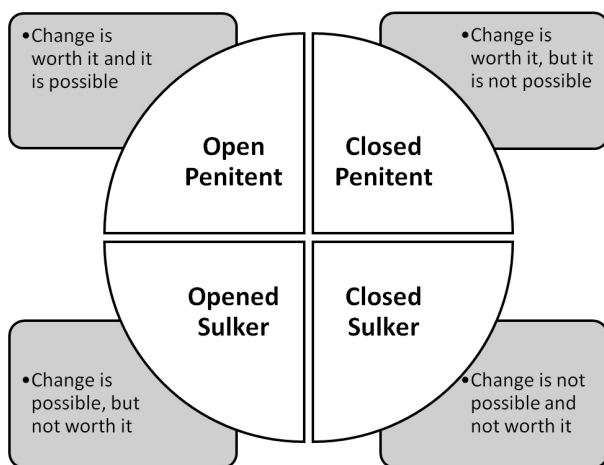


Figure 2: Four adaptation strategies to „problem“ situations (Červenka, 2012)

The four strategies represent ideal types which we will most likely never encounter in practice. Let us assume that we are more likely to encounter the tendencies in individual children’s behavior towards one of the above types.

With the four adaptation strategies, I introduced combinations of variants of attitudes of children with EBDs to their life situation and thus I also redefined their specific characteristics. This refers to differences in the situation of children with EBDs that we can anticipate, and in terms of inclusive informed intervention, we should interpret them in the language of individual educational needs. This can help us plan effective intervention focused on the needs of the child.

We are now ready to present how educators perceive the situation of children with EBDs and the needs arising from this situation. I will focus on the two types of needs that I named in the conclusions of the research as 1) need for (positive)

boundary setting and 2) need to open perspectives. In the following text, I will show the close relationship between the two above-mentioned attitudes (the will to change and the belief in change) and these two needs (boundaries and perspective). I will also show the role of identity in this interconnection and its relation to the other actors' behavior. By combining the perspectives of children and educators, we get a more sophisticated idea of a situation that is referred to as a disorder of emotion and behavior.

4 Needs of children with EBDs

In the framework of data analysis of the second research, two topics were identified in interviews with educators, representing the needs and, therefore, the two intervention goals that they link to EBD children: 1) the need for positive setting of boundaries (to have set boundaries); and 2) the need for opening of perspectives (to have open perspectives). Later I will show how these two needs are interconnected and how they can relate to the types of adaptation strategies presented above.

4.1 The need to set boundaries as a way to form identity

The need for children with EBD to *have boundaries* for their behavior was apparent in interviews with educators in various forms. From the analytical point of view, we understand the issue of boundary setting in two ways: *negatively* (limiting the room for negotiation, or preventing behavior as such) or *positively* (defining the space for negotiation or support, strengthening the behavior as such). Negative or positive boundary setting should not have judgmental connotations. It is only an analytical definition of how to “set boundaries”.

Negative boundary defining is accomplished by identifying a space that is not accessible. This also involves disciplinary functions – *I know where I cannot go*. This is an approach of negative discipline, which uses bans to define rules and punishments to prevent trespassing of these rules. This reprehensively tuned approach to boundary setting is typically associated with the upbringing of children with EBDs.¹ It is also an approach where an authority (teacher) plays an active role in disciplinary policy, while the child is typically placed in a passive role and is thus implicitly dependent on the authority that defines boundaries for his/her behavior. As a rule, we speak of interventional concepts of repression or restrictions transmitted.

¹ From the point of view of research findings, it is interesting to note that the participants (educational professionals) did not speak about the fact that they would prefer a repressive approach in the intervention. The topic of repressive approaches, according to some of them, comes into the environment of educational facilities from the outside, which according to them is influenced by stereotypical ideas about educational institutions primarily as institutions punishing children with EBDs.

Besides the negative setting of boundaries, it is possible to define the boundaries positively. The concept of *positive* boundary setting shows the need to identify what to do. The means is the forms of support and empowerment that shapes the behavior in the intended direction. “Boundary setting” can be done by offering a role model that children can identify with or through an offer of opportunities for personal development or entertainment. The child is more likely to play an active role in the disciplinary policy. Boundary setting may not only limit or prevent certain (undesirable) behavior, but it may support certain (desirable) behavior, showing its form, content, and direction. Under the positive setting of boundaries we can imagine, for example, an “act of creating space, figuratively speaking, pitching the playground, rather than the act of limiting a space beyond which it is impossible to go.” (Červenka, 2016, p. 79). Positive boundary setting is a prerequisite for the opening up of perspectives that I will write about later.

Positive and negative boundary setting can only be a matter of perspective and interpretation. “Both the negative and the positive approach to setting boundaries define the same space. But we do it in different ways. The effect is the same as when we talk about a half-empty or semi-empty bottle.” (Červenka, 2016, p. 80)

The following roles of boundaries (in the sense of positive boundary setting) have emerged in the research: boundaries as search for limits of how far can I go; boundaries such as a ritual, regularity, custom; boundaries as asylum – escape from freedom to security of the boundary; boundaries as natural authority, leadership, role model, idol.

As you can see, the concept of *positive* boundary *setting* is closely related to the tendency to put the child into the role of an active agent. It is an active alternative to carelessness, mentioned by Helus (2004), when “the child asks for help, shows interest in interacting with his/her educator, asks for suggestions and events that will help him/her in his/her development” (Helus, 2004, p. 92).

4.2 Need to open up perspectives

Before we look at the need to open up perspectives and identities, we need to briefly introduce the situation from which this need arises.

4.2.1 Closing of identities and perspectives as one of the consequences of a behavioral disorder situation

One of the consequences of a child with a behavioral disorder is that the child gradually adopts the “problematic” status into his/her identity, his/her own self-concept – he/she is increasingly perceived as “problematic” or “a child causing problems”. The problem, of course, is not just this process in terms of self-concept, self-identity, but also the fact that his/her external identity is changing – that others are increasingly

perceiving him/her as “someone who is in trouble”. Eventually, it may happen that his/her external (and indeed internal) identity gets stabilized – a child with a “problem child” identity will not be able to “just” get rid of it. The process leading to such a situation is referred to as the process of identity closure. As a result, the child’s identity is hardly changeable, the child is “closed” in it without having a chance to leave it or choose another identity (as is the case with a number of conventional identities).

In other words, the main component of the child’s inner and outer identity in a behavioral disorder is the “problem” identity (which becomes the main status)². This “problem” status tends to be generalized to the rest of the child’s personality, thereby limiting the possibility of changing the child’s self-image and the chance to change the way others perceive him/her (as perceived by others). Problem identities usually stick more than the non-problem ones.

From the point of view of practical implications, the “problematic” identity of the child prevents transition to conventional behavior and a conventional life situation. Identity is a symbolic phenomenon, but it carries with it absolutely real consequences. This concerns, as mentioned above, both internal and external dimensions of the child’s life. At the external level, how others perceive a child is reflected in their behavior towards the child (see stigmatization). On an internal level, how the child perceives him/herself is reflected in his/her behavior towards him/herself, to others, and what goals he/she sets for him/herself (see learned helplessness, self-efficacy).

To illustrate: in research interviews, education professionals talked in this context about “labeling” of children with EBDs in their natural social environment (at school, etc.), pointing to the process of labeling or stigmatizing. Examples have also emerged that illustrate the issue of “problem” careers of children with EBDs. One behavioral disorder specialist described the situation of a girl who was proud of her “problematic” actions and presented herself through them, taking pride in it. Another example that points to the relationship between the external and internal identities and the behavior of the child may be the situation of a boy who, according to a behavioral disorder specialist, said: “When they say I am a punk, then at least I am a good punk and a good thug.”

From the point of view of a special education teacher, the process of closing of identities and perspectives can be understood in the case of a child with EBDs as a barrier in his/her way of life that blocks the development of his/her individual potential and endangers the quality of his/her life – both current and future.

² Master status is the term used by Evert Hughes (Becker, 1991). It is a concept that closely correlates with stereotypes. According to Hughes, a social actor has two types of status – master status and auxiliary status. The master status is unique in that it “supersedes” all other statuses – for example, in one person, the main status such as a former prisoner overcomes other statuses such as a proficient footballer, friend, philatelist, etc. Others look at the actor through the master status, using it to assign importance to other statuses that are in its shadow.

If we perceive the situation of a child with EBDs as a process of closing of identities and perspectives, then it is a logical need to set up a process in which identities and perspectives are opened up.

4.2.2 The need to open identities and perspectives as an intervention goal

In order to ensure conditions and support for active participation of the child in the change of their “problematic” life situation, it is necessary from the point of view of the boundaries and perspectives discussed here that the child should begin building his/her conformational career in order to adopt a conformal (“non-problem”) identity into his/her self-concept and to see his/her future as open, as a reasonable offer of opportunities – to see the meaning of his/her actions. At the external level of the child’s situation, the child is offered social acceptance, manifestations of solidarity and related opportunities for development.

Here, we can see a close link between the process of opening of identities and perspectives of the child and the above-mentioned four adaptation strategies of children with EBDs. The theme of perspectives that emerged in interviews with participants – education professionals, is particularly relevant from the point of view of behavior disorder specialist intervention, particularly among children who hold the attitude of non-belief in change (Closed Penitent or Closed Sulker). Particularly in the case of Closed sulker strategy, the theme of opening perspectives goes hand in hand with the theme of opening identities (Sulker needs to be changed into Penitent).

The process of opening can be seen as part of so-called normalization (cf. Scheff, 2013), neutralization (cf. Sykes & Matza, 1957) or simply as a process of transition to “normal” identity (cf. Lofland, 2002).

The need discussed here and the resulting process of opening the identities and perspectives of children with EBDs is understood as a way to intervene in response to the above adaptation strategies, namely to those that are risky from the child’s perspective (Closed Penitent, Open Sulker, Closed Sulker).

The theme of opening identities and perspectives directs our attention to the conditions and factors that affect the children and their will and faith in changing their life situation. This is about the general belief of the child in the future and in options to approach their own past, the present and their self. The process of opening perspectives should therefore focus on the identity of the child, which will be open to various interpretations so that it serves the child as the basis for the realization of multiple scenarios of future behavior and life. (Červenka, 2016)

The outcome of the opening process should be a child understood (both by other people and the child itself) as a whole personality, when the problem is perceived through the personality of the child, not the other way round. The problem is thus better perceived as one of the various characteristics of the child’s personality (no

matter how distinctive or influential). This results in the opportunity to perceive potentialities in the personality and the situation of the child, on which the change of the current situation and the best possible future can be built.

So how can we imagine the process of opening of identities and perspectives? To illustrate, I will introduce several topics that emerged in interviews with education professionals and which can be considered as indicators of the opening process. Steps that can play a role in *counteracting* the effects of closing identities and perspectives of EBD children.

Need for a role model and direction – as a counterweight to the closing process

Role models generally offer behavioral directions. Social role models, including identity models, offer behavioral directions and also define the scope for action (they say what is appropriate/inappropriate, possible/impossible...). In the research, the participants (educators) often talked about the role models play in the lives of children they work with. They talked more about negative role models that, in their view, lead children to “problem” behavior.

“The fact that somebody is sentenced to prison becomes part of ... a standard part of the lives of these families, so even for our children it is not really ... a big threat or anything ... because it’s part of their lives...” (P4)

“I think they did not get a chance to learn ... or see how to do it ... they’re mostly like that, or they just learned it the wrong way from the people around, seeing it ... Either they see their parents as role models ... or the parents do not let them learn it ... or maybe they just started as little kids doing it so to speak the wrong way and got supported – that it was OK. (P12)

Significance of positive role models can be traced back from the statements about negative role models. The former, unlike negative role models, could be the opposite of the process of closing of identities and perspectives, opening them up. It is also a good example of the relationship between boundary issues and perspectives and the interrelation of the needs represented by these themes.

Positive role model and experience

Positive experiences can be another factor in countering the process of closing. It can be a *competitive experience* (Vacek, in Polínek 2015, p. 99) or a *corrective experience* (Kalina, 2013, p. 26-27). Such experiences may take the form of a “*trace of a good man*,” spoken of by one of the participants:

“I always say that if we taught the child that life can be better, just a trace of a good man, just a trace of someone respecting them that exists in this world [...]. So the goal is, because at six... at sixteen – seventeen, it is actually possible

just to leave a trace that the world is not only bad. [...] And that he either is not only bad. (P3)

The need to neutralize the burden of the past – thick line and other chances

In one of the interviews, the term “thick line behind the past” appeared in connection with the labeling of children with EBDs and its implications for the future of the child.

“And I think this is precisely what the labels do. It’s like you’re the villain, I’m going to watch you and you get no second chance.” (P6)

“That the child (here in the corrective educational facility) will do something wrong, something that I do not agree with, maybe, I don’t know, an act of wrongdoing, but... I will punish him and that’s it. This is where I draw the thick line... I do not mean just punish, of course there’s a punishment... a lot of interviews, we talk about it, we’re discussing it to get some lessons from it, but then there is a thick line and we start over again. I cannot say to him in two months... something in the sense: I do not want to talk to you, I do not believe you anymore because two months ago you disappointed me, this harping on and throwing the past back in his face... the past is the past. Because our children have a lot of problems here and they would never get out of it. (P6)

The technique of “drawing the thick line” can be interpreted as a need to neutralize the burden of the past. It can also be understood as opening the opportunity to establish a “new” relationship with authority. We can also see it as a way to create an opportunity for the child to escape from the troubled past and to see the future as open and encouraging to be active. The thick line is a means to offer the child another chance to change his/her life situation.

“I think they... should get... another chance. That when they do something, then... it’s not for life. In order not to have the sticker of a villain for life, that nothing can be done about it and that it will never change. I think this is also very important to them. (P6)

5 Intervention triangle

The last part of the text links the topics presented above. It links the child’s perspective with the perspective of educators on the “problem” situation of the child. Figure 3 shows the intervention triangle model with three factors: 1) the child’s response, 2) the child’s behavior, 3) an intervention response of people around. A factor on the child’s side is his/her attitudinal response to his/her “problematic” situation, and this reaction takes the form of an adaptation strategy. A factor on the side of educators is an intervention response that takes the form of steps leading to boundary setting and opening of the child’s perspectives.

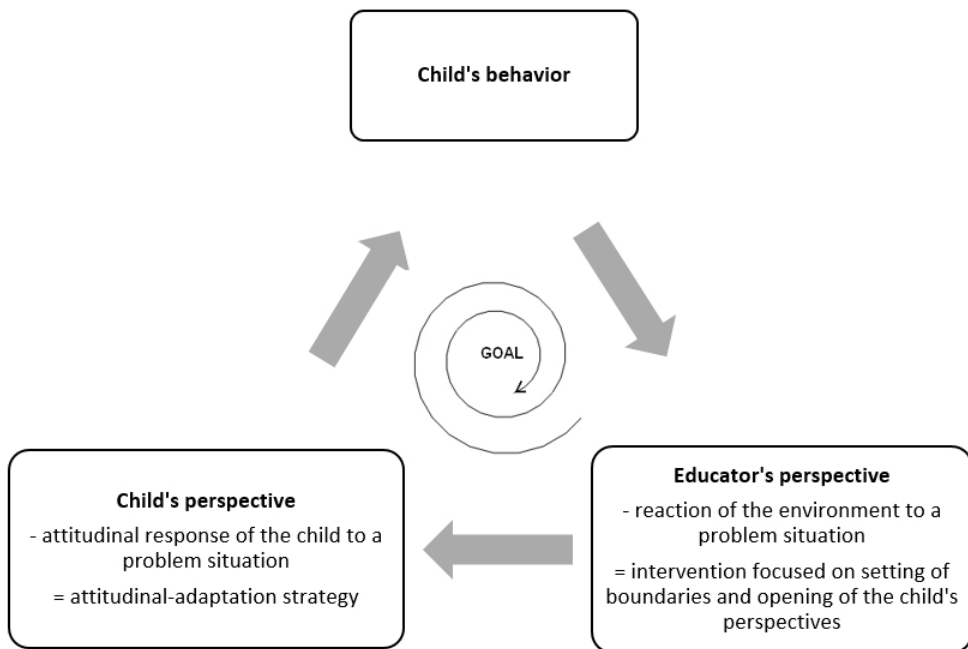


Figure 3: Intervention triangle and intervention spiral

Here, I was freely inspired by Albert Bandura’s model of reciprocal determinism (1977), which links the factors of the individual’s personality, his/her behavior and the environmental factors. The Bandura’s model is based on the assumption of mutual (reciprocal) influence among all of the above factors. The model of intervention triangle presented here is not based on reciprocity. It represents only a part of the process shown by the Bandura’s model and declares the relationship of sequential influence of the above three factors. Figure 3 also shows a spiral in the center of which is the goal of a behavioral disorder intervention. The intervention triangle diagram is a representation of the cyclical repetition of the intervention process, with each another cycle (ideally) being more specifically targeting and approaching the intervention target. Thus the spiral metaphor. After each intervention cycle, a reassessment of the child’s situation should follow, while interventions in the next cycle should be adjusted and clarified until the intervention goal is reached, and then the intervention can be stopped.

Since the discussed adaptation strategy can be considered as one of the typical characteristics of the situation of a child with EBDs, in Figure 3, the aspect and **response of the child** is represented by an attitudinal (cognitive, emotional, acting) reaction to his/her “problem” situation. It can be assumed that such a reaction will approach one of the above four types of adaptation strategies (Open Penitent, Closed

Penitent, Open Sulker, Closed Sulker). This attitude response subsequently affects the behavior of the child, which is graspable for the child's environment in his/her behavioral manifestations. This is followed by the **reaction of the environment**, namely educators, consisting in three steps of informed intervention (1) identification of relevant characteristics and differences of the child with EBDs and its situation, 2) formulation of individual educational needs of the child, and 3) planning and realization of the intervention steps focused on setting boundaries and opening up the identities and perspectives of the child. While setting boundaries is more about shaping the child's identity, opening perspectives points to his/her attitude toward the future. From the point of view of different types of adaptation strategies, it can be concluded that, for the Open Penitent, intervention should offer support to continue to change his/her problematic situation. For other types of adaptation strategies, but especially for Closed Sulker, intervention should be primarily aimed at creating conditions for change in the will to change, i.e. the identity of the child (towards conformational identity), and at the level of belief in change, i.e. perspective (toward an open future).

6 Conclusion

A model of the interventional spiral was presented in the text, which points to the inevitable interdependence of the child and educators in the context of the intervention process in behavior disorders therapy. If the intervention is to be effective, it must be based on the subjective perception of the child. However, it must also take advantage of the external viewpoint of the child's situation, which offers the necessary expertise. In the model, the two sides of the same coin are represented on the one hand by the attitudinal reaction of the child to his/her situation and by the intervention response of the educators on the other hand, in the context of informed (inclusive) intervention.

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Women in private sex business from the perspective of relationship level

(overview essay)

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***Abstract:** The main goal of the article consists in describing the relationship level of women in private sex business. The research set consisted of 36 women working in private sex business in the South Bohemian Region and in Prague. The study made use of the technique of biographic-narrative interview. The acquired data were analysed in the Atlas.ti program and then links between individual categories and codes were searched with the help of the anchored theory method. The result shows that the relationship level, or the social network of the respondents, respectively, is very narrow. Financial support to the primary family, the partner or a friend is frequent. The financial support may be consequently reflected in whether the respective person does or does not tolerate the work in sex business.*

***Keywords:** sex business, relationships, social network*

1 Introduction

The definitions of sex business differ by authors or institutions. So we can find a concept of sex business as “manifestation of violence against women” and a concept of sex business as sexual work (Ditmore, 2006). We can explain sex business in general as a provision of different forms of sexual services for money or other payment (Chmelík et al., 2003).

We can divide sex business in three ways, i.e. by its form, by the way of its provision and by the environment of its provision. The forms of sex business include female, male or child prostitution (we speak of prostitution from the perspective of the character of this form). The ways of provision include contact and contactless sex, as the Rozkoš bez rizika organization states. That organization divides sex business into contact and contactless forms. Contact sex business includes sex as such or acting in porn movies, while contactless sex business includes phone sex or

sex chat (Kutálková et al. 2016). The last method of division divides sex business by environment. Chmelík et al. (2003) names street or road, club, hotel and private sex business, as well as escort services. Sex business is hierarchized; women working in private sex business fall into higher class, while women providing sexual services in the street fall into so called scum (Zikmundová, Weiss, 2004).

Private sex business is provided in hired or own flats. Often there are several women in such a flat; they cooperate and share the rent (Sanders, 2005). The customer base of private sex business is relatively regular; the first contact is often established by advertising on internet portals or press. Private sex business brings more privacy both to the client and to the women providing sexual services; therefore the demand for such form is high (Ditmore, 2006). The age of women in that form most frequently ranges from twenty to forty years; there are women of different education and background. (Sochůrek, 2009)

We deal with this topic as private sex business and the relationship level of sexual workers are insufficiently processed, but in fact the relationship level is one of very important areas in sex business.

The article is aimed at describing the relationship level of women in private sex business. The article deals with the relationships of women in private sex business with their primary family, their partner, their pimp and their colleagues.

2 Theoretical foundation

The directing influence of the family on future life of the person and on possible starting of a procreation family is indisputable. The child often behaves according to the parents' model, as the parent is a loving person on one hand and an authority on the other hand. The absence of one or both parent models constitutes a considerable disadvantage and deprivation to the child. If the parent is present in the family, but does not fulfil his or her role sufficiently, a subdeprivation occurs – for example if the father is alcoholic. (Langmeier, Matějček, 2011)

Single-parent families are considered a risk-loaded environment for incidence of delinquent behaviour of the children, primarily due to reduced parent supervision (Sampson, Laub 1993; Kierkus, Baer 2002; Demuth, Brown 2004). Hirschi (2002) considers the type of family with one foster parent an even more risk-loaded family. Wikström, Butterworth (2006) agree with that.

Studies suggest the existence of specific family-related factors that may be risk-loaded for entry in sex business. They include the non-functionality of the family in which the women have experienced physical or sexual abuse or other form of violence, do not have good relationships with their primary family or do not communicate with them at all, and the family does not fulfil the primary functions in general (James, 1980; Earls, David, 1990; Petrocchi et al., 2016). That is opposed by a study carried out by

Rozkoš bez rizika; the study suggests that sexual workers are not predisposed for work in sex business by complicated childhood or by sexual desire (Malinová, 2016). One of the motives to start prostitution is also the effort to escape the parents or the husband (McCaghy and Hou, 1994). Family dissatisfaction and unstable family background, as well as the effort to repay the husband's or the family's debts play a great role. The study by Malakouti et al. (2016) confirms it by stating that more than one half of the women in question had bad relationships in the family and bad economic situation in the family.

As for the relationships between sexual workers and their male partners, they frequently miss emotional contents and focus rather on the use of finances or sex (Rochelle, 2011). Nabila (2004) found out that women working in sex business very often experience violence from their intimate partner. Jewkes et al. (2012) brought an interesting study result with respect to attached couples' experience with sex business. 42 % men, although they had a relationship, practised sex with a sexual worker either for money or for other benefits; 44 % experienced sex with a one-off partner.

Pimps constitute another group of persons entering the relationship level of the women working in sex business. The pimp is the person who is most frequently present in street or road sex business (Williamson, Cluse-Tolar, 2002). A woman who provides sex services and has a pimp supports the pimp with her income, giving him up to 2/3 or even all of her income. The woman is often completely dependent on the pimp, either because he withholds all her documents, or because he gives her a "shot" as a reward, if the woman is drug addicted (La Strada, 2006). At the beginning of the relationship, the pimp treats the woman kindly and nicely, but after some time he may behave rudely or even violently. We can learn that fact for example in the study by Marcus et al. (2004) that took place in New York; they found out that 5 % pimps admit their violent approach to the prostitutes. That is confirmed by their further survey carried out among prostitutes, in which about 2 % sexual workers reported a relationship with a violent pimp. The remaining pimps are aware of their unstable work and of the limits they should not exceed in order to maintain their income. In private sex business, the pimp is often the lessor of the flat or the partner who sponges off the woman (May, Harocopos, Hough, 2000). The woman may not always perceive the relationship with the pimp negatively. The sexual worker may find her "family", as well as the feeling of safety and protection in the pimp (Ernstman-Mongard, 1996).

3 Methods

The study made use of qualitative research strategy. The interview, specifically biographic-narrative interview was chosen as the technique. The research set consisted of 36 women from the South Bohemian Region and from Prague, who work in private sex business and advertise their services for example in the Naprivat.cz, Agamaseznamka.cz and Eroticke-privaty.cz internet portals. The women's age ranged

from 21 years – 50 years and their average age was 27 years. The respondents who were willing to get involved in the study were familiarized with the goal and the utilization of the interview. As the narrative interview imperatively needs the verbatim wording of the story, all interviews were recorded on a voice recorder with the respondents' informed consent, then they were verbatim transcribed and analyzed by the Atlas.ti program, with the help of the anchored theory method. The study was focused on the life style of women in private sex business; however, for the purpose of this article, we have focused only on a part of the results concerning the relationship level of the women in question. Specifically, we analyzed the information on their relationships with their family and their partner, and we further examined their relationships with their colleagues and with their pimp, if any.

4 Results

The data analysis helped us to identify four main groups of persons with whom the respondents maintained relationships. The relationships with the primary family, with the partner, with the colleagues and with friends. The interconnection of the relationship categories with codes is graphically represented in diagram 1; they are commented and analyzed in more detail in the text below.

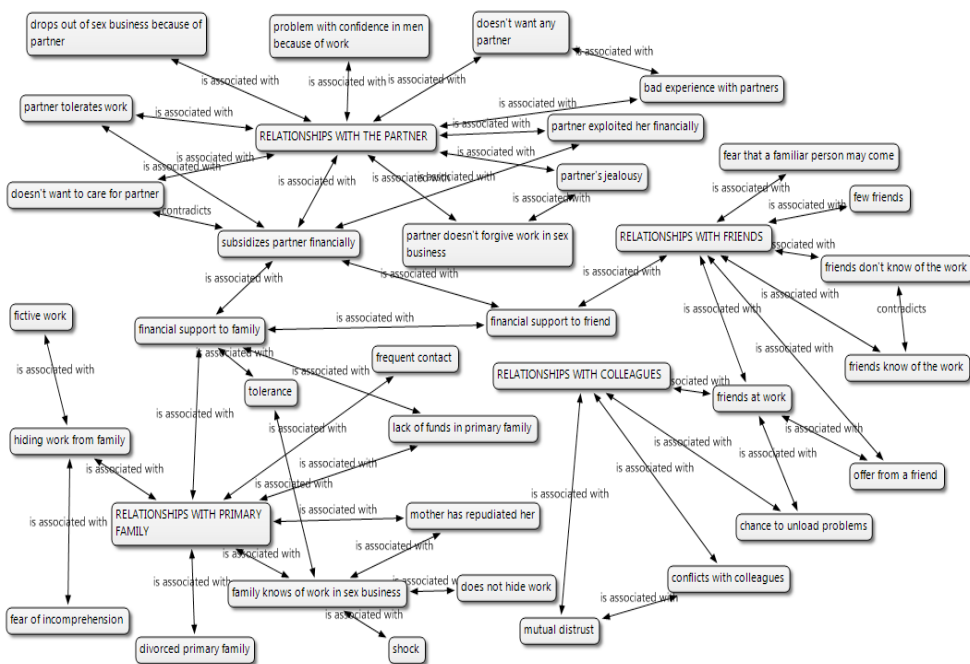


Diagram 1: Relationship level

5 Relationships with primary family

The family background of the respondents was varied, from divorced to two-parent family. As for the relationships with the primary family, we identified two contrary positions in essence. The first position is based on the fact that the women have informed their family of their work: *„I am angry to be such a chatterbox; so my mum knows it, my grandma knows it, my friend knows it; a lot of people suspect it and a lot of people know it about me.“* (IN2, 23 years), and the family either tolerated the respondent's work: *„My family knows it, my mum knows it, my children know it, and my mum finally said: „if only I were younger“* (IN5, 50 years) or rejected it: *„my mum learned about it ... she never told me personally that she knows it, but she send messages to everybody, telling them not to talk to me because I work as a whore“* (IN10, 25 years). But the motive for tolerance often consists in the fact that the women working in sex business financially support their family: *„Clothing, jewels, cars, a lot of the luxury at the beginning; as I was modest, I paid it and gave money to my parents“* (IN6, 30 years).

The second position is connected with hiding the work in sex business from the family. Such decision is primarily motivated by fear of incomprehension. *„Well, of course they don't know it; if they knew that they have brought up their girl for this business, they probably wouldn't like it. (laughter).“* (IN17, 24 years). That's why the respondents speak of different false works, from masseur to cosmetician to bartender when talking to their family.

6 Relationships with the partner

Similar to the relationship with the primary family, the respondents had completely different experience with partner relationships. When the study was carried out, some of them reported to have a partner and some of them not. The respondents having a partner unanimously said that their partner was informed of their work and tolerated it. The tolerance may be influenced by the fact that, similar to the family, the partners have financial profit from the sex business. The respondents also agree that most men consider it unacceptable to harmonize the partner coexistence and the respondent's work:

T: What about, why did you break up, because of your work?

IN4 (28 years): Well, it was because of my work; at the beginning, it is ideal, isn't it, everybody says he doesn't mind, but with the time they start not liking my being with other guys ... they start being jealous.”

A great part of respondents do not have a partner at present and they do not want any. The motive consists in changed attitude and confidence in men in connection with their work: *„I have, well, problems with confidence... I trust hardly anybody.*

Because the men are bastards and I know what they do, I just know that married men come to us“ (IN1, 43 years), or: „Noo, I am sick of guys, I couldn’t stand someone bothering me at a disco or something like that, no no“ (IN13, 31 years).

Some respondents consider a partner for the future in connection with starting a family and leaving sex business: *„But it is clear that one day I will reach the age to wish children and a family. So then I would leave this business; but I would consider leaving it now too, if our relationship was serious“ (IN10, 25 years).*

7 Relationships with colleagues

Another group of persons spoken about by the respondents in connection with the relationship level includes their colleagues. Some respondents reported good and friendly relationships connected with mutual support. The colleagues were often the only persons to discuss their work with, to complain about the customers, etc. Thus the colleagues became friends: *„We don’t quarrel, but I have often seen that the group changes much “(IN1, 43 years), „I have friends from the private flat; they know it, of course...“ (IN2, 23 years).* On the other hand, there were also relationships that could be termed as conflicting. The conflicts most frequently resulted from daily disputes of the operation of the flat, e.g. cleaning, management of common property (washing powder, towels, etc.). It further must be taken into consideration that they are competitors, and that may lead to conflicts too. *„For example rows with the girls in the flat, or something like that; it sometimes wrecks my nerves“ (IN8, 36 years).*

8 Relationships with friends

The last group of persons reflected in the relationship level of women in private sex business includes friends. The respondents stated that before joining sex business, they had more friends than at present: *„Yes, they know it, but I must say I have few of them; not because I do what I do, but I actually have only the closest ones... I keep people far from me.“ (IN23, 27 years).* The motive may consist in the fact that the women often hide their work in sex business from their friends. Similar to the primary family, the motive for hiding consists in fear of incomprehension.

On the other hand, they have at least one friend who knows about their work: *„My best friends whom I know since my childhood know it“ (IN9, 26 years).* Such person is an important person from outside the sex business or a person who mediated their work in sex business and is thus their colleague: *„A friend of mine offered it to me and I went into it because I didn’t have money and I didn’t want to work as a confectioner; then I even lived with her, with the friend“ (IN4, 28 years), „I was offered this work by a friend whom I have known a long time“ (IN6, 30 years).*

9 Discussion

The data analysis brought quite interesting information, differing from existing studies. The first difference consists in the fact that our respondents come from very variable types of families, evaluated by the respondents as completely functional. Frequent support to the family is also interesting; it does not constitute the actual motive of joining sex business, but it may be an impulse to continue in it. For example Oso Casas (2010) states that in sex business, the difference between love and exploitation is often vague and some emotional relationships do not support the differentiation. The woman may continue in sex business for example because of family love and requests for gifts or because of sending money to the family.

A considerable part of the interviews concerned friends and colleagues, which are two groups usually not dealt with in literature, even though they may constitute key groups in the relationship level of women in private sex business, as for example Malinová et al. (2016) state; their study shows that the relationships with colleagues in private sex business are very important for the women to feel satisfied at their workplace. Female friends often constitute the first contact with sex business, which corresponds to the study carried out by May, Harocopos, Hough (2000) and stating that friends even encourage the women to join sex business. At the same time, the friend becomes the closest person to which the woman may unload her concerns related to work, That is shown by a study carried out by the Rozkoš bez rizika organization (Rozkoš bez rizika, 2014).

The question whether the respondents have a manager who arranges offers for them or supervises them was answered negatively by all respondents. That may be caused by the fact that pimps are not found in private sex business as often as in other forms (May, Harocopos, Hough, 2000). Although pimps were not directly found in the study, the role of pimp is sometimes assumed by the partner who does not offer the woman directly, but profits from sex business and tolerates it.

The narrow relationship network of women working in different forms of sex business is described by multiple authors. The most frequently stated motive is fear of disclosure of source of livelihood and consequent stigmatization (Heumann, 2010). Women in private sex business, unlike other forms of sex business, do not have contact with other helping institutions, e.g. social work.

10 Conclusion

Women in private sex business maintain relationships with their primary family and with the partner. The existing relationships are motivating to work in sex business and to continue in it. From our perspective, it is important to deal with the relationships of those women and not to omit them. The relationship level is bad in general,

and the general social network of the respondents is narrow. That may be caused by the fact that the respondent has told her close persons about her work and they have not accepted it, or by the fact that the respondent intentionally maintains a narrow social network, in order to have a greater chance to hide her work in sex business.

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A review of somatic games intervention for children with autism spectrum disorders

(overview essay)

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Abstract: *Technology-aided instruction and intervention (TAII) is an evidence-based practice intervention method for individuals with autism spectrum disorders. With three-dimensional display and body awareness, somatic games are video games operated through body movements. It is based on natural user interaction, and has great potential to support individuals with autism spectrum disorders to obtain target skills. This study reviews research literature on the studies of intervention for children with autism spectrum disorders by using somatic games, sums up the strength and problems of these studies, and then gives enlightenment on related researches and practice in future.*

Keywords: *children with autism spectrum disorders, somatic games, intervention, review*

1 Introduction

Autism spectrum disorder (ASD) is one of the fastest growing developmental disorders in the US with the Center for Disease Control (CDC) estimating that 1 in 68 children are diagnosed with ASD. According to the Diagnostic and Statistical Manual of Mental Disorders-fifth edition (DSM-V) published by the American Psychiatric Association in 2013, ASD is identified by two diagnostic markers: persistent deficits in social communication and social interaction, and the restricted, repetitive patterns of behavior, interests, or activities. With regard to these deficits, individuals caring for children and youth with ASD have been striving to explore more scientific and effective treatment methods. In January 2014, National Professional Development Center published a report, which was called Evidence-Based Practices for Children,

Youth, and Young Adults with Autism Spectrum Disorder. This report described 27 intervention practices designated as evidence-based practices. One of those intervention approaches is technology-aided instruction and intervention (TAII). TAIIs are those in which technology is the central feature of an intervention that supports the goal or outcome for the student, which can be used effectively to address social, communication, behavior, joint attention, cognitive, school-readiness, academic, motor, adaptive, and vocational skills (Wong et al., 2014).

In TAIIs, natural user interface (NUI) shows great potential benefits in individuals with ASD. "Natural user interfaces" have been adopted as a generally accepted term to refer to a new classification of computerized interactions that extend beyond traditional mice and keyboards, including pens/writing, gestures, speech, eye-tracking, and tangible computing. NUIs enable a variety of input mechanisms specific to the needs of individuals who present with different sensory impairments (Kientz et al., 2013). With the development of sensor technology, speech recognition, and computer vision, the use of motion sensing allows users to interact without any intermediary device to reach perfect natural user interface (Kandroudi, Bratitsis, 2013). Based on motion sensing, somatic games are video games operated through body movements, which means that the body motion is the game mechanic. Somatic games are digital games requiring neither mice nor keyboards, but a great number of body movements while being played.

The high potential of somatic games for learning is grounded on two relationships: the one between digital games and children's development, and the other between body movements and children's development. The particular influence of digital games on children's learning has been cherished by American education expert Marc Prensky. He (2001) proposed that integrating digital games with education would achieve better learning outcomes. Because digital games constitute potentially powerful learning environments, and children are not receiving knowledge passively but participating in the activities very positively. Therefore, those digital games aiming at making children be producers of knowledge, can make their learning much easier, more enjoyable, and more interesting, and thus, more effective. Besides, many researches indicate that children with ASD may have an affinity for digital media and that these technologies may serve an important role in ASD intervention (Uzuegbunam et al., 2015). In general, digital games that encompass educational objectives and subject matter are believed to contribute to children's development. As for the relationship between body movements and children's development, Piaget's theory firstly states that knowledge acquisition is derived from active experiences in the world. Then, embodied cognition theory also emphasises the formative role of embodiment, which is the way in which an individual's sensory-motor capacities enable him or her to successfully interact with the physical environment (Mademtzi, 2016). Later, more studies have suggested that body movements affect emotional

processes, and affective and social communicative mediation apart from cognitive processes (Bianchi-Berthouze, 2013). With respect to children with ASD, previous studies have shown that there is a positive correlation between behavioral problems and lack of body movements. Thus, engaging in body movements will contribute to reduce their self-stimulatory behaviors, class destruction behaviors, and improve their body aptitudes, such as stamina, strength, and agility (Pitetti et al., 2007).

While theoretical arguments and empirical results suggested that both digital games and body movements will be beneficial for children with ASD, the marriage of body movements with digital games, also known as somatic games, is a promising approach for children with ASD that has been increasing in attention and popularity in recent years. Since individuals with ASD demonstrate delay in fine motor skills which causes difficulties in grasping and manipulating objects, such as a mouse, and combining with their strong motivation and interests for somatic games, it is not difficult to conclude that somatic games will be a highly promising way to empower the teachers or parents of children with ASD with valuable tools to build important skills, such as cooperation, attention, and imitation, and then to improve their quality of life. The current study is trying to review empirical studies that applying somatic games to promote ASD children's skills, and then summarize and analyze the characteristics of these studies, hoping to provide insights into related research and practice in future.

2 Methods

The aim of this study is to provide a complete and structured literature review of somatic games interventions for children with ASD. To locate suitable articles, a computerized multi-database literature search on the China National Knowledge Infrastructure (CNKI), Web of Science, ProQuest, and Google Scholar search engine was performed using combinations of the following search terms and phrases: active video games, somatic games, motion-based touchless games, motion interactive games, exergames, autistic children, children with autism, children with autism spectrum disorder. Then, a dataset of 252 articles were received. After having read these articles' titles and abstracts, we excluded the same articles, books, and review articles, then reserved 43 articles in English language. Afterwards, we conducted a detailed reading for the full paper to select the most appropriate ones, which met the following criteria: (1) the subjects in the research must be identified as having a diagnosis of ASD, (2) the research must examine the use of somatic games as an intervention tool for children with ASD, (3) the research must be an empirical study, not a theoretical one, and (4) the research can be retrieved online. Ultimately, 18 articles were identified for this review. The main information of these articles is shown in TABLE 1.

Table 1 – Main Information of the Studies Included

Author and Nationality	Years	Subjects	Consoles	Somatic Games	Duration of Intervention	Target Behaviors	Research Design
Blum-Dimaya et al. (USA)	2010	four children with ASD	PlayStation Move	Guitar Hero II™	15 minutes	imitative skills	a multiple-probe across participants design
Li et al. (Taiwan, China)	2012	three children with ASD aged 8 to 10	Webcam	Swimming Race Game	30 minutes	sensory integration	a quasi-experiment case study
Bartoli et al. (Italy)	2013	five boys with ASD aged 10 to 12	Kinect	(1) Bump Bash (2) Body Ball (3) Pin Rush (4) Target Kick (5) It's not what you think! Honest!	3 hours and 40 minutes	attention, emotion, and behavior	
Shoemaker (USA)	2013	eight children with ASD aged 4 to 11	Wii	(1) Just Dance 3 (2) Wii Sports (3) Mario Party (4) Just Dance for Kids	1hour	visual-motor coordination	a repeated measures quasi-experimental design
Hillier (USA)	2013	three boys with ASD aged 3 to 5	Wii	(1) Dora the Explorer Dance Video (2) Nickelodeon Dance (3) Zoo Adventures	2 to 3 minutes	engagement and peer interaction	a multiple baseline across participants design
Ferguson et al. (USA)	2013	six boys with ASD aged 7 to 11	Wii	Wii Sports Games	90 minutes	giving compliments, taking turns, and making a positive postgame comment	a multiple baseline across individuals design

Garzotto et al. (Italy)	2014	five boys with ASD aged 6 to 8	Kinect	Pixel Balance	10 minutes	imitative capability, body schema awareness, and social skills	
Bartoli et al. (Italy)	2014	ten children with ASD aged 6 to 8	Kinect	(1) Bubble Game (2) Space Game (3) Shape Game	30 minutes	selected attention, sustained attention, visual perception, motor coordination, and visual-motor coordination	a group-design
Zhu et al. (China)	2015	two children with ASD aged 9 to 10	Leap motion	Matching games	30 minutes	fine motor skills	an AB sequence design
Xu et al. (China)	2015	fifty-one children with ASD aged 3-19	Kinect	Rehabilitation games	30-40 minutes	self-care, mobility and sociability	a pre- and post-test experimental design
Bhat-tacharya et al. (USA)	2015	eighteen students with ASD aged 8 to 19	Kinect	Motion-based activities		engagement, social behavior, motor skills and coordination	
Uzuegbunam et al. (USA)	2015	three boys with ASD aged 7 to 12	Kinect	MEBook		greeting behaviors	a multiple-baseline single-subject study
Golden (USA)	2015	eleven boys with ASD aged 8 to 11	Kinect	(1) Crazy Sales (2) Save the hotdog	45 minutes	physical activity levels and executive function	a group-design
Mademtzzi (UK)	2016		Kinect	Pictogram Room	15 minutes	sensory-motor skills	mixed a single-subject approach and a group-design approach
Lei et al. (China)	2016	one boy with ASD aged 11	Kinect	Catching game	15 minutes	motor skills	an ABAB sequence design
Lei et al. (China)	2017	four children with ASD aged 10 to 11	Kinect	Catching game	15 minutes	attention	an ABAB sequence design

Ge et al. (China)	2017	one girl with ASD aged 14	Kinect	Gesture Games: "Fruit Ninja" and "Big Adventure"	30 minutes	verbal skills, communication skills, peer relationship, interests	
Edwards et al. (Australia)	2017	eleven children with ASD aged 6 to 10	Kinect	Sports active video game	45-60 minutes	object control skills	a 2-group pre- and post-test experimental design

3 Review

The consoles of somatic games

Somatic games cannot run without motion sensing devices. Currently, there are three common motion sensor technologies, namely Nintendo Wii, Microsoft Kinect, and Sony PlayStation Move. The Nintendo Wii was developed by Nintendo Company in 2006. Its distinguishing features is the wireless controller, the Wii remote which contains a sensor able to detect motion and rotation in three dimensions and then can be utilized as a gesture recognition and pointing tool (Kandroudi, Bratitsis, 2013). Wii somatic games can not only improve health conditions such as heart rate, fat consumption, oxygen uptake, respiratory exchange ratio, and hand-eye coordination, but also increase participants' motivation for physical rehabilitation (Chang et al., 2011). But Wii requires users to hold the sensors in the hands to detect motions, which possibly causes inconvenience and discomfort (Chang et al., 2011), and may not be suitable for some special groups (Li et al., 2012). One of the existing studies applied the PlayStation Move, which is a motion-sensing game controller platform created by Sony Corporation in 2010, which uses a PlayStation Eye camera to track the wand's position, and inertial sensors in the wand to detect its motion (Kandroudi, Bratitsis, 2013). The wand contains a three-axis accelerometer and a three-axis gyro sensor, which are used to track rotation in overall motion and can be used for dead reckoning in cases when the camera tracking is insufficient, such as when the wand is obscured behind the player's back. Most of the existing studies chose the Kinect, which is a motion sensing input device implemented by Microsoft Corporation in 2010. The device can detect user's movements and gestures and transfer them to the computer, providing a natural user interface that enables users to control and interact without the need to touch a game controller (Chang et al., 2011; Kandroudi, Bratitsis, 2013). Using the Kinect sensor, children are engaged naturally, using hand and body gestures, in a playful learning experience where both body and brain stimulation are present and active. Thus, somatic games with kinect sensor can enhance participants' motivation and promote health-related fitness. However, Kinect has some limitations as well. For instance, it can only recognize the head, body, and limbs, but can not

identify fingers acutely. Besides, it can just capture some simple motions. In addition to the three common motion sensor technologies above, some studies also applied other sensors, such as leap motion and the web camera (webcam). Leap Motion is a new gesture and position tracking system with the accuracy level of sub-millimeter (Zhu et al., 2015). Webcam is a kind of digital camera video monitor service terminals with an inbuilt web server by which people can monitor video, control remotely and manipulate PTZ. Li et al. (2012) proposed that webcam was similar to Kinect and was relatively cheaper. Taking into account the mutability of children with ASD, future consoles selection can be determined by the target behaviors and children's cognitive abilities and motor skills.

The characteristics of somatic games

Somatic games in the existing studies include ball games, sports, dance, adventures and so on. Some were chosen from commercial games, and some others were designed by researchers themselves. For example, Li et al. (2012) selected the swimming race game from an online Flash game resource website. Bartoli et al. (2013) selected the five games from various packages and over 150 entertainment products. Whereas Garzotto et al. (2014), Bartoli et al. (2014) and other researches designed their own games according to the characteristics and learning needs of children with ASD. It has been shown that games developed according to some guidelines are more effective than commercial games, which have a similar game logic but are not explicitly designed for children with ASD (Bartoli et al., 2014).

Generally speaking, somatic games applied in the existing studies present several characteristics as the following. (1) task simplicity: considering children with ASD tend to have difficulty in finishing tough works, Li et al. (2012) and Bartoli et al. (2013) required the task difficulty of the games should not be too high, to fit the abilities of children with ASD and to focus their attention and emotions on play rather than on understanding the complexity of multiple game rules. (2) short duration: as playing somatic games for a long time may lead to exhaustion, games in existing studies were demanded to be finished in short time. For example, Bartoli et al. (2013) suggested that the game session should be completed in few minutes, for the purpose of favoring concentration and keep physical fatigue at an affordable level. (3) ordering: in order to keep ASD children's interests and motivation, Bartoli et al. (2013) stressed that it must have an order of complexity among the games. And Garzotto et al. (2014) divided the game configurations in 5 levels with growing difficulty. (4) diverse: on the one hand, it refers to the diversity of the game content, which include ball games, sports, dance, adventures and so on. On the other hand, it means the multiplicity of the game modes. For instance, the pixel balance game and the shape game in existing studies both can be played in single player or in multiplayer mode. While in a multiplayer mode, participants have to cooperate to finish the tasks, which

contributes to their social interaction skills. (5) customizable: to fit different children's interests and abilities, existing studies highlighted the customizable mechanism of the games. For example, Bartoli et al. (2014) emphasized that the designed games should be strongly customizable according to the characteristics and learning needs of the children with ASD, including the game speed, object density and enabled body parts. Similarly, Garzotto et al. (2014) also stressed the game's parameters should be set personally, including the shape to match, steady duration, and time limit.

The implementation of the intervention

Despite different studies conducted different intervention procedures, the implementation of the intervention shows several characteristics in general as follows. (1) different experimental designs: some researchers chose a group-design approach, while most utilised a single-subject design to see the effectiveness of the somatic games intervention. Single-subject design is one of the standard practices that can be used to examine the effectiveness of interventions based on the nature of the interventions and target behaviors (Uzuegbunam, 2015). In addition to that, interviews with the parents or teachers were also conducted in some researches to gather the qualitative data. In other words, mixed-methods design has been applied to provide better validity of the results. (2) different duration of intervention time: existing studies showed very different intervention time. For example, Bartoli et al. (2013) made an arrangement that each child played five games for approximately 3 hours and 40 minutes. Whereas Hillier (2013) let the children play the Wii game just for 2 to 3 minutes. Actually, children with ASD require intensive and sustained intervention, and the effect will be significant. But the long-time intervention may bring about exhaustion and loss of motivation and interests, and thus affect the effectiveness of the intervention. As a result, intervention duration should be reasonable and be determined by the intervention goals, procedures, and ASD children's characteristics and stamina. (3) flexible arrangement of the intervention activities: most research intervened with somatic games selected or developed, some other research conducted other activities in addition to somatic games. For example, in an attempt to verify the functional relationship between Wii game and peer interaction, children in the study of Hillier (2013) were directed to make a choice of a different free choice activity available in the classroom after playing Wii game with their peers. Likewise, Ferguson et al. (2013) allotted the participants 15 minutes of free time at the end of the intervention, in which they could play other games the participants brought from home or have access to other games on the Wii console. (4) effectively use of reinforcements: as the positive reinforcement is the most effective way to enhance the initiative of the children with ASD, existing studies applied plentiful reinforcements. For example, Bartoli et al. (2014) gave a positive final reward (e.g., an applause or a golden cup) to participants if they finished the game. Ferguson et al. (2013) reinforced each participant with verbal praise and token economy points (could

be exchanged for tangible rewards, e.g., Legos, sunglasses, Pokémon trading cards) when they showed the following behaviors: following directions, participating in group discussion, and demonstrating the target skills. Golden (2015) gave the participant stickers every 2 minutes for feedback and additional encouragement if the child was lagging or was very intent in the game. Analogously, Garzotto et al. (2014) showed a 3-second video reward once the children successfully accomplished the activity, for the sake of gratifying and encouraging them.

The effectiveness of the intervention

Empirical studies focused on ASD children's motor skills (e.g., balance, visual-motor coordination), cognitive skills (e.g., imitative capability, body awareness), and social skills (e.g., attention, emotion, peer interaction). And majority of them hold quite positive intervention effectiveness. For instance, Li et al. (2012) analyzed three subjects' biological change on heart beat, blood pressure, and temperature, with the observation records about limb coordination, concentration focus time, tempo accommodation, and game performance, finding positive changes on vision, hearing, motor senses, and overall coordination of limbs. In addition, depending on the feedback, the teacher and the students possessed positive attitudes toward applying the game for training ASD students' sensory integration. Bartoli et al. (2013) found an increase of selective and sustained attention in all children and their difficulties on interaction and anxiety were decreased according to three participants' changes before, during, and after the treatment. Combining with three participants' data in baseline and intervention, Hillier (2013) held the belief that they demonstrated increased rates of peer interaction. At the same time, Hillier (2013) conducted an interobserver reliability assessment through training two assistants to simultaneously and independently code the sessions. Besides, the researcher provided a survey on the ease and effectiveness of the intervention to the classroom teachers to measure the social validity of the study. Ferguson et al. (2013) also indicated that participants exhibited improved performance in giving compliments, taking turns, and offering a positive postgame comment, and each participant made significantly fewer negative comments toward his peers and group clinicians after the intervention. Furthermore, these behaviors were found to generalize to other stimuli (i.e., different video games and actual sports). On the basis of the global weighted score, Garzotto et al. (2014) revealed that games successfully contributed to ASD children's imitative ability, body awareness, and social skills. Bartoli et al. (2014) compared the evaluation between the initial and the final time of the treatment group, finding that motion-based touchless games have a learning potential for ASD children's attention, integration of motor and visual skills.

Very few studies did not show significant data change. For example, Shoemaker (2013) found that the Nintendo Wii did not improve visual-motor coordination, visual perception or motor coordination in Hispanic children with autism according to

the data before and after the treatment. The researcher summarized several problems that might have affected the internal validity of the study. First, this study utilized a pre-post test design, potentially resulting in test-retest effects. This would mean that any changes that might have occurred could have been a result of practice effects. Second, only one measure (The VMI) was administered to assess for each construct, which means there was not convergent validity for each construct being measured. Third, during the initial pre-test period, many of the participants did not know the researchers, resulting in evaluation apprehension which may not have been present during the post-test where they knew the researchers. Fourth, the assessment procedures and interventions were administered at different times of the day and different times of the year for different participants. Some participants completed the assessment and intervention over the course of summer break, while others completed the intervention during the school year. This could have resulted in History effects. Fifth, the children played the games with the assistance of their families, which means that the amount of support may have affected the results as well. Nevertheless, regardless of the unremarkable data changes, the researcher reported that all children appeared to enjoy the games, and each child developed their own favorite games or activities with each game, which confirms the potential of somatic games to motivate children with ASD. Besides, Edwards et al. (2017) also did not find any significant increase in object control skills following a 2-week intervention of playing Kinect Sports on the Xbox Kinect. They explained that the use of active video games (45-60 min, 3 times a week for 2 weeks) as a play-based intervention may not provide enough opportunity for children to perform the correct movement patterns to influence target skills. They suggested an active video game program may be more successful when used for a longer period of time or when incorporated in a therapy session within a structured environment, rather than for “play” in an unstructured in-home environment. However, they did find an improvement in ASD children’s perceptions of their own motor skills, which could lead to positive active behavior.

4 Conclusions and Directions for Future Research

In this paper, we present a literature review of somatic games for children with ASD. Building on the encouraging findings from empirical studies, we suggest that somatic games, which incorporate body movements, may help to strongly motivate children with ASD to engage in vigorous exercise and be a powerful stepping-stone to develop their key skills, such as cooperation, attention, and imitation, thus leading to better life. Given that the children and the teachers or the parents possess positive attitudes toward somatic games, and the low-cost full-body tracking devices such as the Wii or Kinect will be widely available for schools and homes, we suggest it is worthy to integrate somatic games into daily routines of children with ASD, so as to

be favorable for them. Meanwhile, it is noteworthy that excessively or inappropriately use of somatic games may hurt children, such as ankle sprain, which makes it vitally important to apply somatic games reasonably and properly in the future.

As we all know, children with ASD always can not maintain appropriate attention time, and lots of body movements in somatic games may lead to burnout after novelty, making it very crucial to develop multifarious games to arouse and maintain their motivation and interests. Owing to the variability in ASD children's interests, it is not practical to develop custom-tailored games for each child's particular interests. However, it may be possible to provide a customization mechanism in these games to allow teachers and parents to configure the settings according to the individual needs and profile of each child. As some researchers proposed, the applied game categories, levels and terms should be personalized so the highest effect on child's progress could be achieved (Roglić, 2016). At the same time, it is also vitally important to make a more diverse game design to keep children's interests and avoid boredom caused by tedious play. Furthermore, it could not be better if the game would be set with multiple modes, in which decisions between single player and multiplayer mode can be made according to different intervention goals. Especially, in the multiplayer mode, children with ASD have more chance to interact with peers and then will lead to better results in improvement of their social skills, such as cooperation and social interaction. Moreover, games with multiple difficulty levels are also needed to meet the needs of different children and boost their enthusiasm and motivation to participate in games more vigorously. Thus, we believe that making games fun and having multiple modes and difficulty levels might be the first reasonable step towards motivating the children. What's more, seeing that children with ASD typically have fear of difficulty, the number of steps required to operate the game should be minimized, with the aim of making it easier for children with ASD. Additionally, it is necessary to provide a data analysis or visualization tools in these games which presents the progress and development of the children's skills (Zakari et al., 2014).

In addition to the games, the experimental design of future interventions should be elaborated rigorously. Some existing studies paid more attention to the selection or design of the games, but ignored the experimental design of the intervention. For example, Garzotto et al. (2014) described the goals and the characteristics of the game in detail, whereas skipped over the procedures and results of the intervention. Some studies even did not mention their experimental designs. In fact, rigorously experimental design will not only affect the persuasiveness of the results, but also be convenient for replicable studies in the future. Therefore, while valuing the game design, future studies should also emphasize the rigorousness of the experimental design of the intervention, making the intervention results more convincing. Additionally, it would be beneficial for future research to report the reliability and validity of the intervention. Few existing studies verified their reliability and validity

of the intervention, which makes it unclear whether the target skills would be generalized to other contexts or not. As is known to all, reliability means the credibility of the results, and validity refers to the availability of the findings. They are very important standards to verify empirical studies, undoubtedly related to the dependability and authenticity of the findings. As a consequence, future studies with more accurate and reliable data about the reliability and validity should be conducted.

While research on the benefits of somatic games are encouraging, and given the shortcomings of existing studies, more strict research on the somatic games as an intervention to facilitate various vital skills of children with ASD are imperatively required in future.

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Studying the attitude of future teachers towards inclusive education in the Republic of Kazakhstan

(overview essay)

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Abstract: *The aim of the current research is defining the attitude of future teachers to inclusive education. In total, 108 students of pedagogical specialities were recruited. In order to define the attitude «The Sentiments, Attitudes, and Concerns about Inclusive Education Revised Scale (SACIE-R)» method was used. The results of the research show the neutral attitude of the future teachers to inclusive education and need of purposeful work on their preparation for work in the conditions of inclusive education.*

Keywords: *Inclusion; inclusive education; future teachers; pupils with disabilities, special educational needs*

1 Introduction

Teacher is a central figure in the pedagogical process and determining factor in upbringing the future generation, in particular, in the inclusive education process.

The attitude of a teacher towards inclusive education plays a main role in efficiency of implementation of inclusive education (Kraska & Boyle, 2014).

The analysis of foreign researches carried out by Anke de Boer, Sip Jan Pijl and Alexander Minnaert (2011) shows predominance of teachers' neutral or negative attitudes to inclusion. Most of the teachers either had a neutral or negative attitude towards inclusive education and did not think that they were well prepared for training of children with special educational needs (SEN).

Most studies have focused on studying the effect of different variables on the attitude of teachers to inclusive education. Among the main variables are:

- 1) Teacher's gender. A number of researches have found that women are more positive towards inclusive education than men (Savolainen et al., 2012). However,

other researchers have found no significant differences between attitudes towards inclusion between women and men (Haq & Mundia, 2012).

- 2) Teaching experience. Young teachers with work experience from 1 to 10 years are more positive concerning inclusive education, than their colleagues with a long standing (Boyle, Topping, & Jindal-Snape, 2013).
- 3) Teaching experience with SEN children. Most researchers note that teachers with teaching experience of children with SEN are more positive to inclusion, than teachers without such experience (Specht et al., 2016).
- 4) Special training. A number of researchers state that specialized training, studying a module about inclusive education or a professional development course influence improvement of the attitude to inclusive education (Kraska & Boyle, 2014).
- 5) Type of disorder. Teachers are more positive to inclusion of pupils with physical or sensory impairments (Muwana & Octrosky, 2014). Least of all they would like to teach in a class with children with intellectual disabilities, emotional or behavioural disorders or with more difficult, complex disorders (Hastings & Oakford, 2003).

In this research we did not try to determine the dependence of teachers' attitude towards inclusive education on all of the above listed variables. In Kazakhstan, inclusive education is only at a stage of formation, future teachers have neither any work experience with children with SEN, nor special training. Therefore, the aim of our research is to determine the general attitude of the future teachers towards inclusion.

2 Inclusive education in Kazakhstan

One of the directions of education modernization in the Republic of Kazakhstan (RK) is ensuring the right of children with special needs the access to quality education, their integration into society through inclusion in educational space.

According to the Law „On Education“ of the RK (2007) inclusive education is the joint education and training of persons with disabilities, providing equal access with other categories of pupils to the appropriate educational programs, correctional-pedagogical and social support of development by means of providing special conditions.

In Kazakhstan the legal framework for children with SEN and disabled is formed, which is aligned with the international instruments in education field of SEN children.

Today a child with disabilities can study:

- 1) In level maintenance depending on needs of the pupil practices in inclusive schools. The pupil is followed by a tutor, whose main task is to give physical support to a child, to help to move, feel confident in the class and school. Besides,

some children with special development need a tutor trained in methods of special correctional pedagogy.

- 2) In a **special school** and **inclusive school**. There are 27 inclusive schools in the country (EGov RK, 2017a). There are 102 special schools in the country now. Here is a list of their specific types of disorders:
 - for blind children – 3 schools in the country;
 - for visually impaired – 7 schools;
 - for the deaf – 10 schools;
 - for hearing-impaired – 9 schools;
 - for children with speech impairments – 9 schools;
 - for children with disorders of the musculoskeletal system – 3 schools;
 - for children with mental retardation – 47 schools;
 - for children with a delay of mental development – 14 schools.
- 3) In a **special class** of a mainstream school. There are about 1 219 in the country. However, special class pupils do not get additional tutors' support.
- 4) A **comprehensive (mainstream) school** is for pupils with slight disorders. There are 7 307 mainstream schools in the country at the moment. However, additional support is not provided there.
- 5) **Home education** is carried out in the presence of indications according to the conclusion of psychological – medical-pedagogical consultation for children who cannot attend school for a long time due to health problems.

Education market for children with disabilities is extremely narrow. For example, Almaty city, with a population of 2 million people, has only 2 inclusive schools (Kurmanzhanova & Kenzhakimova, 2015). There are few private centres for children with disabilities, including autism spectrum disorder (ASD). However, there are no care centres and after-school professional training for children with disabilities older than 18 years.

Additional support for SEN children is carried out only in inclusive schools, the number of which is small, where for a child, depending on the requirements can be appointed 2 tutors: for the care and special handling (e.g. typhlo teacher for a child with vision problems).

Other children with SEN studying in special classes of a mainstream school are deprived of the necessary additional educational support.

In Kazakhstan teachers' training to work in inclusive education system is carried out by:

- 1) the National Scientific and Practical Centre of correctional pedagogy;
- 2) the Centre for Social Adaptation and Vocational Rehabilitation of children and adolescents with mental and physical development, that:

- conducts short training courses for professionals working in the field of special education: pathologists, speech therapists, oligophrenia teachers, audiologists, typhlo teachers, psychologists, social workers;
 - conducts refresher courses for teachers with higher pedagogical education, working or wishing to work in special and inclusive education, of a duration of 1 year.
- 3) „Orleu“ national centre has methodical association of inclusive education, where training seminars, creative laboratories and workshops are delivered for teachers, psychologists, social workers, speech therapists, comprehensive and inclusive schools` academic affairs deputy directors` (Abisheva, 2016).

In addition, the quota for admission to study in the organization of higher education for the first and the second groups of disabled and children with disabilities are provided (EGov RK, 2017b). During the period 2012-2014, under the quota for the disabled more than 680 people in higher education institutions and 1,146 people with disabilities in the organization of technical and vocational education were accepted. At colleges and universities there is no support for such students and no staff of assistive technology.

Inclusive education in Kazakhstan is developing insufficiently. Children with SEN have limited access to quality education. Achievement of quality education for children with SEN is interfered by a lack of well-trained pedagogical personnel, impracticality of school buildings, buildings of colleges and universities, lack of individualized models and training programs, absence of support services for children with SEN at different education levels.

In 2010 the State program of a development of education of the Republic of Kazakhstan for 2011-2020 was adopted by the Ministry of Education and Science. In the program, an increase in number of inclusive schools up to 70% of the total number of schools is planned by the year 2020. In this connection, there is a need for teachers trained to work in conditions of inclusive education during their study period at the university.

3 Methods

In the questionnaire 108 students studying «Education» fields at S.Toraighyrov Pavlodar State University and Pavlodar State Pedagogical Institute took part.

All participants were in the age range of 25 and under. Most respondents were females (83.3 %) and school graduates (88%), only 12% had specialized vocational education.

The survey results presented in Table 1 show that most of the students had experience with children with disabilities (64.8%) and did not have experience of preparation for their training (73.1%).

Knowledge of the local legislation and policy for children with disabilities is also at a low level: 66.6%. Vast majority of students have no experience of training children with disabilities (69.4%).

In this connection the low level of confidence in teaching children with disabilities prevails among future teachers (52.7%).

Table 1: Personal and professional characteristics of the sample

Characteristics		N	%
I am training to teach in:	Early Childhood	4	3.7
	Primary school	3	2.8
	Secondary school	85	78.7
	Special Education	16	14.8
Gender	Male	18	16.7
	Female	90	83.3
Age	25 years or below	108	100
Level of education	Secondary school	95	88
	Other (college)	13	12
Interaction with persons with disabilities	Yes	38	35.2
	No	70	64.8
Training in Special Needs Education	None	79	73.1
	Some	28	25.9
	High (at least 40 hrs)	1	0.9
Knowledge of the local legislation or policy as it pertains to children with disabilities	None	25	23.1
	Poor	47	43.5
	Average	33	30.6
	Good	2	1.9
	Very Good	1	0.9
Confidence in teaching or supporting students with disabilities	Very Low	17	15.7
	Low	40	37.0
	Average	43	39.8
	High	5	4.6
	Very high	3	2.8
Experience in teaching or supporting students with disabilities	Nil	75	69.4
	Some	33	30.6
Total		108	100

For the questionnaire «The Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) Scale» (Forlin et al., 2011) method was used which comprises 15 scales and 3 subscales:

- attitude towards inclusion scale – questions 3, 6, 8, 12, 15 of the questionnaire;
- fears/concern scale concerning inclusion: questions 1, 4, 7, 10, 14 of the questionnaire;

- a scale of sentiments at interaction with children with disabilities: questions 2, 5, 9, 11, 13 of the questionnaire.

At the same time a scale of sentiments and fears were coded reverse to a scale of the attitudes towards inclusion.

Participants estimated the consent with statements, using a four-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree). The reverse coding was applied to a scale of sentiments and concerns so that the maximum point had positive value for all questions of the questionnaire and characterized the positive attitude towards inclusion. Calculation of average assessment on all 3 scales is overall assessment of SACIE-R.

In order to determine the reliability we used the measure of the internal consistency of the scales – a Cronbach's (1951) Alpha coefficient (α). Total coefficient a Cronbach's Alpha equal to 0.753 (scale of sentiments $\alpha = 0.733$, the scale of fears $\alpha = 0.706$, scale of attitudes $\alpha = 0.702$), which is an acceptable indicator of reliability.

The questionnaire also contains additional questions of the most important characteristics of participants (sex, age, education level, etc.).

4 Results

Table 2 contains detailed information on participants' answers to the questionnaire. The general attitude to inclusion of future teachers is neutral; the average value of all SACIE-R elements is 2.43 with a fairly wide range, which means the existence of both negative and positive values. Most importantly, the range of sentiments is 2.58 (SD = 1.046), which shows feelings people experience when interacting with children with disabilities.

Results on this scale show that future teachers are not afraid of interacting with children with disabilities (M = 3.28), of facing them (M = 3.19), and do not feel a shock when meeting with people with difficult physical violations (M = 3.14). The vast majority of students do not experience difficulties in communication with children with disabilities, but they are somewhat revolted by a possibility of existence of disability in themselves (M = 1.71, M = 1.6).

The lowest average has a scale ratio 2.29 (SD = 1.014), which indicates that future teachers are not ready for inclusion of children with SEN and disabilities in mainstream classes. Average value on a scale of fears is equal to 2.41 (SD = 1.220).

The main problems which disturb future teachers are connected with a lack of necessary knowledge and skills for realization of inclusive practice (M = 2.09), acceptance of children with the rest of the class (2.03), as well as the complexity of the distribution of attention to all pupils in an inclusive class (2.17).

Table 2: Means and standard deviations for scores on the SACIE-R Scale

Item	M	SD
Sentiments	2.58	1.046
I tend to make contacts with people with disabilities brief and I finish them as quickly as possible.	3.28	0.915
I am afraid to look directly at a person with a disability.	3.19	0.997
I find it difficult to overcome my initial shock when meeting people with severe physical disabilities.	3.14	0.880
I dread the thought that I could eventually end up with a disability.	1.71	1.094
I would feel terrible if I had a disability.	1.6	0.896
Concerns	2.41	1.220
I am concerned that I will be more stressed if I have students with disabilities in my class.	3.11	0.950
I am concerned that my workload will increase if I have students with disabilities in my class.	2.66	1.069
I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom.	2.17	0.859
I am concerned that I do not have the knowledge and skills required to teach students with disabilities.	2.09	1.000
I am concerned that students with disabilities will not be accepted by the rest of the class.	2.00	0.917
Attitudes	2.29	1.014
Students who frequently fail exams should be in regular classes.	2.72	1.031
Students who have difficulty expressing their thoughts verbally should be in regular classes.	2.55	0.980
Students who are inattentive should be in regular classes.	2.30	0.979
Students who need an individualized academic program should be in regular classes.	2.03	0.932
Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes.	1.85	0.905
Total	2.43	1.104

5 Discussion and conclusion

Specific character of educational space in the Republic of Kazakhstan is characterized by long-term existence of two systems of special and traditional learning. Inclusive education is at a stage of the formation and is now developing in insufficient degree. One of the reasons is the unavailability of teachers to inclusive practice. This research also confirms that future teachers do not feel assured to work in the conditions of inclusive education and show the neutral attitude towards inclusion.

Our research does not contradict the results of the international researches about prevalence of the neutral or negative attitudes of the teachers (Poon et al., 2016), especially in the countries where inclusive education has a short history of its existence (Galović, Brojčin & Glumbić, 2014).

As neutral or negative attitude of teachers may have devastating consequences for children with limited opportunities, and lead to feelings of alienation, psycho-social distress (Thaver & Lim, 2014), it is necessary to implement the targeted training of future teachers for realization of inclusive practice, particularly in the development of practical methods and technologies that are used in inclusive classes. Training of teachers and future teachers considerably increases the positive attitudes, willingness to work in the conditions of inclusive education (Bender, Vail & Scott, 1995).

Lambe and Bones (2007) research also approves positive influence of pedagogical specialties students' teaching practices on improvement of the attitudes towards inclusion, reduction of anxiety and concerns about the implementation of inclusive practices.

Need for trained teachers to meet the needs of all pupils becomes obvious to provide not only equal opportunities for all, but also for the formation of inclusive education system in the Republic of Kazakhstan. In this connection, in our country in 2016-2017 academic year the obligatory module on "A basis of inclusive education", aimed at the formation of future teachers competences for implementation of successful inclusive practice has been introduced into the standard plan of pedagogical specialties. It is believed that it will facilitate a more inclusive approach from new graduates of pedagogical specialties.

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Lifestyle of visually impaired individuals

(scientific paper)

Alena Hiršová, Dita Finková

Abstract: *The paper presents results from research realized in 2017 and focused on the issue of the “lifestyle of people with visual impairments”. Scientific literature, as well as other sources, mostly focus their research on the topic of life satisfaction. Our goal was to approach the field of lifestyle, or rather of “healthy lifestyle”, in visually impaired individuals so that this lifestyle can contribute to improving the quality of life of these individuals in intact society. This therefore presents another important aspect of this research area, being the aspect of the current topic of inclusion.*

The research was focused on the lifestyle in people with visual impairments. Also a control group of intact individuals was created. The research result analysis enabled the evaluation of differences in approaches to the lifestyle of the groups. This, eventually, gave us the option to identify the possible barriers, the removal of which could lead to an improvement in lifestyle of the visually impaired in majority society.

The primary research method used was the questionnaire. We established hypotheses, via which we aimed to specify the lifestyle of the monitored groups. In order to verify the created hypotheses, we made use of statistical methods (particularly the chi-squared distribution) and attempted to assess identify and analyse quality of life in visually impaired individuals as well as of the intact group. Further research questions have been established, which helped identify possible obstacles. These questions have also helped to establish, whether these barriers occur in the life of any individual, or only affect the lives of the visually impaired.

The results of the research can be briefly summarised by stating that the lifestyle of the sensorically impaired is similar to that in intact population, but does differ in some aspects. These differences can be found especially in the implementation of physical activities, or rather the availability of centres enabling these activities. These centres also often lack the proper environment adjustments as well as trained staff. The visually

impaired individuals, therefore, often have to choose some other type of physical activity, or need to rely on the help of another person.

Seeing its focus area, the research helps in both theory and practice. This means that in practical terms it is possible to use the research results as a basis, for example, to improve the availability of fitness centres and other sports facilities, which could then be used by the visually impaired, who would then have the opportunity to live their lives without barriers and thus fully to their liking.

Keywords: *visual impairment, lifestyle, quality of life, inclusion.*

1 Introduction

Inclusion is a topic that is part of the current direction of a democratic society. In the past 27 years, also the Czech Republic has been working towards this principle. After the regime change (in 1989), the country has tried to gradually anchor fundamental human values and principles both in legislative terms and in reality (i.e. practice). The development, of course, is gradual, but after these 27 years, a large step forward can be seen in the segregation of individuals differing from the country's majority towards inclusion. The principle of inclusion is based on the acceptance of diversity in terms of gender, race, nationality, social background or disability. All the people are therefore equal in their dignity and rights, and the presence of diversity is understood as an enrichment and benefit to society.

In this text, we would like to point out an area that is also a part of inclusion, although at first glance it may not be obvious. We will talk about **quality of life**, and above all the **lifestyle of visually impaired individuals** in the context of inclusion. "The paper is created within the framework of Palacký University Student Grant Competition project: Research of Inclusion in Special Needs Individuals (IGA_PdF_2017_008)". The text is based on the Master's thesis of Alena Hiršová (supervised by Dita Finková) named "Lifestyle of people with visual impairment", as written and defended in 2017.

2 Quality of Life, Lifestyle

The topic of **quality of life** has been the main focus of many papers and dedicated monographs. These papers focus on general topics relating to the quality of life either in specific groups of disabled individuals, minorities in individual countries and quality of life in specific facilities (such as hospital or social facilities), or in the unemployed population, the elderly, etc. We will try to concentrate solely on visually impaired individuals.

The perception of one's own health in relation to the quality of life is, in individuals with visual impairment, significantly different from such perception in intact population. In general, the quality of life in individuals with visual impairment can change, either for the better, or for the worse. In this context, we can talk about the concept of *Health Related Quality of Life*, i.e. quality of life dependent on the health of the individual (Jánský, 2007 in Ješina, Hamřík, 2011).

Koudelková (2002, in Ješina, Hamřík, 2011) characterises this term as a part of quality of life that is subject to the individual's health characteristics, as well as the level of health care. Therefore, we must also point out the context of quality of life and life satisfaction, which we already mentioned in this paper's introduction. An individual is happy when they can recognize what is important to them and what evokes their sense of inner happiness (Hiršová, 2017).

The above-mentioned thus points to the possibility of evaluation of the quality of life and life satisfaction, despite the presence of visual impairment. Hiršová (2017) also shows a link with the topic of life satisfaction, where one of the prerequisites that influence life satisfaction in the visually impaired is their particular grade and type of visual impairment. Some types of visual impairment may negatively affect e.g. the possibilities the individual's leisure-time activities, in particular those involving any physical activity. Hiršová (2017) states that visually impaired individuals have a reduced the ability of orientation in space, and therefore it is significantly more difficult for them to get involved in physical activities and sports. It is, therefore, of crucial importance to determine the real abilities of a particular person. The involvement of people with visual impairment is also useful for their ability to find a reason to live a satisfied life despite their disability. This may reflect in both their quality of life and the related lifestyle. The opportunity to be in the company of other people, not to be isolated, to have friends, to be able to engage in normal activities (to participate in cultural events, sports, work, etc.) – all these factors can influence the lifestyle.

The concept of **lifestyle** can have a number of different characteristics. It depends on the perception of the meaning of this term. The most general definition is specified as the way in which people live, i.e. the way of living, dining, education, social behaviour, and also how they communicate, work, make important decisions, take care of themselves and others, adhere to a particular value system, etc. This definition therefore suggests that the concept of lifestyle is rather comprehensive and can be approached from a number of angles. Despite this plethora of dimensions and interdisciplinary character, the area of lifestyle requires compliance with the complexity of approach (Duffková, Urban, Dubský, 2008).

In order to be able to understand the issue of lifestyle more easily, sociologists have devised a specific conceptual scheme, which attempts to describe the term "lifestyle" as such. The answer to the question: "What is actually examined in the category of lifestyle" is that **lifestyle is defined as a set of activities and relationships in the**

everyday life of a particular individual or group of people. The activities that the person or the group get involved in, are governed by universally well-known but unwritten rules and are organised in time and space. It is therefore the practice that a person or society implement within their particular style of life thanks to their inherent intelligence upbringing (Duffková, Urban, Dubský, 2008).

Hiršová (2017) in her paper zooms in on those areas of life style (especially **in relation to the “healthy lifestyle”**) in visually impaired individuals, that can contribute to improving the quality of life of these individuals in the society of intact individuals. A healthy lifestyle can be, in general, defined as a decision made by an individual for their own health and fulfilling life. Klescht (2008) lists the following components of a healthy lifestyle: **good nutrition, physical activity, sleep and relaxation, defence against stress, environment, protection from harmful drugs and substances, positive thinking.**

Respecting certain approaches, therefore, improves the lifestyle of the individual, not only in terms of their overall health improvement a well-being, but also in terms of interpersonal relationships. If a person thinks positively and is pleased with his or herself, this fact can be later reflected in the behaviour of other people towards this very individual. If the individual tries to live a healthy and active life, they reduce the risk of health complications and handle stressful situations and obstacles in an easier fashion (WHO, 1999).

3 Methodology and Research Group

The research focuses on the lifestyle of visually impaired individuals. As a control group, a group of intact individuals has been selected. The research seeks to assess the differences in approaches to the lifestyles of these two groups. Having analysed the results, it will then identify possible barriers, the removal of which could lead to an improvement in lifestyle of the visually impaired in majority society.

The primary research method used was the **questionnaire**. We established hypotheses, via which we aimed to specify the lifestyle of the monitored groups. In order to verify the created hypotheses, we made use of statistical methods (particularly the chi-squared distribution) and attempted to assess identify and analyse quality of life in visually impaired individuals as well as of the intact group. Further research questions have been established, which helped identify possible obstacles. These questions have also helped to establish, whether these barriers occur in the life of any individual, or only affect the lives of the visually impaired.

Table 1: Questionnaire Item Distribution in Respective Questionnaires

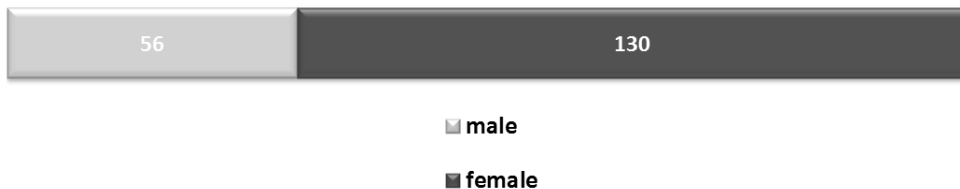
Intact Individuals' Questionnaire		Visually Impaired Individuals' Questionnaire	
Open-Ended Items	13	Open-Ended Items	14
Semi-Close-Ended Items	10	Semi-Close-Ended Items	10
Close-Ended Items	15	Close-Ended Items	16
Total	Σ 38	Total	Σ 40

For the purposes of the research, two questionnaires were created. One of them aimed at intact individuals (containing 38 items), whereas the other aimed at the visually impaired group (containing 40 questions). Both versions contained predominantly close-ended items. Other items in the questionnaires, however, were open-ended. Semi-close-ended items, i.e. questions containing answer suggestions as well as the possibility of the respondent commenting, were less frequent. This option was used by the visually impaired group more often than by the intact group. In the first part of the questionnaire, in questions where the authors have inquired about the sex of the respondent or whether the respondent is regularly physically active, the questions were predominantly dichotomous. The authors also included items enlisting a number of possible answers, e.g. in questions on the respondents' age or on the negative phenomena, that discourage the respondents from engaging in physical activities.

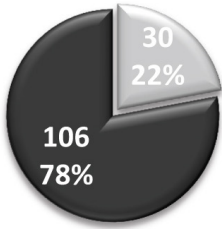
The respondents then completed the survey online via an Internet portal. The average time of completion was 20 minutes. The Web form of completing the survey was chosen, as it is easily accessed, especially for individuals with sensory disabilities. The final form of the questionnaire (before it was placed on the Internet) was consulted directly with a visually impaired individual in order to avoid any future issues, such as poor clarity of the questionnaire, too many items, an unsuitable way of completing the questionnaire, etc.

In total, 186 respondents took part in the questionnaire survey, 50 of which were in the group of visually impaired individuals.

Respondent Gender Distribution



Intact individuals



Visually Impaired Individuals

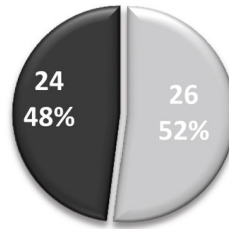


Table 2: Respondent Gender Distribution

As far as the **issue of age** is concerned, most of the intact individuals were in the age group of 18–30 years of age. The group of visually impaired individuals contained mostly individuals older than 31 years of age. The results of the research also provide current employment information of the visually impaired individuals, as employment can affect quality of life and lifestyle of these individuals. The results show that people with visual impairments work mainly on administrative positions (34%) or work manually (14%) or are in full disability pension (14%). Some of the interesting positions reported in the survey were e.g. music teachers, piano tuners, English teachers, exhibition guides, software developers, masseurs or call centre employees. Most of these positions are not dependent on the quality of the person’s vision and give the opportunity of employment to any given individual.

4 Research Result Analysis

Seeing the research topic (lifestyle of individuals with visual impairment), we have focused mostly on the areas of **correct nutrition and physical activity**.

Based on the chi-squared distribution, we found that the research group demonstrated the same frequency of physical activity in individuals with visual impairments as in the intact group. Other questions show, however, that visually impaired individuals tend to engage in other sorts of physical activity than the intact group. The most common sports and activities in the survey include tourism (33%), swimming (14%) and also riding a tandem bike (10%). Furthermore, the majority of people with sensory disabilities enjoy e.g. yoga, rehabilitation exercises, but also extreme sports such as mountain climbing or windsurfing. Based on the results, we can conclude that these individuals prefer to engage in slower-paced physical activities and can always be accompanied by another person. The intact population, on the other hand, predominantly prefers running (25%) and fitness and strength training (16%) to maintain their physical well being. Comparing these two groups, we can also determine some interesting accord in some of the physical activities.

The observation shows that the intact individuals also swim and hike. Despite the different types of physical activities in the two groups, the calculation of average weekly frequency bears witness to the fact that both of these groups engage in some sort of physical activity at least three times a week. Using the questionnaire, we also explored many more specifics and preferences related to physical activity, such as **exercise daytime preference** (morning, evening), **monthly cost** of the physical activity, **exercise lessons preference** (individual, groups) or even **phenomena discouraging from physical activity**, as shown in Chart 1. Further questions included the **respondent's dependence on a trainer**, the importance of **special gym equipment** etc.

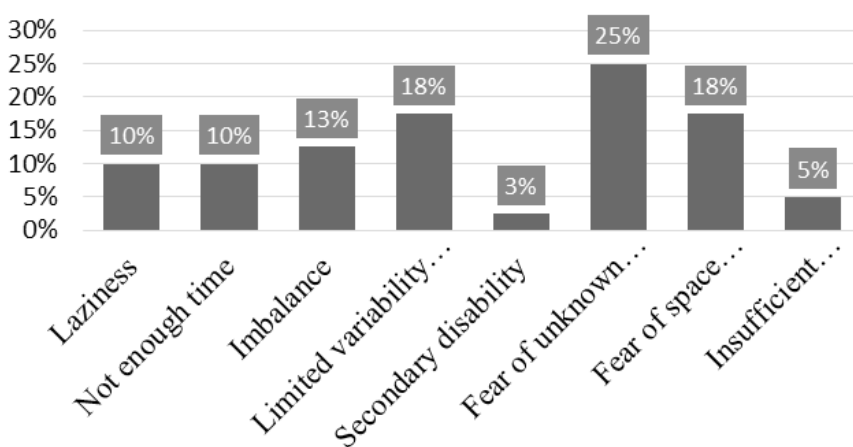


Chart 1: Phenomena discouraging the visually impaired individuals from physical activity

The reasons for inactivity, as directly stated by the respondents with visual impairment, arise directly from the existence of their visual disability (see Chart 1). They would like to exercise, but they are faced with barriers, some of which cannot be affected by the will of these individuals.

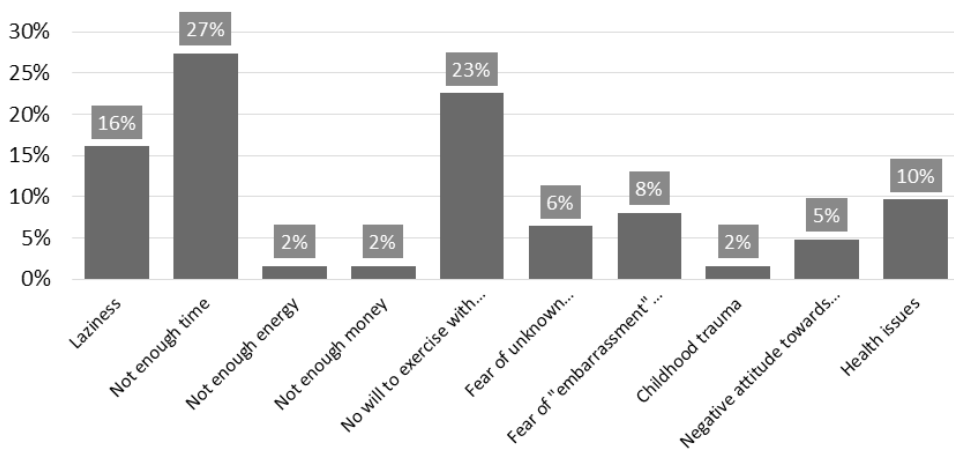


Chart 2: Phenomena discouraging the intact individuals from physical activity

The responses of the intact group, by contrast, demonstrate somewhat different phenomena, on the basis of which these individuals reject or do not engage in physical activity on a regular basis. The results de facto reveal that everything depends on the will of each individual, and the vital thing is to overcome one's laziness and decide to start exercising. Most of the phenomena stated by the intact individuals can be generalized under the broader term of "reluctance to exercise". For the results, see Chart 2. The question remains, whether the visually impaired individuals would not state the same reasons as the intact group, if the barriers mentioned by them were removed.

The questionnaire also posed the question, whether the respondent's perceive the issue of initial dependence on a trainer or assistant as a problem. Both groups have stated that the help of a trainer or assistant is welcome and is thus no hindrance in their training.

The next question asked whether the respondents preferred individual or group lessons. In both groups, the respondents who have stated that a trainer is a hindrance to their training have also stated that they prefer individual lessons. This fact seems like paradoxical, because a person taking individual lessons is in the majority of cases dependent on the help of a trainer (see Chart 3).

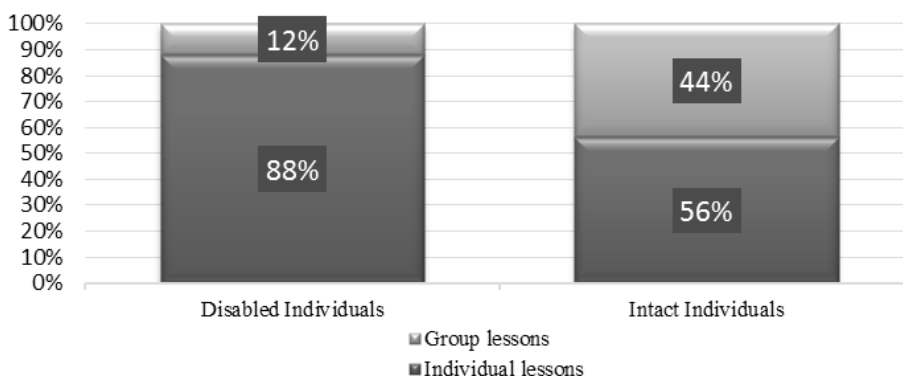


Chart 3: Respondents who prefer to exercise without the aid of a personal trainer and their preferred type of exercise

Other results also show the need of special equipment for individuals with special needs in sport centres. These centres often lack such special equipment. The intact individuals, who participated in the research, perceive the issue in the same manner. The main importance was placed especially on labels and instructions in Braille, guide lines and contrasting elements throughout the fitness centres, as well as suitable lighting, exercise equipment with sound guidance and dedicated dressing rooms for the disabled. Most of the respondents also reflected the crucial need of trained staff, which would often be enough for the visually impaired individuals to not be afraid of entering these facilities and thus beginning to change their lifestyle via active movement.

In the research, we also sought to determine the dependence of frequency of physical activity on the type of environment (i.e. cities and countryside), where the individual lives. The authors of the research were trying to find out, whether individuals living in cities tend to indulge in sport more often than people living in villages. We wanted to verify this fact on the basis of cities' better availability of sports centres. The survey results have shown that 64% of the respondents live in cities and engage in physical activity. The ratio of respondents living in villages and engaging in regular physical activity is virtually equal (61%). These results show that the environment has no effect on the frequency of engaging in physical activity.

The authors of the research, as already stated in the introduction, have not only dealt with physical activity of the population, but also with other aspects that affect society's lifestyle. A further research issue was the aspect of **healthy nutrition**. Here we investigated e.g. the availability of information on healthy foods. The most often noted source in this regard was the Internet. In order to live a healthy lifestyle, however, it is not only important to know the information, one must also implement this knowledge. The next question investigated the respondents' ability to prepare

a nutritionally suitable dish for themselves (Chart 4). Intact individuals gave a positive answer in 82%, whereas visually impaired individuals gave a positive answer in 80% (even though they may be dependent on others to prepare their food, e.g. family members, caretakers, etc.).

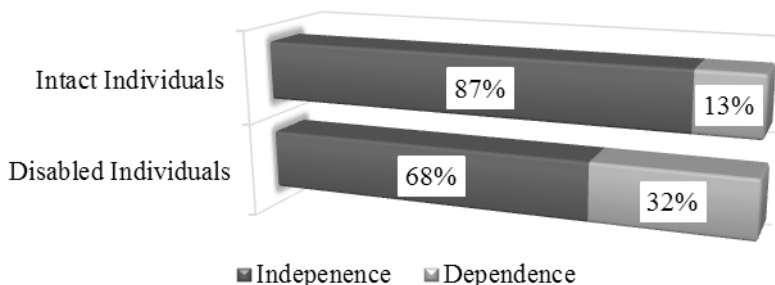


Chart 4: Respondents' dependence/independence on the preparation of food by another person

The research has also shown that there is no connection between visual impairment and food allergy. Both groups claim that they mostly do not suffer from any food intolerance. Only 12% of the intact respondents responded positively, in that they were either lactose or gluten intolerant or allergic to fruit and nuts. 8% of the visually impaired group claimed either gluten intolerance or seafood allergy. This item was included in the questionnaire as food allergy can, to certain extent at least, affect an individual's lifestyle. The need for diet adjustments, the need for allergen monitoring in restaurant dishes and while shopping for food (usually finding out the nutritional information of the particular food item) can carry some risk. Non-compliance with certain principles can even endanger an individual's life as such.

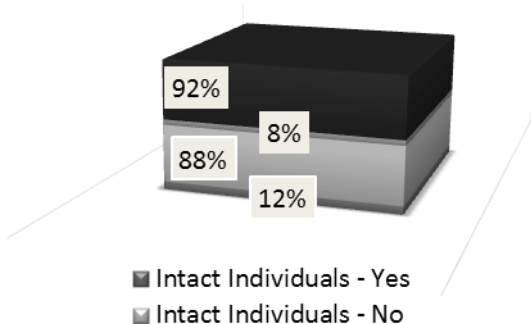


Chart 5: Food allergy

The authors have eventually focused on the investigation of phenomena that can affect the respondents' quality of life. The responses show that the quality of life in intact individuals is most affected by family relationships and the individuals' current health status (see Chart 6). In other answers, the respondents mentioned their relationships with friends and regular physical activity. The results of the research show that physical activity has an impact on the particular individual's quality of life and is an integral part of an active lifestyle.

The quality of life of individuals with visual impairment is most affected by the degree of their visual impairment (see Chart 7). However, these respondents are able to live their lives at a similarly high degree of quality to the lives of the intact community, despite the presence of their visual impairment and the obstacles related. Both groups of respondents reported, as the second most common phenomenon, their current state of health. It goes without saying that each individual is affected by their current health state. Any activity or employment comes easier to a healthy and strong individual than to a person with certain health issues.

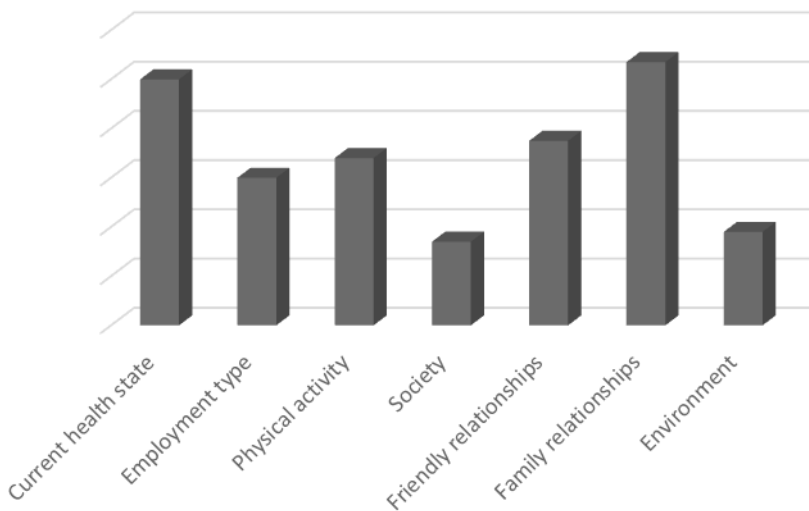


Chart 6: Phenomena affecting quality of life in intact individuals

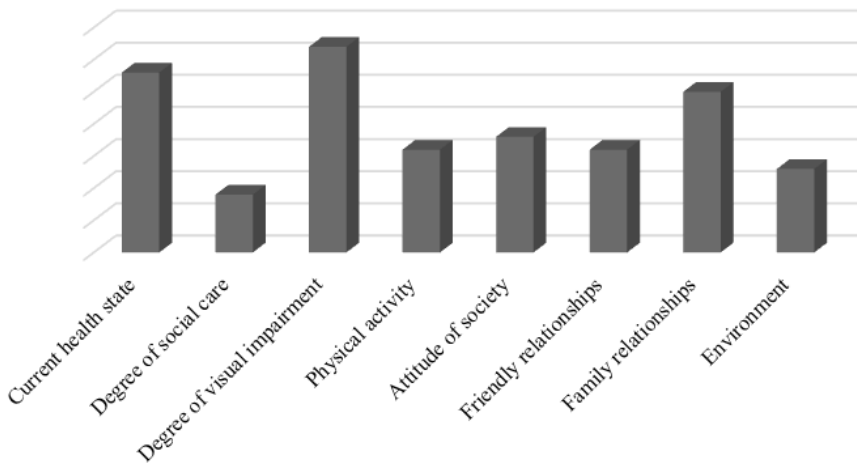


Chart 7: Phenomena affecting quality of life in visually impaired individuals

As has already been said, the research attempted to evaluate the differences between the approach towards lifestyle in intact individuals and in people with visual impairment. A partial aim was the identification of possible obstacles which could be removed, leading to an improvement in lifestyle of visually impaired individuals in majority society.

5 Conclusion

The results show that there are differences in the lifestyles of intact and visually impaired individuals. Both groups feel the importance of their current health state, but also the presence of their visual impairment. The visually impaired individuals also perceive the amount of finances they pay monthly for their physical activity as somewhat of an issue, whereas the intact individuals do not. Therefore, their low disability pension can present a financial constraint for these individuals, or they might prefer other physical activity (such as hiking).

When investigating the aspects that discourage the respondents from regular physical activity, we have found that the reasons are similar, but can also differ greatly (maybe even typical for each individual group). The aspects discouraging the visually impaired individuals from physical activity are characteristic in that they mostly cannot be affected by the will of the individual. In this case, it can be argued that individuals with visual disabilities would like to engage in physical activity, but the unfortunate external circumstances and the sports centres' lack of preparation and specific equipment discourage them. The opposite side is then represented by the phenomena presented by the intact individuals, who can mostly influence these

discouraging aspects by their will. In intact individuals, therefore, it can be said that it is merely a personal matter of each individual (as long as they are not suffering from a temporary health issue) whether they do or do not want to engage in regular physical activity. The question remains, whether the visually impaired individuals would not provide the same answers as the intact individuals if the conditions presented by them were actually adapted.

The analysis of the data showed an interesting paradox in the question specifying the presence of a trainer during physical activity. It was found that respondents who consider the presence of a trainer or assistant an obstacle during physical activity, prefer individual lessons. And yet it is the case of individual lessons where the presence of a trainer is needed.

One further question examined the need for special equipment for the disabled in the sports centres and gyms. The majority of respondents (in both groups) pinpointed the importance of such special fitness centre equipment for individuals with special needs. Unfortunately, most of the owners of fitness centres do not reflect on this, as they mostly do not presume that these individuals would visit their fitness centres at all. Most of the sports centres, therefore, do not offer suitable conditions for individuals with special needs. The visually impaired individuals themselves were supposed, within the framework of the questionnaire, to enumerate what changes and adjustments would be appropriate and even welcome in these centres. The following were stated most frequently: descriptions of exercise equipment in Braille, guidelines throughout the fitness facility, sound guidance for equipment, dressing room only for the visually impaired, contrasting elements on exercise equipment and on the floor, suitable lighting, trained staff. The results indicate that such adjustments are not substantial in their scope and should not be present a major financial obstacle for the fitness centres. The main issue to tackle here would probably be the one of trained staff, as this is mostly the problem of willingness to learn and implement one's knowledge if a disabled person visits the particular fitness centre.

Another area of research was healthy nutrition. The respondents answered the question whether they can prepare nutritionally valuable food on their own. The response analysis shows that the ability to prepare a nutritionally valuable food does not directly depend on the degree of visual impairment, but rather on the manual dexterity and skill of a particular individual. The question of the respondent's dependence on another person to prepare their food is also closely related. Most of the intact respondents as well as those visual disabilities stated that they are not dependent on anyone in their food preparation. The above stated makes it clear that even the visually impaired individuals can take care of themselves and prepare food of the same quality as the intact respondents.

An essential component of lifestyle, as clearly defined in the research, is the environment, where a person lives and grows up. Here we posed the question whether the

characteristics of one's environment also affect the engagement in physical activity. The basis of this idea was the fact of greater availability of fitness and sports centres in cities. This leads us to believe that the frequency of physical activity would be higher for individuals living in larger conurbations. The result was that the frequency ratio of physical activity was more or less equal in individuals living in cities and in those living in smaller villages. Therefore, it cannot be stated that the type of environment would have effect on the frequency of engaging in physical activity. Another interesting point found out within the sensory disabled individuals research was the fact that those individuals, who regularly engage in physical activities, tend to live in quieter parts of towns or in villages, rather than in busy city centres. This is caused by the fact that these individuals have, due to their visual impairment, a reduced ability of spatial orientation. For this reason, it is easier for them to move in a calmer environment, where there is no large amount of people and vehicles. A quieter environment gives them a feeling of certainty and security when exercising.

The questionnaire also focuses on the difference of frequency of physical activity in individuals living in flats or houses. It was found that physical activity of individuals with visual impairments who live in flats, is three times higher than of those people who live in houses. From this we can assume that living in a flat, where there is not much space, forces the inhabitants to visit fitness centres more often or go exercise in the countryside.

In summary, it can be said that the lifestyle of individuals with sensory disabilities is similar to that of the intact population. There will always be possible ways to improve the conditions of inclusion (in this cases e.g. the adjustments on conditions of fitness centres in order to make them more suitable for the visually impaired). The current state of affairs, however, enables even these visually impaired individuals to live a life of high quality.

Acknowledgements

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Testing of subjective perception of complexity of signs of Czech sign language

(scientific paper)

Jiří Langer, Miroslav Rypka

Abstract: *The contribution focuses on expanding the theoretical basis for teaching the Czech sign language (hereinafter CSL) and for its particular grammatical description. This knowledge is a necessary condition for efficient teaching both of deaf users (prelingually deaf children) and of hearing users (parents and family members, students of special pedagogy, interpreters etc.).*

More concretely, it reports on the results of research focusing on the subjective assessment of the perception of complexity of signs of CSL from the perspective of potentially hearing students. Another aim of the study was verification of the designed theoretical concept of counting of the number of morphemes in the CSL signs whose number is one of the crucial variables during the process of hierarchical dependences and subsequent verification of the validity of Menzerath-Altmann law in the case of CSL.

In total, 28 signs of CSL were tested while those belong into 7 groups of motion matrices, while 235 respondents subjectively expressed via five-degree Likert scale their opinion on the complexity of a particular sign. From the results, it is concluded that there exists a direct proportional linear dependence between the number of morphemes of individual signs and assessment of their complexity. Based on the discovered results, also an adjustment of the way how to count morphemes was designed for the needs of further qualitatively linguistic analysis.

Keywords: *Czech sign language, teaching sign language, students, quantitative linguistics, Menzerath-Altmann law*

1 Introduction

From January 2017, a multidisciplinary research project funded by the Grantová agentura České republiky (or GAČR, in English the Czech Science Foundation) is solved at Faculty of Education, Palacký University, Olomouc (Czech Republic) in co-operation with Faculty of Arts and Faculty of Science (of the same university) which is called “Theoretical basis for teaching Czech sign language (CSL) tested through

quantitative linguistic methods". A deeper discovering of one of the other linguistic characteristics of CSL (esp. its hierarchical phoneme structure), obtained through quantitative linguistic methods, contribute to the development of special education, especially for theoretical and practical education of CSL. With its concept and used research methods, it is a unique research project while it links the newly created application of qualitative linguistic methods and fractal analysis onto the sign language of deaf people which has (contrarily to the spoken languages) a simultaneous and poly-synthetic nature.

Historically, it was developed based on the analogy with the natural language; equivalents for the concepts used in description of the natural language (like the phoneme, word, sentence etc.) were found for the sign language. This analogy then grounded further focus on the grammar and generally semiotic nature of the sign language. The nature of the sign language, yet, does not reflect the character of a natural language in many aspects as natural languages are usually understood. The biggest difference is seen in simultaneous presence of signs related to phonemes in the text, which does not correspond to natural language speech; whether spoken, written or another. On the other hand, varying individual signs of phonemic analogy in relation to other particular signs corresponds to the allophonic variability and phonotactic rules which are represented more or less in every natural language. There is, however, also a possibility to consider the sign simultaneity in the language of the deaf from the point of view of polysyntheticity; such a perspective, yet, requires the initial grammar model based on the phonemic structure of simultaneously used signs.

Simultaneously composed signs would then be evaluated as sets of semantically independent components, not only phonemes. Such a point of view would mean a significant change in understanding the hierarchy of the CSL. The research project will study the speeches in the CSL of the deaf and will describe them using varying grammar means. It will use for it available transcription methods, possibly it will develop new transcription methods (see further). Such samples will then be analyzed using a wide range of quantitative methods and the results will be compared with quantitative analyses of spoken languages. The used quantitative analyses will enable a safe procedure for evaluating the nature of particular hierarchies through which it sees the analyzed text. This way language types and language unit types will cluster regularly and safely. The same will happen in case of the CSL. This way it will be possible to set up when the grammar description of the CSL is correct and corresponds to the nature of this sign system.

The Menzerath-Altman law (MAL) is a suitable instrument for text analysis. It is considered as a language universal which reflects so called conservation principles which affect the text production and language structure (cf. the literature at the end of the application). The research project assumes that the identification of the MAL in the CSL manifestations will confirm its correct unit concept, i.e. directly in

comparison with those natural languages with sound-based and with sign writing systems (Chinese). The research will include another range of quantitative metrics through which the manifestations of the CSL will be analyzed. They are e.g. entropy, type-token ratio, word and sentence average length, thematic concentration, the ratio of hapax legomena, token length frequency spectrum, repeat rate etc. Analyses of these metrics will be compared with the manifestations of the MAL.

2 Quantitative linguistics and sign language

In the year of 1928 Paul Menzerath established the following simple hypotheses: "... a sound is the shorter the longer the whole in which it occurs" and "the more sounds in a syllable the smaller their relative length", as stated in (Menzerath, 1928). Later on, in (Menzerath, 1954), when analyzing German words, the author came to a conclusion that the longer the words the shorter the syllables. This way one of the most known, quoted and analyzed laws of quantitative linguistics was born. The hypothesis was put to the test many times employing many samples. Yet, it was popularized and given a mathematical shape by Gabriel Altmann, a German quantitative linguist. Altmann took it under the magnifying glass, tested it and generalized: the longer a language construct the shorter its constituents, cf. (Altmann, 1980), where the language construct is a unit on a higher language level and is composed of units on the immediately lower level, i.e. its constituents. The construct length is measured in the number of its constituents, the constituent length in the number of its subconstituents. The law reflects a universal nature of the language, i.e. to behave in an economical manner. Thus, every natural language is expected to maintain this quality (Köhler, 2008; Hřebíček, 2007; Kelih, 2010).

The research will describe the design of the sign language. The starting point will be elementary semiotic assumptions; it will describe the role of individual CSL instruments based on universal semiotic relationships. The CSL figural level and sign level determinations will become the platform. Following the description of the delimitation of double articulation of CSL levels (i.e. sign means, their components from the point of view of figural means – phonemes/graphemes), the description of the CSL sign structure will be treated and elaborated. It will, at the same time, assist in classifying the combination of distinctive features in figural means. Such analyses will lead to the determination of CSL levels and their quantitative testing based on MAL manifestations. The research will not favor any CSL analogy, yet it backs the design by basic semiotic assumptions.

In a case of linear spoken languages (while it is possible to include Czech, English, German or Chinese languages into this group), the hierarchical dependences and structures are normally researched on the string of the following units:

the text – sentence – clause – word – syllable – phoneme (letter);

in a case of visually motor sign language (with a simultaneous production of phonemes which constitute individual signs and with a possibility of a simultaneous production of more signs), it is possible to research the hierarchical structure on a string of the following units:

the text – sentence – clause – sign – morpheme.

In the case of the first 4 stages (the text – sentence – clause – sign), the spoken languages and sign languages are structurally analogical while it is not possible to identify syllables among the sign languages due to their simultaneousness – the determination of the number of phonemes used is very complicated as well. In the following text, we therefore strive to design a way to calculate phonemes (or meaning-creating morphemes) which are used while articulating individual signs.

The text, apart from the above mentioned, will have to satisfy the criterion of homogeneity to the highest attainable degree. The sentences and clauses are defined in the traditional manner; however, their delimitation will solely be performed by the native speakers of the CSL. The same holds true for the signs (Grzybek, 2015).

Due to a fact that the string of the measurement of the dependence of hierarchical structures (which is mentioned above) has never – in the case of the sign language – been used within the field of quantitative linguistics, it emerged that it is necessary to perform experimental measurement whose aim is a discovery whether there is a similar dependence between the total number of morphemes of individual signs and the subjective perception of their complexity similar to the case of spoken languages (if a word is longer in terms of syllables and speech sounds, it is perceived as more difficult to be learnt and remembered). The educational and didactic aspects of this dependence are also obvious while it may lead to a more effective teaching of the sign language in the practical application from the easier (i.e. easily memorable) signs to signs that are more complex and more difficult.

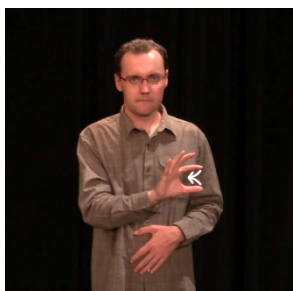
3 Methodology

Based on the current knowledge, the lowest analyzed level is grounded in the number of morphemes which appear in particularly identified lexical units (signs). Since the signs of CSL (unlike the words of the Czech language) do not consist of linearly produced sounds, with respect to the composition of CSL signs by simultaneously produced parameters, every sign will be presented as the total sum of all morphemes which are produced in its course.

Simultaneously performed manual sign parameters (Macurová, 2008):

- sign location in the articulation space (TAB)
- the shape of the articulating hand/hands (DEZ)

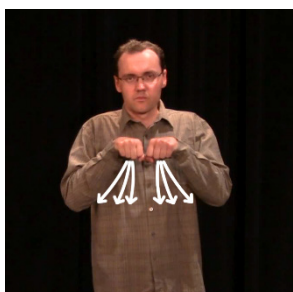
- the orientation of the palm/palms (ORI1)
- the orientation of fingers (ORI2)
- the movements of the hand/hands (SIG)
- mutual hand arrangement in two-handed signs (HA)



CHOOSE**

Parameter	Number of morphemes*	
	Right hand	Left hand
TAB	1	0
DEZ	2	0
ORI1	1	0
ORI2	1	0
SIG	1	0
HA	0	
Total	6	

Table 1: The design of the analysis and notation of the total morpheme number in the one-handed sign (CHOOSE)



SPREAD

Parameter	Number of morphemes*	
	Right hand	Left hand
TAB	2	2
DEZ	2	2
ORI1	1	1
ORI2	1	1
SIG	1	1
HA	1	
Total	15	

Table 2: The design of the analysis and notation of the total morpheme number in the two-handed sign (SPREAD)

* The number of morphemes on the abovementioned examples states the number of values which are possible to be acquired by a certain parameter in a sign – e.g. the place of articulation of the sign CHOOSE is not changed (TAB = 1) as well as the palm orientation (ORI1 = 1) and orientation of the fingers (ORI2 = 1) while the movement of a hand is not repeated (SIG = 1). However, the original shape of hands is changed (DEZ = 2). At the sign SPREAD, one hand changes the place of articulation (TAB = 2), while the shape of one hand is changed as well (DEZ = 2). Other parameters are not changing (ORI1 = 1, ORI2 = 1, SIG = 1). The mutual position of hands is not changed as well (HA = 1).

** In the text, the English equivalents of corresponding signs of CSL are stated in capital letters.

It is possible to conclude from the stated tables that the total number of morphemes is significantly influenced by the number of hands (which are used to realize a sign) and the number of phonologically important changes in individual parameters (morphemes). However, it remains a question if the abovementioned sign SPREAD (with the total of 15 morphemes) is actually perceived by the students of sign language as significantly more difficult to learn and remember than the sign CHOOSE with the total number of 6 morphemes.

In the professional literature, the signs of sign languages are grouped in several groups according to so-called motion matrices. According to Battison (1978), the following ones are the most common:

- Signs that may be articulated by one hand:
 - signs with zero contacts (e.g. STUDY, DAY, SUN),
 - signs with a contact with the body, however, not with the other hand (e.g. DEAF, FRIEND, OLD).
- Signs articulated by both hands:
 - signs in which both hands are active and both of them are in the same shape (e.g. WEATHER, IMPORTANT, SLOVAKIA);
 - symmetric signs in which one hand is active (the dominant hand – i.e. the right hand among the right-handed people) which articulates above (under, behind, in front of, etc.) the passive hand; both hands are in the same shape (e.g. SOCK, OCTOBER, DANGER);
 - asymmetric signs in which only one hand is active (the dominant hand) which articulates above (under, behind, in front of, etc.) the passive hand; both hands are in a different shape (e.g. GIFT, TECHNOLOGY, TACK).
- Composed signs which include combinations of signs of types mentioned above (e.g. MAY, LIBRARY, DO NOT KNOW).

For the needs of our research and for exploration of the subjective perception of complexity of signs to be learnt, it was necessary to create a classification of motion matrices which respects also the didactic difficulty of individual signs:

- Signs articulated by one hand:
 - signs with zero contacts (= 1H without contact),
 - signs with a contact with the body, however, not with the other hand (= 1H with contact).
- Signs articulated by both hands:
 - symmetric signs in which both hands are active and both of them are in the same shape and perform the same (mirror) motion (= 2H symmetric);

- semi-symmetric in which the hands are in the same shape and they perform similar or phase-shifted motion (= 2H semisymmetric);
- non-symmetric signs in which the hands are in the same shape, however, only one hand is active (= 2H non-symmetric);
- asymmetric signs in which the hands are in different shapes and only one hand is active (= 2H asymmetric).
- Composed signs which include combinations of all above mentioned types of signs (= composed).

All seven motion matrices were accompanied by four corresponding signs of CSL among which the sum of morphemes was analysed. After that, they were anonymized and they were subjected to assessment of respondents of the research in random order (see Table 3). Four signs of each motion matrix seemed optimal number with a regard to the variability of summarized number of morphemes, in order to provide a sufficient number of research data and also with regard to adequate time demands for respondents who had to assess 28 signs in total.

			Number of morphemes										HA	Total
			Dominant hand					Non-dominant hand						
Sign (English equivalent)	Anony- mous code	Motion matrix	TAB	DEZ	ORI1	ORI2	SIG	TAB	DEZ	ORI1	ORI2	SIG		
BANANA	SIGN01	2H non-symmetric	3	1	1	1	3	1	1	1	1	0	3	16
YES	SIGN02	1H without contact	1	1	1	2	1	0	0	0	0	0	0	6
TACK	SIGN03	2H asymmetric	1	1	2	1	1	1	1	1	1	0	1	11
DUCK	SIGN04	2H semi-symmetric	1	1	3	1	3	1	1	3	1	3	1	19
100	SIGN05	1H without contact	2	2	2	2	3	0	0	0	0	0	0	11
LI-BRARY	SIGN06	composed	3	1	3	1	6	2	1	3	1	2	1	24
MAY	SIGN07	composed	3	3	1	2	2	1	1	1	1	1	2	18
WEATHER	SIGN08	2H symmetric	2	1	1	1	2	2	1	1	1	2	1	15
HIGH-WAY	SIGN09	2H semi-symmetric	1	1	1	1	3	1	1	1	1	3	1	15
SUN	SIGN10	1H without contact	3	1	1	1	1	0	0	0	0	0	0	7

SPAIN	SIGN11	1H with contact	1	1	2	1	1	0	0	0	0	0	0	6
OLD	SIGN12	1H with contact	1	1	1	1	4	0	0	0	0	0	0	8
FAT	SIGN13	2H non-symmetric	1	1	1	1	4	1	1	1	1	0	1	13
ART	SIGN14	1H with contact	3	1	2	2	3	0	0	0	0	0	0	11
FEBRUARY	SIGN15	composed	5	2	2	2	5	5	2	1	1	4	2	31
TRUST	SIGN16	2H asymmetric	2	2	2	2	1	1	1	1	1	0	1	14
FAITHFUL	SIGN17	2H non-symmetric	2	1	1	1	1	1	1	1	1	0	1	11
WOLF	SIGN18	1H without contact	2	2	2	2	1	0	0	0	0	0	0	9
BRIGHT	SIGN19	2H asymmetric	3	1	1	2	3	1	1	1	1	0	2	16
DANGER	SIGN20	2H non-symmetric	1	1	1	2	4	1	1	1	1	0	1	14
SHOP	SIGN21	2H semi-symmetric	1	1	2	1	1	1	1	2	1	1	1	13
HELP	SIGN22	2H symmetric	1	1	1	1	1	1	1	1	1	1	1	11
DON'T KNOW	SIGN23	composed	2	2	2	2	2	1	1	1	1	0	1	15
FAMILY	SIGN24	2H symmetric	3	2	1	1	1	3	2	1	1	1	1	17
YEAR	SIGN25	2H asymmetric	3	1	1	1	3	1	1	1	1	1	4	18
EGG	SIGN26	2H symmetric	2	1	1	1	4	2	1	1	1	4	1	19
GREEN	SIGN27	1H with contact	1	1	1	1	3	0	0	0	0	0	0	7
CABBAGE	SIGN28	2H semi-symmetric	1	1	1	2	3	1	1	1	2	3	1	17

Table 3: List of tested signs, their affiliation to motion matrices and numbers of morphemes which are occur in them

The tested signs may be watched (in a form of video recording) at links below:

- 1H without contact – YES (S02), 100 (S05), SUN (S10), WOLF (S18): https://youtu.be/VYzg_bgutxA
- 1H with contact – SPAIN (S11), OLD (S12), ART (S14), GREEN (S27): <https://youtu.be/HUdvv7orIHs>

- 2H symmetric – WEATHER (S08), HELP (S22), FAMILY (S24), EGG (S26): <https://youtu.be/kn5Fc8Lblik>
- 2H semisymmetric – DUCK (S04), HIGHWAY (S09), SHOP (S21), CABBAGE (S28): <https://youtu.be/7QLuwpoizkE>
- 2H non-symmetric – BANANA (S01), FAT (S13), FAITHFUL (S17), DANGER (S20): <https://youtu.be/F7Puma2tJVU>
- 2H asymmetric – TACK (S03), TRUST (S16), BRIGHT (S19), YEAR (S25): <https://youtu.be/5Ec0INzhYoc>
- Composed – LIBRARY (S06), MAY (S07), FEBRUARY (S15), DON'T KNOW (S23): <https://youtu.be/Znfe8Ikk770>

In order to discover the subjective perception of signs' complexity, an online questionnaire was applied (via GoogleDocs) while it employed five-degree Likert's scale to mark the complexity of all 28 signs. Individual signs were introduced to the respondents in anonymized form of isolated video recordings at which a deaf signer interprets the sign. All video recordings of signs were presented in the same light and color conditions and in the same (standard) speed. The respondents might (according to the introductory instruction) play the video recording of each sign any time they wanted and they were asked to mark their subjective perception of each sign on the scale of 1 (very simple) – 5 (very complicated) (see Figure 1 below). It was recommended to watch all the signs at the beginning and to use the whole scale 1–5.

Znak 01



*

Hodnocení znaku 01:

	1	2	3	4	5	
velmi jednoduchý	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	velmi složitý

Figure 1: On-line form for the scale-based assessment of signs' complexity

Due to a fact that a vast part of CSL is visually motivated, has an iconic nature and, therefore, the visual course of a sign reminds a typical attribute of an item or a phenomenon which they represent (cf. Langer, 2013), it is possible to think that the knowledge of semantic meaning of these signs may influence the respondent in their subjective perception of sign's complexity. Since the aim of the realized research was to discover the perception of signs' complexity of respondents who were not aware of their meaning, a question to discover respondent's practical experience with CSL (or for how long do they study CSL) was included in the questionnaire as well. At the end of the questionnaire, several additional questions of demographic nature were included to discover the sex, age and economic status (high school student, university student, other respondents) of respondents. The respondents might also add any comments to the researched problematics and the online questionnaire itself.

4 Respondents and research course

The created scale-based online questionnaire was administered for the period of 19 days (13th February – 2nd March 2017), 3 main groups of respondents were addressed while they were typical hearing students of CSL:

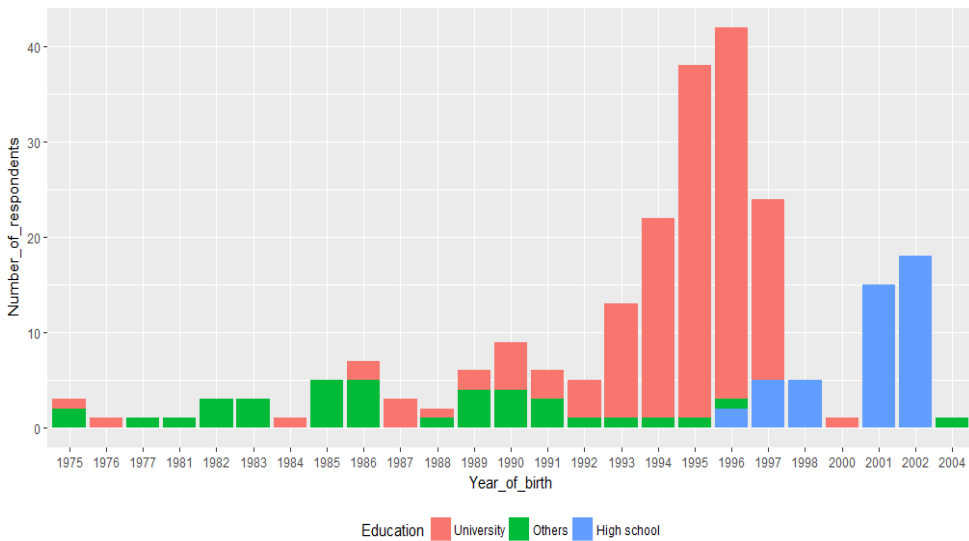
- high-school students who study CSL because of their personal or professional interest,
- university students who study CSL because of their personal or professional interest,
- adults (aged 25–35 years) which is the age in which the hearing parents of a deaf child start to learn CSL.

Contacting of potential respondents was performed in a form of link which was given out together with introductory instructions based on personal visits of researchers in several classes of Slovanské gymnasium Olomouc (in case of high-school students) and personal visits of researchers in classes of university students of 3 faculties of Palacký University Olomouc: Faculty of Education, Faculty of Arts and Faculty of Science. The parents of young deaf children were contacted via personal contacts of researchers, community social networks and the snowball method. The responses of the respondents were anonymous

In total, 236 unique respondents were joined the research while 1 respondent have not managed to fill in the whole online questionnaire correctly. Therefore, this respondent's answers were not included in the further process. Therefore, data by 235 unique respondents were subjected to further analyses (see Table 4 below).

	Sum			Average age		
	Males	Females	Total	Males	Females	Total
High-school students	19	26	45	16.2	16.9	16.6
University students	15	137	152	24.4	22.6	22.8
Others	16	22	38	30.3	29.7	29.9
Total	50	185	235	23.2	22.7	22.8

Table 4: Demographic characteristics of the respondents



Graph 1: Age structure of the respondents

	Length of CSL study (in years)					
	0	1	2	3	4	5 and more
High-school students	45	0	0	0	0	0
University students	112	30	6	2	0	2
Others	36	1	0	0	0	1
Total	193	31	6	2	0	3

Table 5: Respondents' experience with CSL study

The possibility to add a comment linked to the researched problematics and to the online scale-based questionnaire itself was used by 36 respondents in total. The vast majority of the respondents positively assessed the form of the questionnaire while it showed a greater interest in CSL and the issue of communication among the deaf. In addition, the impulse to state Czech equivalents of individual signs was frequently mentioned while the anonymization of individual researched signs was the aim of researches (the same information channel was used to send a link to the respondents once the questionnaire was administered while it contained a modified version of the online questionnaire in which the Czech equivalents were stated). Only 2 comments of a technical nature contained an impulse to include a possibility to play the signs slower and to enable the zooming-in to see the signing hands in detail. However, these adjustments were not desirable due to the aims of the research.

5 Results and Discussion

From the responses which were recorded in data file of online questionnaire form, the following results of the scale-based assessment of signs complexity (1 = very easy; 5 = very hard) emerged for the researched signs (see Table 6 below):

Sign (English equivalent)	Anony- mous code	Motion matrix	Number of mor- phemes	Average rating		
				All	Without experience	With experience
YES	S02	1H without contact	6	1.3	1.3	1.3
100	S05	1H without contact	11	3.2	3.1	3.4
SUN	S10	1H without contact	7	1.2	1.3	1.1
WOLF	S18	1H without contact	9	1.5	1.5	1.6
GREEN	S27	1H with contact	7	1.6	1.6	1.7
SPAIN	S11	1H with contact	6	2.2	2.2	2.4
OLD	S12	1H with contact	8	1.4	1.4	1.3
ART	S14	1H with contact	11	2.8	2.9	2.6
WEATHER	S08	2H symmetric	15	1.3	1.3	1.2
HELP	S22	2H symmetric	11	1.3	1.4	1.2
FAMILY	S24	2H symmetric	17	2.0	2.0	1.8
EGG	S26	2H symmetric	19	1.6	1.6	1.4
DUCK	S04	2H semisymmetric	19	3.0	3.0	2.7
HIGHWAY	S09	2H semisymmetric	15	2.0	2.0	1.9
SHOP	S21	2H semisymmetric	13	1.7	1.7	1.6

CABBAGE	S28	2H semisymmetric	17	2.0	2.1	1.9
BANANA	S01	2H non-symmetric	16	2.7	2.9	1.8
FAT	S13	2H non-symmetric	13	1.8	1.7	1.8
FAITHFUL	S17	2H non-symmetric	11	1.4	1.3	1.5
DANGER	S20	2H non-symmetric	14	2.8	2.8	2.6
TACK	S03	2H asymmetric	11	1.6	1.5	2.0
TRUST	S16	2H asymmetric	14	1.8	1.7	2.1
BRIGHT	S19	2H asymmetric	16	3.1	3.1	3.1
YEAR	S25	2H asymmetric	18	2.1	2.2	1.9
LIBRARY	S06	composed	24	3.6	3.7	3.0
MAY	S07	composed	18	3.5	3.4	3.5
FEBRUARY	S15	composed	31	3.1	3.2	2.7
DON'T KNOW	S23	composed	15	3.4	3.4	3.3

Table 6: Average assessment of signs' complexity by the respondents

From the results stated above, it is possible to conclude (see Table 7 below) that the lowest average values at scale from 1 (very simple) to 5 (very complicated) were achieved in all three groups (all/without any experience with sign language/with experience with sign language) by one-handed signs or by two-handed signs in which both hands are in the same shape (the symmetric and non-symmetric). Signs of this type therefore have an extensive didactic potential and they should be (in addition to the contextual and content point of view) included in the vocabulary for students – beginners.

Rank	All			Without experience			With experience		
	Sign (English equivalent)	Motion matrix	Av. rating	Sign (English equivalent)	Motion matrix	Av. rating	Sign (English equivalent)	Motion matrix	Av. rating
1.	SUN	1H without contact	1.2	SUN	1H without contact	1.3	SUN	1H without contact	1.1
2.	WEATHER	2H symmetric	1.3	FAITHFUL	2H non-symmetric	1.3	WEATHER	2H symmetric	1.2
3.	HELP	2H symmetric	1.3	WEATHER	2H symmetric	1.3	HELP	2H symmetric	1.2
4.	YES	1H without contact	1.3	YES	1H without contact	1.3	OLD	1H with contact	1.3
5.	FAITHFUL	2H non-symmetric	1.4	HELP	2H symmetric	1.4	YES	1H without contact	1.3
6.	OLD	1H with contact	1.4	OLD	1H with contact	1.4	EGG	2H symmetric	1.4

7.	WOLF	1H without contact	1.5	WOLF	1H without contact	1.5	FAITHFUL	2H non-symmetric	1.5
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Table 7: The order of seven signs with the lowest average value of complexity.

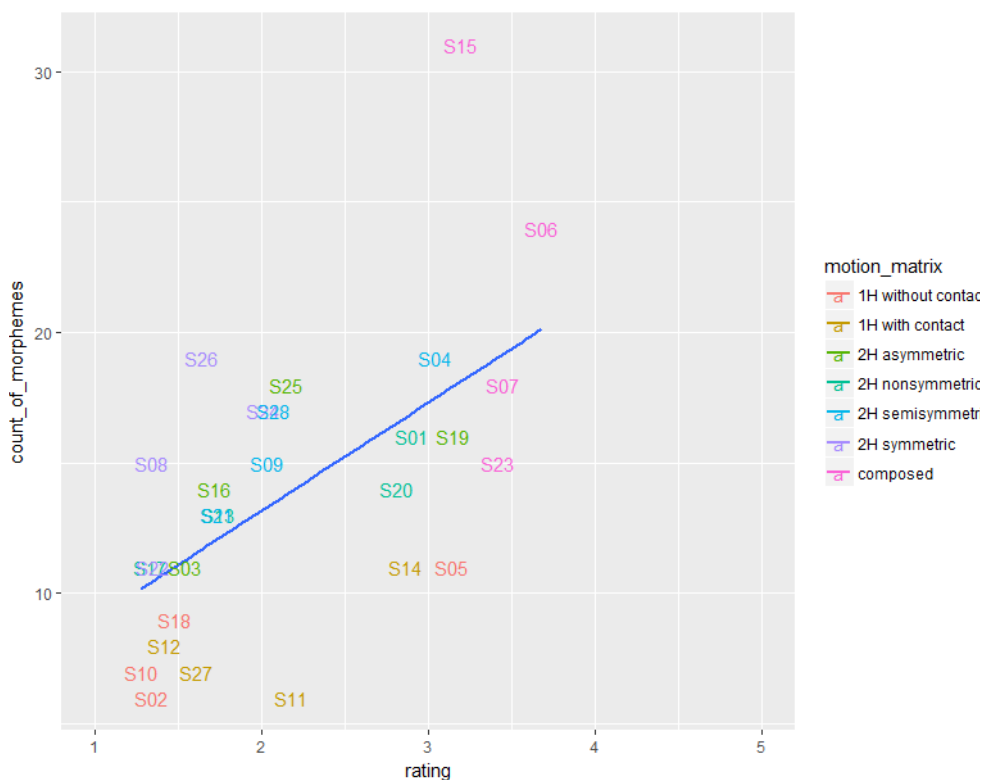
In terms of a group of 7 signs with the highest average value of complexity, the vast majority of respondents (as expected) of all 3 groups mentioned the composed signs – i.e. signs with a combination of more motion matrices in which there is a larger number of morphemes (see Table 8 below). However, the placement of a sign for a numeral 100 with a motion matrix of a one-handed sign without a contact is rather surprising. Nevertheless, it is a sign with rather high number of morphemes which are necessary to capture – therefore, it is obvious that the high number of morphemes is significantly projected in the perception of its complexity even in case of one-handed sign. From the perspective of didactics, they are not appropriate to be taught in the initial training.

Rank	All			Without experience			With experience		
	Sign (English equivalent)	Motion matrix	Av. rating	Sign (English equivalent)	Motion matrix	Av. rating	Sign (English equivalent)	Motion matrix	Av. rating
22.	DUCK	2H semi-symmetric	3.0	DUCK	2H semi-symmetric	3.0	FEBRUARY	composed	2.7
23.	FEBRUARY	composed	3.1	100	1H without contact	3.1	DUCK	2H semi-symmetric	2.7
24.	BRIGHT	2H asymmetric	3.1	BRIGHT	2H asymmetric	3.1	LIBRARY	composed	3.0
25.	100	1H without contact	3.2	FEBRUARY	composed	3.2	BRIGHT	2H asymmetric	3.1
26.	DON'T KNOW	composed	3.4	DON'T KNOW	composed	3.4	DON'T KNOW	composed	3.3
27.	MAY	composed	3.5	MAY	composed	3.4	100	1H without contact	3.4
28.	LIBRARY	composed	3.6	LIBRARY	composed	3.7	MAY	composed	3.5

Table 8: The order of seven signs with the highest average value of complexity.

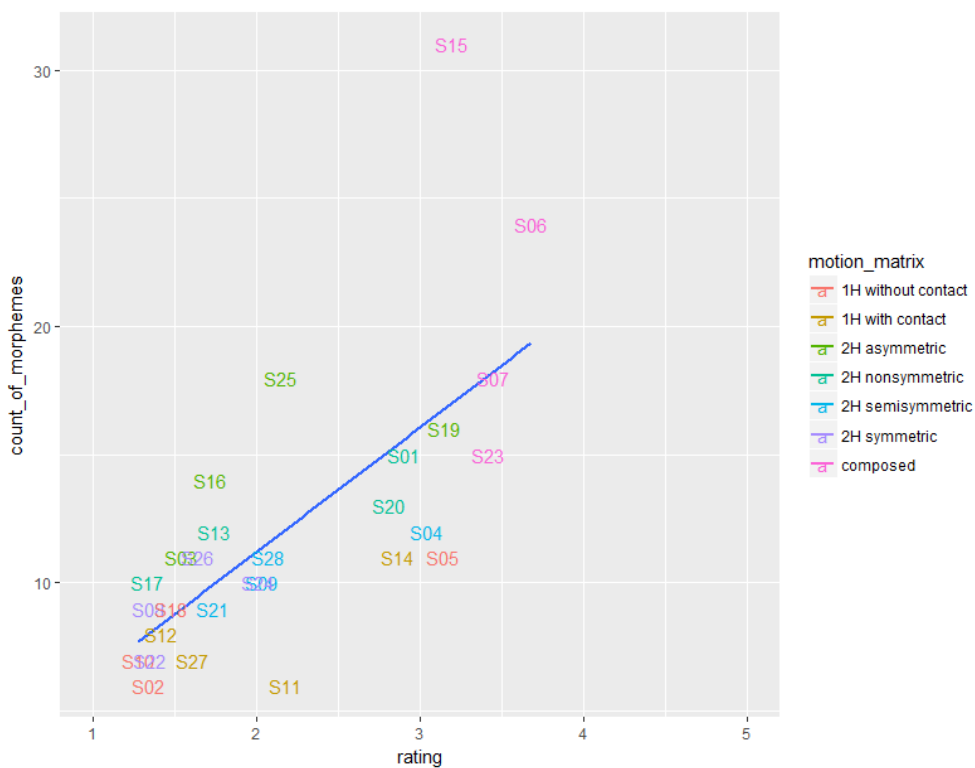
From the distribution of values of average assessment of the signs' complexity, the linear dependency of the complexity of a sign on the number of its morphemes (see Graph 2 below) is obvious, however, not entirely essential (the correlation reaches the value 0.4). At the same time, the non-standard placement of signs S08, S09, S24, S25, S26 and S28 is obvious, while they are, despite a rather high number of morphemes, assessed as relatively simple. Due to a fact that they are two-handed symmetric signs (2H symmetric), there emerge a question of an unwanted overrating of the total

number of morphemes among these signs since it is basically a mirror image and motion of both hands.

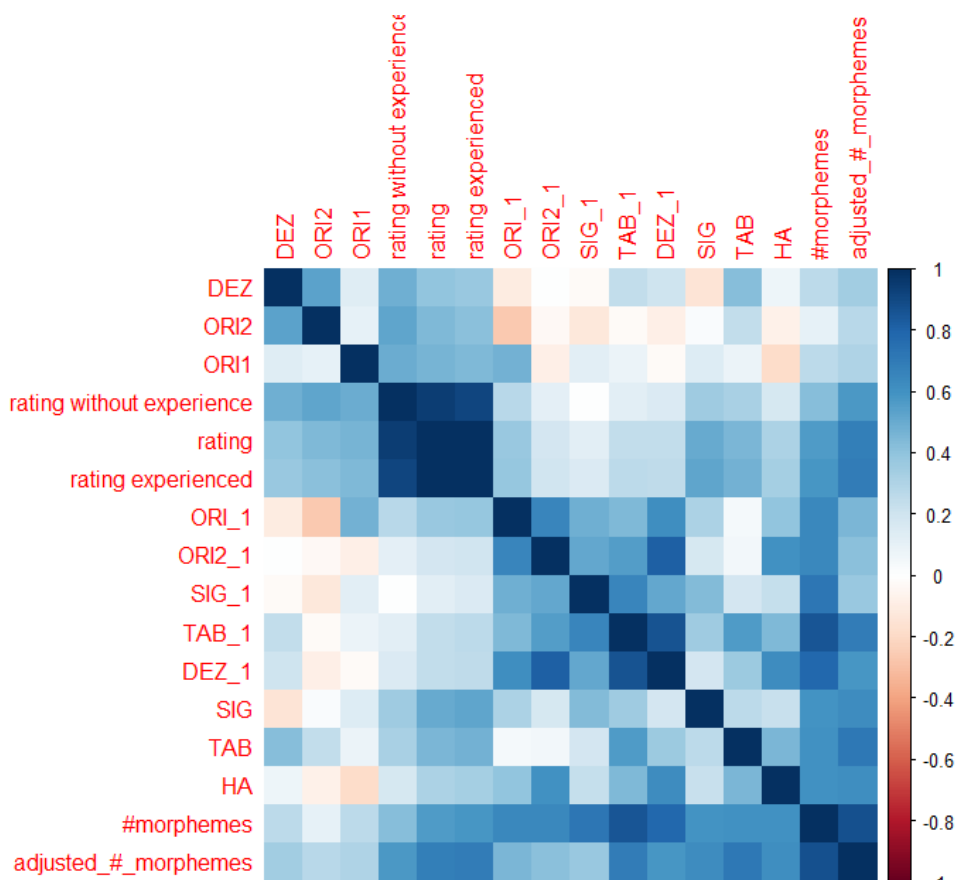


Graph 2: The dependence of the average value of sign's complexity on the number of morphemes

After the supplementary adjustment of number of morphemes of two-handed signs, in which both hands are in the same shape (symmetric, semisymmetric and asymmetric signs), which was based on the reduction of number of morphemes at a non-dominant hand to the value 1 (in case of symmetric signs), reduction to the value 2 (among semisymmetric signs), and reduction to the value 3 (among nonsymmetric signs) – the linear dependence is less disrupted (see Graph 3 below).



Graph 3: The dependence of the average value of sign's complexity on the number of morphemes after their supplementary reduction



Graph 5: Correlation of a type of morpheme and its assessment

In the Graph 5 (see above), the correlation matrix for signs and assessments in the questionnaire is plotted. The most interesting discoveries are presented in fourth to sixth rows. The assessment of complexity done by respondents with and without experience with sign language are strongly correlated. Therefore, the signs which are complex for one group are complex for the second group as well. Among both groups, the correlation is growing when the number of morphemes is adjusted (last two columns), therefore, the adjusted assessment is more corresponding to the perception of complexity of signs among the respondents (the correlation raises from 0.42 to 0.57 among respondents without experience, and from 0.57 to 0.68 in total).

6 Conclusion

The realized research confirmed the original theoretical assumption that the number of morphemes (phonemes that carry meaning) in CSL signs is proportionally influencing the subjective perception of complexity of presented signs. The number of morphemes was at the beginning of research stated in a way that it referred to the sum of phonemes occurring during the articulation of a sign in individual parameters of a sign for both dominant and non-dominant hand.

The results also showed the fact that the assessment of complexity of two-handed signs among which both hands are in the same shape (i.e. symmetric, semisymmetric and non-symmetric signs) does not correspond to their placement in a graph of the trends stated by other types of signs. The cause may be the fact that the same shape of hands and more-or-less identical other parameters at both hands cause an impression of relatively simple sign among the respondents. During the modeling and the supplementary adjustment of the sum of total number of morphemes among the three groups of signs (instead of morphemes of the non-dominant hand among symmetric signs +1, among semisymmetric signs +2, and non-symmetric signs +3), their placement within the graph showing the dependence between the number of morphemes and the value of their complexity seems to be adequate and it corresponds the observed linear dependence.

From the didactic perspective, we consider substantial the confirmation of the theoretical assumption of the easier memorability of the signs which contain a lesser number of morphemes. As the simplest ones, the symmetric signs are considered, i.e. those which are performed with hands in the same shape, they are in mirror positions and they perform the identical motion. In addition, both groups of one-handed signs are perceived as relatively simple – e.g. those with no contact and with a contact to a body. The composed signs are unambiguously perceived the most complex and difficult. While designing the methodology of CSL teaching for target groups of hearing people (while the research included respondents from 13 to 42 years of age), it would be appropriate to include signs from groups of motion matrices which were perceived simple mainly in the initial stages of the teaching.

The results stated above are also principal for the execution of planned quantitatively linguistic analysis of CSL for which the numbers of morphemes of individual signs are the lowest level of the observed hierarchic structure. As stated above, the originally proposed calculation of the sum of morphemes proved to be (via research) overvalued (among two-handed symmetric, semisymmetric and non-symmetric signs), therefore, the supplementary adjustment of the calculation was performed.

Acknowledgements

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The role of school principals in implementing inclusive education in the Czech Republic

PETERS, Brenda; POTMĚŠIL Miloň: Palacky University
Olomouc, 2015, 81pp., ISBN 978-80-244-4798-8
(book review)

Reviewed by Joy S. Okoye

The role of school principals in implementing inclusive education in the Czech Republic is one of the available literatures concerned with the development of inclusive education in central Europe. This book, however, focuses on leadership for inclusion and the inclusive practices of school principals of regular schools.

Brenda Peters and Milon Potmesil are the sole authors of the book under review. Their research focuses on the role of the school leader in developing inclusive attitudes and practices of staff and the wider community towards students with special education needs (SEN) in the Moravian region of the Czech Republic. They discern that the development of inclusion and inclusive practice in the Czech Republic is largely unknown outside the country when compared to other European countries, however, in sum Peters and Potmesil maintain that the Czech Republic purports to be moving towards a more inclusive educational system.

The book has six chapters and is written as a monograph. It begins by providing the reader with background and situational information, which are deemed essential to the investigation of school principal's attitudes towards students with SEN, and extant inclusive practices that occur within schools. The first chapter further describes the research problem, the purpose, the significance of the study and provides an overview and organization of the study.

In chapter 2, the authors' insights offer a cultural-historical perspective on inclusive education and the exploration of the inclusive practices of school leaders. Included in this chapter is the detailed conceptual framework that contributes to our understanding of the practices of inclusive education and comprises of philosophical perspectives, historical perspectives, cultural perspectives and professional/personal experience. The authors used related literatures that concern school principals and leadership from other countries such as United States, Australia, Sweden and the UK to buttress the issue. Intensive information about inclusive educational practices

in the Czech Republic is explored; for example, the Czech government's failure to address selective nature of its school system in that it has the highest percentage of students with SEN in segregated educational provision in the European Union. In addition, the chapter proffers, inclusive practices of principals in the Czech Republic and the research questions and hypotheses are stated.

Chapter 3 postulates the study design that involved two parts used to gather data. In the first part of the data collection schools principals' attitudes towards students with SEN in the Czech Republic are gathered by means of Bailey's attitude scale and results are compared with a renowned inclusive country, in this instance Sweden. The second part explores inclusive practices acknowledged by Czech school principals within their schools, thus, using survey research design. Included are a detailed procedure, recruitment process, data collection, instruments, validity as well as data analysis.

In chapter 4, Peters and Potmesil present the findings of the results gathered from administering the questionnaires that explored school principals' attitudes towards students with SEN and the extant inclusion practices that occur within schools in the Czech Republic, which are further explored in the subsequent chapter.

Chapter 5 explains the results gathered in detail in relation to the research literature. Additionally, the chapter is organized in relation to the six elements of the activity system (Engestrom, 1987) namely the community, tools, outcomes, subject, role and rules. Peters and Potmesil conclude the chapter with the implications and limitations of the study.

Finally, chapter 6 draws the study together and connecting the implication of the findings to future developments of inclusive education and how such developments may be best supported and encouraged in the Czech Republic and future research directions were proffered.

Generally, the book provides new empirical data into staff attitudes and the inclusive educational practices in the Czech Republic and also exposes existing inclusive practices of school leaders in Moravia region.

It identifies the strength and weakness of school leadership inclusion and inclusive practice in the Czech Republic. Thus, this book does not only gives one an understanding of the role of school principals in implementing inclusive education in the Czech Republic but also that of many other countries.

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A practical guide for learning the craft of qualitative interviewing

BRINKMAN, S; KVALE, S.: *Interviews: Learning the craft of qualitative research interviewing*. London: Sage, 2015, ISBN: 978-0761925422
(book review)

Reviewed by Liu Jia, Zhou Bo

Interview is one of the important methods of social science researches. It forms the basis of investigation method together with questionnaires and plays an important role in the research of psychology, pedagogy, sociology, anthropology and other disciplines. Because it is more time-consuming, using the interview method to collect research data often has to pay a higher cost, this method has not been favored by researchers in the times of pursuing quantitative indicators. With the rise of qualitative researches, the importance of interview is increasingly revealed.

Two authors of *Interviews: Learning the Craft of Qualitative Research Interview*, Steinar Kvale and Svend Brinkmann, have deep attainments in qualitative research interviews. Qualitative interviews are just relying on their own advantages to increasingly become a method used by social researchers in the study. The method of interview is not only a basic skill for the researchers, but also a successful way to study social phenomena. In the book, interview is seen not only as a technique, but also as a social practice; through such a practice, it can make researchers understand and grasp the researched issues better. As an interview method which is very different from the structured interviews used in the social survey and research, the qualitative interviews described in the book (sometimes it is also referred to as “in-depth interviews”, “no-structure interviews”, “free interviews”, etc.) is a method which has more flexibility, more requirements for interviewers, and involves more techniques, strategies, methods as well as issues. In this method, the interviewer (researcher) is just a tool of the research; in the interview process that seems very close to the oral communication between people in the daily social life, the researchers put forward all kinds of questions around the target in their hearts, listen to the interviewees, and deepen the understanding of the objects step by step. The direction guide and content control in the interview process both should be in depth and expanded step

by step, smoothly, without being perceived by the respondents and with the help of interview skills of the interviewers.

The book consists of two parts, the first part is concepts and basic theories. In this part, the authors adopted four chapters to introduce the concepts related to qualitative research interviews, not only distinguishing the differences between research interviews and philosophical conversations as well as therapeutic interviews, but also making the further analysis of related concepts from the aspects of epistemology and ethics. This part can be seen as the basis of qualitative research interviews. The second part is the focus of this book, the authors adopted twelve chapters to introduce in detail the specific steps and technical details of qualitative research interviews, and they made all the detailed descriptions from determining the theme to the whole process of the official interviews, as well as the construction and handling of interview contents, the conversational language, etc.. The book also has a major feature taking a specific interview study for example, and introduces step by step the conceptualization of interview surveys, interview design, interview situation and a variety of interview forms, making interactive oral interviews translated into written text data, a variety of tools used for analyzing the interview text data, the validation of interview results, the writing of interview research reports and many other aspects of contents, which cover the entire process of interview researches. This approach provides the novices engaged in interview researches with a good and practical guide on “how to do” an interview research, and it is very easy for the novices to learn and use. In addition, the book not only lists a large number of living examples to introduce all kinds of interview techniques and skills in detail, but also especially discusses the epistemology and methodology of interview researches, ethical issues of interview researches, etc.. The authors adopted a simple, concise way to present the complex academic information, guided the readers to understand the interrogative interview techniques used in social researches and provided a clear, incremental guide for the researchers who try to be familiar with the field. The papers and research report cases which are provided in the book show the readers a systematic process of the qualitative research from fragmentary thought sparks to finally forming a masterwork.

When describing detailed techniques and skills, meantime, the authors also put forward a question that all those who do qualitative researches may encounter --- How can qualitative researchers make an appropriate, effective understanding and explanation of research phenomena? In the qualitative interviews, the authors put forward an understandable paradox which is reflected in: How can interviewers really “understand” interviewees? Interviewers have their own research questions, and the reason why the interviewers put forward the questions is that they have their own pre-views, or at least they have their own concern contents on the questions, and they think that such questions are very important. During the conversation with

the interviewees, he / she must keep balanced between listening to the other (local concepts, naming ways and life worlds) and keeping in mind their research questions as well as research purposes. Whether pausing, repeating or questioning closely, he / she are consciously guiding the other to the ways that his/ her own interest is in. The reasons why the interviewees accept interviews are that they usually have their own agendas and hopes. Mostly they have their own stories needing to be poured out, they hope to be heard, understood, and expressed. While, often, they have different languages, different meaning systems, different cultural customs and different social realities from the interviewers. The gap between main bodies is torn by different factors, seeming to make the exchanges and interviews become impossible.

According to the introduction of the authors of this book, in the postmodern epistemology, the object of cognition is not an independent island, but a “structure of relationship”. The core of knowledge is the relationship, not the individual. Knowledge does not exist in the individual, nor is it independent of the world, but it exists in the relationship between persons as well as the relationship between it and the world. The authors of this book uses two vivid metaphors to refer to the role of qualitative researchers in understanding and interpreting: miners and travelers. They both hope to know and understand the social realities, and also hope to pursue the truths. But, in contrast, the former is a knowledge explorer, and knowledge is considered to be objective existence, similar to the rich mineral deposits, waiting for the “miners” to dig; while the latter is a knowledge constructor, similar to the traveler, forming his own knowledge and insight then by constantly talking and inquiring with others during the journey. From the research paradigm, the miners can be considered as a post-positivist, hoping to dig the precious “gold” that has long been “there” through the rigorous, systematic procedures and methods; while the traveler is a constructivist, forming the new knowledge in a particular, social and historical situation, as well as in the relationship with people. So the authors stress that the two must be combined.

From that the authors of this book adopt many chapters to introduce the knowledge view of post-modernism, it is clear that they are more interested in the role of qualitative researchers as travelers. However, it is not stereotyped to teach “philosophism” and “research method”, but to make the theories, steps and techniques related to qualitative interview researches that seem difficult introduced systematically in popular, simple and concrete language, and it has a good inspiration. In the structure, the whole book first makes an overview of the entire interview research, and makes a brief and comprehensive discussion of qualitative researches. It can not only help the readers understand the qualitative research method, but also help to open up perspectives, understanding various possibilities in the survey method.

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Approaches to students with learning disorders in inclusive school environment

BARTOŇOVÁ, M.: (2014). Approaches to students with learning disorders in Inclusive school environment. Brno: Muni press .ISBN 978-80-210-7110-0
(Book Review)

Reviewed by Orim Samuel Orim

This book is one of the intellectual property of a researcher and academic, doc.PaedDr. Miroslava Bartonova, Ph.D. It is the author's contribution to the Interdisciplinary Research Project MUNI/M/0012/2013 which primarily aims at creating enabling environment for the implementation of inclusive education in the Czech Republic. The book has four chapters, beginning with introduction which gives the background to the text and stresses the role of positive school environment to the implementation of inclusive education for children with specific learning disorders with a focus in primary schools. Chapters one and two present theoretical background and research based strategies/models of educating students with specific learning disorders in inclusive school environment. In chapters three and four the author's attention is focused on strategies for measuring support among learners with these disabilities in inclusive educational setting and personality characteristics of this category of learners.

In chapter one the author presents expressly the subject matter in an orderly and scholarly sub headings, beginning with:

- The right to education of children with specific learning disorders
- Terminology associated with specific learning disorders
- Etiology of specific learning disorders and behavior.
- Counseling and intervention approaches for students with learning disorders.

Specifically, the author discusses the right of persons with these disabilities to education. To substantiate this the author clearly makes reference to the provisions of the constitution of the Czech Republic ,ACT NO198/2009Coll and the UN Convention on the Right of persons with Disabilities 2006. Other legislations that conferred the right to education on persons with specific learning disorders (SLD) in the Czech Republic as articulated by the author are Decree no: 13/2005 coll as amended by Decree 374/2006, Decree 48/2005, Decree 72/2005 as amended by Decree no:

116/2011 coll and Decree no:147/2011 coll which specifically focus on inclusive education and support services. To precisely and categorically understand the disability in question it heterogeneity is discuss and the prevalence as the time of this research was 4–8% with dyslexia having the higher percentage. The author use the diagnostic manual of the world health organization-International classification of diseases 10th edition of 1992 and International classification of functioning, Disability and Health (ICF) adopted by WHO in 2001 to classify these disabilities into, dyslexia, dysgraphia, dysorthographia, dyscalculia ,dyspraxia and terms like learning disabilities, specific learning difficulties, specific learning disorders and specific learning and behaviour disorders are used to refer to disabilities that has no sensory, facial evidence but implicate one's ability to read ,write, spell. Count, use motor skills and pay attention to a given task for a required time frame. Under etiology of SLD, the author acknowledges the shift from earlier etiology to more recent and scientific research based causes. In this regard SLD is traced to many factors which include but not limited to phonologic deficit, memory deficit, and neurological deficit, deficit in automation process, genetic factors and social interaction problem. The author appreciates the frustration SLD imposes on the children the need for professional counseling as well as prompt intervention beginning with comprehensive neuropsychological diagnosis as a basis for remediation of SLD cases.

Chapter two of the text acknowledges varied models of education for students with SLD in accordance with the principle of curriculum policy formulation as defined by Act no: 561/2004 coll as amended primarily to give students opportunity to choose from among various professions base on future education, forces of labour market and individual interest and cognitive ability of the child. The author further articulates policy initiative in Europe as decided by Council of ministers of Education and express support for inclusion. However the author did not rule out the need for individualization of educational programmes which must be supported with professional services and good facilities.

The writer expressly highlights the need for effective planning for effective classroom interaction, learning and particularly note that reading is a cardinal skill that required professional pedagogical attention in school especially among students with dyslexia. In addition, the textbook sees foreign language as a vehicle to enhance social interaction among student with SLD in Czech and other countries. On this basis the book advocates for the study of foreign language by students with SLD despite the challenges of teaching and learning the language. The Chapter presents executive function as a strategy to initiate, plan and keep the students on track or focus on his/her task as well as monitor the progress. The positive role of learning styles is discuss and based on research findings the author encourage these category of students to develop and use effective learning with due consideration to their ability, to enhance their learning style teaching strategies should be learner centered.

The last chapter presents both behavioural and educational characteristics of students with SLD and notes that the uniqueness of this disability makes it difficult for two people with SLD to exhibit the personality which has instructional implications for the teacher. The chapter is concluded with recommendation for effective counseling for people with SLD to be able to cope with varied challenges of the disability as they show up at different stages of life and specific assignments in school, office and the society.

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Information for authors



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

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