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PERCEPTIONS OF STUDENTS WITH VISUAL IMPAIRMENT ON INCLUSIVE EDUCATION: A NARRATIVE META-ANALYSIS

Original scientific paper

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ABSTRACT

This study focused on the perceptions of students with visual impairment. A narrative meta-analysis was utilized to synthesize the findings of investigations that employed quantitative, qualitative, or mixed methodological designs. Based on the contents of the reviewed articles, three broad categories were established: barriers, feelings of acceptance, and successful components of inclusion. Barriers included the physical environments of schools, accessibility, and social interactions. With respect to feelings of acceptance, the constructs of homophily and fitting in were discussed. Several components of successful inclusion were delineated such as a positive school climate and a positive, supportive attitude associated with teachers, especially those who possess knowledge and skills and held high expectations for students. Students with visual impairment also needed skills to be autonomous and assertive, which are conducive to academic success and the initiation and building of friendships with sighted peers. A number of findings of the present study corroborated those from previous investigations; however, the uniqueness of this seminal research pertains to the specific perceptions of students with visual impairment in inclusive settings. Limitations of the study were also discussed.

Keywords: *inclusion, students with visual impairment, perceptions*

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The number of children, who are blind and visually impaired and are educated in general education classrooms, has been increasing around the world. For example, in the United States, whereas in the 1960s and 70s, the majority of students with visual impairment were educated in residential schools, as of 2017, more than 80% of these students are receiving education in general education classrooms (U.S. Department of Education, National Center for Education Statistics, 2017). The United Kingdom also has a situation similar to the United States, with more than 60% of children with visual impairment in general education classrooms (Morris & Smith, 2007). Australia, Sweden, and Israel have an even higher percentage, proclaiming that most children with visual impairment (without any additional disabilities) are placed in general education classrooms (De Verdier & Ek, 2014; Jessup et al., 2017; Opie, Deppler, & Southcott, 2017).

Because inclusive education is not only an educational but also a political endeavor, the number of students with visual impairment in general education classrooms will likely continue growing in countries, including in developing countries. This increase will be fueled by several factors such as parental and student expectations and the emergence of advanced technology. In the United States and the United Kingdom, strong advocates have argued that inclusion is a civil rights issue, maintaining that separate education facilities are unequal (i.e., with respect to resources, curricula, and quality of instruction). In addition, these advocates have asserted that instruction in separate special education settings has not substantially raised the academic or social achievement level of most children with disabilities (e.g., see discussions in Byrnes, 2017; Thomas & Vaughan, 2004; Valle & Conner, 2011; Winzer, 2009).

With respect to the inclusion of children with disabilities, especially children with visual impairment, there are lingering concerns such as providing access to the general education curriculum and whether general education classroom teachers are able to address the needs of these children. It has

been remarked that sighted individuals receive about 80% of their daily information through vision; thus, the everyday circumstances and tasks that are taken for granted by fully sighted people provide significant challenges for individuals with visual impairment (Kalloniatis & Johnston, 1994). This is also the case for children with visual impairment in general education classrooms; these children are affected both academically and socially by classroom situations (Brydges & Mkandawire, 2017; Jessup et al., 2017; Opie et al., 2017; West et al., 2004). For example, due to the nature of the disability, recognizing familiar faces is one of the difficult tasks, making it challenging for children with visual impairment to find and approach friends, especially during recess times (Kalloniatis & Johnston, 1994).

In considering possible barriers to the effective inclusion of children with visual impairment, there are challenges related to general education instruction, the use of resources in the classroom environment, and the structure and pace of activities that can impede academic and social success. For example, children with visual impairment may experience difficulties with accessing information on the blackboard or SmartBoard, regardless of the use of assistive technologies (Kalloniatis & Johnston, 1994; Opie, 2018). Lack of support by general education classroom teachers, assistants, and professionals, who do not possess adequate knowledge about visual impairment, is another common issue (Brydges & Mkandawire, 2017; Jessup et al., 2017; Opie et al., 2017; Whitburn, 2014). Consider an example involving participation in physical education programs. Due to a lack of teachers' knowledge of visual impairment and adapted sports, many children with visual impairment in mainstream or inclusive education classrooms are excluded from participating in activities. These children may simply be situated on the sidelines or engaged in different physical activities with teacher assistants (Haegele & Porretta, 2015; Haegele & Zhu, 2017). The above examples provide evidence that the physical proximity of children with visual impairment with sighted children in classrooms and schools does not constitute a successful inclusive education endeavor.

With the rise of disability studies and the awareness of a social model of disability, there has been an increase in research that focus on personal stories and voices of individuals with disabilities and their stakeholders (e.g., Bishop, 1986; Chang & Schaller, 2002; Hess, 2010; Whitburn, 2014). This research thrust on perceptions, involving students, parents or caregivers, and professionals, can provide a better understanding of the barriers and recommendations to improve the inclusive environment. In general, perceptions refer to the “generalizations about things such as causality or the meaning of specific actions” (Yero, 2002, p. 21, with respect to teachers). This can influence decisions, attitudes, and even behaviors exhibited by individuals. If perceptions are not explicit, it is possible to uncover the implications by observing the actions of individuals—that is, their utterances or behaviors. Perceptions are often influenced by background, education, and experiences.

With respect to the perceptions of students with visual impairment, Jessup et al. (2017) found that, although there were positive experiences related by the high school age students, one-third of them were not satisfied with their social relationships. Qualitative research by Whitburn (2014), De Verdier and Ek (2014), and Opie et al. (2017) reported that children with visual impairment are under constant pressure to make adjustments and to *prove* their capabilities to teachers and peers by trying to excel academically or socially. For those who could not excel, these children either externalized their anger and frustration to their teachers or simply lost interest in school. They became distance from their peers or skipped a number of classes (Chang & Schaller, 2002).

Although there is research pertaining to the inclusion of children with visual impairment, including their perceptions of inclusion, there is no research that has analyzed and synthesized the available findings. A meta-analysis or meta-synthesis is critical for understanding the trends and for advancing our knowledge regarding the inclusion of children with visual impairment. In general, a

meta-analysis is an in-depth evaluation of a range of research studies that use various methodologies such as quantitative, qualitative, or mixed (e.g., Gall, Gall, & Borg, 2007, 2015; Galvan, 2012). There is a methodology for including, excluding, and analyzing the findings of studies. Although details such as demographics, instruments, and a few quality indicators are documented in the present study, we do not evaluate the merits of the quality indicators (e.g., see discussions in Booth, Sutton, & Papioannou, 2016; Collins & Fauser, 2005; Council for Exceptional Children, 2014). If we had engaged in the evaluation of quality indicators, we would have had fewer investigations for our analysis.

After providing an overview of research pertaining to inclusion and students with visual impairment, the major aim of this paper is to synthesize the findings of the perceptions of these students on inclusive education. This synthesis is also influenced by our professional experiences and education. The following research questions are addressed:

What are the general perceptions of students with visual impairment regarding:

- Barriers in inclusive education?
- Their feelings of acceptance in an inclusive environment?
- Successful components of inclusive education?

We expect to uncover a range of issues such as the support, attitudes, and qualifications of administrators, teachers, and other professionals; the availability of accessible technology; the use of Braille and orientation and mobility; and collaborations between general education teachers and teachers of students with visual impairment.

METHOD

With respect to obtaining a general overview of research, we conducted a systematic database search on inclusion and visual impairment, using the following major electronic search engines pertaining

to special education: Education Full Text (Wilson), ERIC, EBSCOhost, ProQuest, and PsycInfo. The specific descriptor words and phrases were: visually impaired (or visual impairment or low vision or blind), inclusive education (or inclusion or mainstreaming or integration), academic achievement (or academic performance or academic success) and social skills (or social interaction or social behavior or social competence). After duplicates were eliminated, a total of 472 articles were identified.

We perused independently the titles and abstracts for all 472 journal articles, using the following inclusion criteria:

- The article must be related to children with visual impairment, learning in mainstream or inclusive settings.
- The participants in the article must have a visual impairment (blind or low vision), and the results are mainly derived from their perceptions.
- The students must be in a compulsory education program (that is, 1st to 12th grade).

We excluded articles that only focused on children with visual impairment with additional disabilities. Children with multiple disabilities exhibit more challenges and need additional resources for effective inclusion compared to children with only visual impairment (De Verdier & Ek, 2014; Jessup et al., 2018). Given this situation, these children should be examined separately to minimize confounding findings and to better understand the inclusion of various cohorts of individuals with visual impairment. We did not exclude articles that included children with an additional disability, teachers, and parents as long as children with visual impairment was their main focus.

After applying the inclusion criteria and our initial evaluations, 94 potential relevant articles were identified. We evaluated independently the full texts of these 94 studies. Articles that did not meet the previously mentioned inclusion criteria were eliminated, resulting in a total of 64 remaining articles. After reading and evaluating the full texts of

these articles and reaching a consensus, we organized the content into several broad categories: research method, area/main research theme, country where the study took place, and year of publication.

The 64 articles were reread and further categorized, using a thematic qualitative analysis. A thematic analysis is an approach that involves identifying, analyzing, and reporting patterns or themes within data (Braun & Clarke, 2006). We independently reviewed the full texts and reached a consensus on a list of themes. As a result, a total of five broad research themes emerged: “Perspective (attitude, feeling, opinion)”, “Mental Health”, “Self-esteem and Social Support”, “Content of Topic” (literacy, mathematics, etc.), and “Other” (miscellaneous, due to the range of diverse topics). Of the 64 articles, 23 were categorized under “perspective”, two articles under “mental health”, one under “self-esteem and social support”, 37 under “content of topic”, and one under “other”. Due to the broad themes and the ample number of articles, we decided to focus on the “Perspective” area, involving mainly the perceptions of students with visual impairment. This focus resulted in the identification of 14 relevant articles for review.

In addition to the above-mentioned process, a separate manual search of eight journals was undertaken electronically. The eight journals were: *International Journal of Disability*, *Journal of Visual Impairment & Blindness*, *The British Journal of Visual Impairment*, *European Journal of Special Needs Education*, *Rehabilitation Education for Blindness and Visual Impairment*, *Support for Learning*, *Journal of Research in Special Educational Needs*, and *Australasian Journal of Special Education*. The selected 14 relevant articles were published in these journals. As a result, we identified 40 additional articles via this manual search, excluding duplicates. The titles and abstracts of these articles were screened independently. Adhering to the same inclusion criteria and focusing on the perceptions of students with visual impairment, four new articles were added to the original 14 relevant articles.

A total of 18 articles were evaluated independently and were reassessed for eligibility. We developed a narrative summary of each article and compared our discussions of the contents. Two of the 18 articles were eliminated due to inconsistency in the stated results and/or inadequate described methodology. The 16 articles that met the full inclusion criteria were analyzed with respect to providing information pertaining to one or more of the three research questions listed previously. Figure 1 illustrates the process leading to the final list of 16 studies for our analysis.

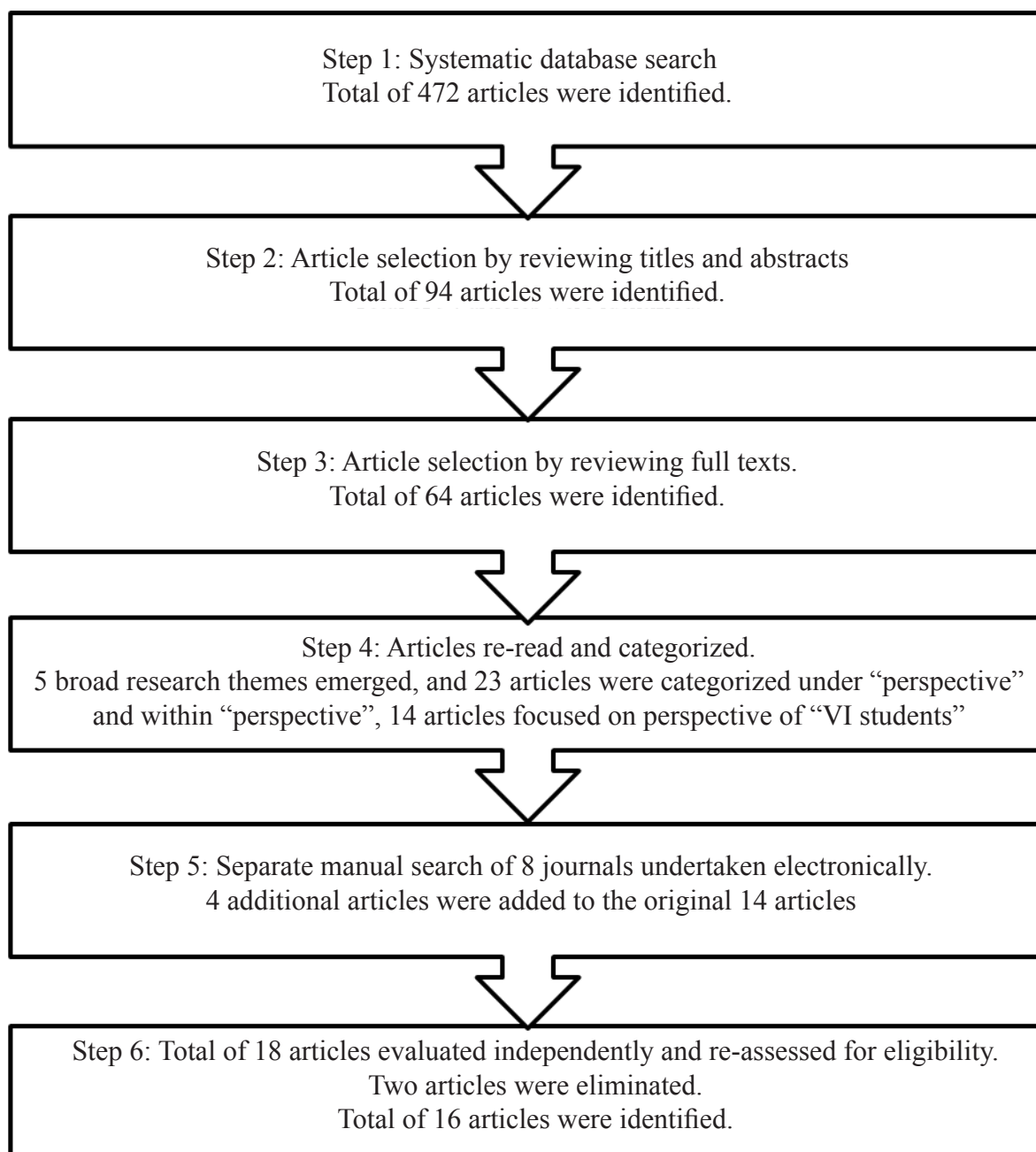


Figure 1. Process for the Selection of Articles

Of the 16 articles, seven articles (Brydges & Mkandawire, 2017; Lieberman, Robinson, & Rollheiser, 2006; Opie & Southcott, 2015; Opie, 2018; Thurston, 2014; West et al., 2004; Whitburn, 2014) focused solely on children with visual impairment, and three others (De Verdier & Ek, 2014; George & Duquette, 2006; Opie et al., 2017) focused on children with visual impairment, but included others (such as teachers and parents) to supplement children with visual impairment's perceptions. The remaining six articles (Bishop, 1986; Chang & Schaller, 2002; Hess, 2010; Jessup et al., 2017; Jessup et al. 2018; Koutsouris, 2014) focused on children with visual impairment, but included some children with additional disabilities, teachers, and parents.

RESULTS AND DISCUSSION

As mentioned above, the systematic search of databases and journals yielded 16 articles that met our inclusion criteria and the main focus on perceptions of students with visual impairment. Table 1 presents the summaries of the research articles. The results of the meta-analysis are reported for each research question below.

Table 1. Summary of the 16 Reviewed Articles

Author & Date	Country	Research Purpose	Methods	Participants	Findings
Bishop (1986) 【Successful components of inclusive education】	USA	To identify the components of success in mainstreaming for students with visual impairment as perceived by teachers of the visually impaired, general education teachers, school principals, parents, and students with visual impairment.	Three-part questionnaire, which consisted of open-ended questions; rank ordering of factors selected from a review of literature; and value judgments were used. Analyzed quantitatively.	304 participants, consisting of teachers of students with VI (88), classroom teachers (62), school principals (52), parents of students with VI (56), current and former students with VI (46).	70 factors were perceived as associated with success in mainstreaming for VI students. Of these, 19 were pupil variables, 9 were school-related, 5 concerned the family, and one was a community factor. Among the 10 most important variables, half were pupil related, 4 were school factors, and one concerned the family.
Brydges & Mkandawire (2017) 【Barriers in inclusive education】 【Feelings of acceptance in an inclusive environment】	Africa	To investigate the experiences of students with VI in Lagos, Nigeria. Explored the perceptions of the education policies on VI in Lagos; examined the degree of government and community support for inclusive education; and investigated salient sociocultural conditions that set the context for inclusive education	Qualitative method. In-depth, semi-structured interviews situated within critical disability theory were conducted. The analysis looked for recurring responses and developed categories. Within the categories, further themes that illustrated the key experiences of the respondents were identified.	Participants were 17 students with VI. All attending junior secondary (12-15 years of age) public inclusive schools. Most had previously attended a special school.	Three major themes emerged: Lack of supplementary instruction; lack of specialized instruction and classroom support; and bullying. Overall, inclusive education was seen as potentially beneficial by the students. Students were gaining new social skills and understanding of the broader world.

Author & Date	Country	Research Purpose	Methods	Participants	Findings
Chang & Schaller (2002) 【Successful components of inclusive education】	USA	To examine the perceptions of students with VI on teacher's support for their needs in the educational settings	Qualitative research design, using semi-structured in-depth interviews and data analysis. Data analysis was based on three levels of coding and cross-case analysis.	Participants were 12 adolescents with visual impairment. Of the 12, one had an additional disability (hearing impairment). 8 attended mainstream schools; 4 students attended special schools.	The emotional and learning needs of VI children emerged from the analysis. Teachers listened and encouraged VI students to excel like the sighted students and believe that they were capable. A variety of instructional strategies, including tactile cues, active learning, cooperative learning groups, the provision of braille materials, and assistive technology were identified. Some VI students expressed a lack of support for both needs (emotional and learning).
De Verdier & Ek (2014) 【Barriers in inclusive education】	Sweden	To examine reading development, academic achievement of students with VI learning in inclusive settings, and the support received.	Qualitative method was used. Interview (semi-structured for all students, one parent, and one teacher per student), and documents such as observation reports and grades for each subject were collected and analyzed.	Participants included 6 students with blindness or severe visual impairment in inclusive educational settings; one of their parents and teachers.	The outcome varied in all three aspects. Two students had satisfactory support from the school; however, most had dissatisfactory level of support. Overall, no difference in reading comprehension compared to sighted readers was found. Differences were seen in decoding and reading speed. All students that attended general education classes had average grades.

Author & Date	Country	Research Purpose	Methods	Participants	Findings
<p>George & Duquette (2006)</p> <p>【Barriers in inclusive education】</p> <p>【Successful components of inclusive education】</p>	Canada	To understand the social and psychological experiences of a student with low vision, and suggest a model for successful inclusion.	Qualitative method. A single case study with a constructivist approach was conducted. Sources of data including semi-structured interviews, observations (field notes), and documents (school files) were collected over 2 months. Data were analyzed inductively and were divided into meaningful units; coded and organized into categories.	Participant was a 11-year-old male with low-vision (oculocutaneous albinism and nystagmus -20/100 with correction). Participants include student's current and previous year's teachers (veteran teachers with teaching experience of 18+ years) who previously taught the VI student; mother was also involved.	Four themes were derived: sports; friendships and popularity; role of the teacher; role of the parent. Role of sports was the central theme. Teachers had a positive image of the student with VI and had high expectations for all students. Physical education was the most difficult subject to include the student with VI. The student has two caring parents, and the mother worked closely with teachers. It was concluded that psychosocial development of students with low vision may not always be compromised by limitations. The four elements that supported the student's successful inclusion were "parental and familial system", "teacher-instructional system", "personal system" and "peer system"
<p>Hess (2010)</p> <p>【Successful components of inclusive education】</p>		To investigate the interrelationships of the school climate, teachers' attitudes, and the quality of life (QOL) of students with visual impairment.	A quantitative method was used. Measurements used: Questionnaire on school climate and staff attitudes; Questionnaire on feelings of depression.	Participants were 63 VI students, ages 12 to 19 years, attending mainstream schools; from 40 different schools all over Israel. Total of 200 teachers involved.	When the school climate and teacher's attitudes towards inclusion were positive, there was a significant correlation of the teachers' assessment of the students (social, emotional, and learning domains) and the students' evaluation of their QOL. When climate and attitudes were positive, the students perceived that stigma was lower.

Author & Date	Country	Research Purpose	Methods	Participants	Findings
<p>Jessup et. al (2017)</p> <p>【Barriers in inclusive education】</p> <p>【Feelings of acceptance in an inclusive environment】</p>	Australia	<p>To explore the social experiences of VI students in high school by addressing following questions.</p> <p>a. How socially included do VI students feel at high school?</p> <p>b. What are the internal qualities (awareness, fitting in, acceptance, loneliness, enjoyment) of their school activities and interactions?</p> <p>c. What are the different influences on social inclusion in high school?</p>	<p>Mixed method was used. Measurements included: Experience Sampling Methodology (ESM), Psychological Sense of School Membership (PSSM) questionnaire, and interview. Interviews corroborated the ESM responses and explored social aspects further.</p>	<p>Participants were 12 VI students, 13-17 years old from 12 different high schools. Three out of 12 were VI with an additional disability. All had varying degrees of vision loss ranging from total blindness (4 participants) to low vision (but all were severe).</p>	<p>All except for some with additional disabilities felt included and had a positive sense of belonging. Over half the time, students felt school was enjoyable; yet, almost 1/3 of the time they felt a little or quite lonely. “Doing nothing” was experienced negatively by students, and it was often seen in mathematics, physical education, and lunchtime. They felt most accepted doing activities with a group of friends (not with staff or a single friend). In class, unreciprocated help was received by 44% of them; the majority came from staff. Student reciprocation--by helping other students--was low (8%). No correlations found for gender, age, grade, level of vision and ICSEA (index of community socio-educational advantage). Factors that influenced students’ perceptions were the presence of additional disability, fitting in, and loneliness.</p>

Author & Date	Country	Research Purpose	Methods	Participants	Findings
<p>Jessup et. al (2018)</p> <p>[Barriers in inclusive education]</p> <p>【Feelings of acceptance in an inclusive environment】</p> <p>【Successful components of inclusive education】</p>	Australia	To explore social inclusion in high school of Australian students with visual impairment by understanding how students described social inclusion, whether they felt included, and what influenced these perceptions.	Part of a larger mixed methods study. Psychological Sense of School Membership (PSSM) was used to measure the subjective sense of school belonging, and semi-structured interview was conducted on thoughts and the actual experiences of social inclusion.	Participants were 12 high school students with VI (13-17 years); 3 with additional disabilities.	Inclusion was described as: being noticed and not overlooked or ignored by others. 2/3 of the group was satisfied with the social relationships whereas 1/3 was not, which included all students with additional disabilities. Students' perceptions and experiences of social inclusion were encompassed by five themes: putting myself forward; knowing me; having control; having a place to shine; and peer exclusion and rejection.
<p>Koutsouris (2014)</p> <p>【Feelings of acceptance in an inclusive environment】</p>	England	To examine young people with and without disabilities' tension between homophily and inclusion	Qualitative research. Data collection was both inductive (data driven) and deductive (theory driven); indepth semi-structured interviews were conducted. Interviews focused on four different scenarios influenced by research in moral psychology.	27 young individuals from special and mainstream schools, disability services, and employees from local public houses participated. Of the 27, 10 had invisible disabilities (Asperger syndrome), 9 had visible disabilities (visually impairment), and 8 were individuals without disabilities. Age range was 15 to 25 years.	Participants identified a tension between homophily and inclusion; they supported one of the two sides. Homophily can be a choice or viewed as a discrimination against different people and, therefore, can be right and wrong at the same time. No major differences between the responses of the young people with and without disabilities.

Author & Date	Country	Research Purpose	Methods	Participants	Findings
<p>Lieberman et. al (2006)</p> <p>【Barriers in inclusive education】</p> <p>【Successful components of inclusive education】</p>	USA	To examine the experiences of students with VI in inclusive general physical education classes in regard to types of modifications and their awareness regarding their Individual Education Plans.	Qualitative method was used. Three parts: Questions pertaining to modifications to equipment and to rules, listing of the most and least liked sport activities, and knowledge on Individual Education Plans. Intuitive and inductive processes were used for analysis.	Participants were 60 children and youth with visual impairment (9-23 years old) enrolled in inclusive general physical education classes and attended a 1-week sports camp in Alaska, New York, or Arizona.	Results varied depending on the level of the vision loss. Children and youth with severe visual impairment had experienced more modifications related to sounds and physical and verbal assistance. Group of students with severe VI liked open sports although the sports were difficult to modify. Severe VI group was aware of their IEPs, but some of the students with less severe VI were not aware.
<p>Opie (2018)</p> <p>【Barriers in inclusive education】</p>	Australia	To examine the perceptions of students with VI on their experiences in mainstream secondary schools in relation to technology.	Qualitative research. 2-3 indepth, semi-structured interviews within a 3 months period were conducted; one interview was approximately one-hour in duration. An interpretative phenomenological analysis (IPA) was conducted.	Participants include seven students with VI attending secondary mainstream schools. 3 girls, 4 boys; 1 in year 10 (17years old); the other 6 students in year 12 (18 or 19 years old).	Participants found access to work on the board and access to worksheets problematic. Also, teachers had a limited understanding of VI and expertise for technology introduction and support. VI students shied away from using technology that singled them out; students did not have enough time to set the technology up in class, which affected the use.

Author & Date	Country	Research Purpose	Methods	Participants	Findings
Opie et. al (2017) 【Barriers in inclusive education】	Australia	To examine how effectively students with VI were supported in the inclusive setting.	Qualitative method was used. Indepth, semi-structured interviews were conducted with 7 students. Brief interviews to augment the information of students were conducted with 16 others including teachers. An interpretative analysis was conducted, with interview data coded independently by researchers, and emergent themes identified before a meeting to negotiate a shared understanding of the data.	Participants were seven senior secondary school (17-19 years of age) students with visual impairment, attending five different mainstream schools. Four students were legally blind, and two had low vision. For brief interviews: Three Heads of Education Supports, two parents, three aides, and eight teachers participated.	The following three themes emerged: time issue, access to schoolwork issue and challenges pertaining to the teacher, and aides' support and training. Poor communication was observed among teachers, aides, students, and parents, and understanding of educational equity was insufficient in schools. Although adjustments for students to enable equitable, quality, and inclusive education was legally mandated, it was not evident from the experiences of the students in the study.
Opie & Southcott (2015) 【Barriers in inclusive education】 【Successful components of inclusive education】	Australia	To explore the educational experience of a year 12 student with visual impairment studying in mainstream school.	Qualitative method. Single case phenomenological study, using an indepth, semi-structured interview. An Interpretative Phenomenological Analysis (IPA) was conducted.	Participant was one male student with visual impairment in year 12. Student attended a private school without an education support unit. Student was supported by qualified education support teachers, and school psychologist, and was eligible for visiting specialist teachers twice a term.	Major factor, which impacted the student's school life, was social issues. Participating in blind sports outside school facilitated close connections with peers and was uplifting.

Author & Date	Country	Research Purpose	Methods	Participants	Findings
<p>Thurston (2014)</p> <p>【Barriers in inclusive education】</p> <p>【Feelings of acceptance in an inclusive environment】</p>	United Kingdom	To examine perceptions of two VI students with albinism in the United Kingdom on inclusion and using low-vision aids in school	Qualitative research. Interview using open questions was conducted. An interpretative phenomenological analysis (IPA) was conducted.	Participants included two high school students with albinism. One female (age 16) and one male (age 15); 10% functional vision, stable since birth.	Experiencing low vision in school had physical, social, and emotional consequences. Both VI students perceived low vision aids as beneficial, allowing them to see better; however, there were drawbacks such as complexity of using, transporting, lack of functionality, and not being able to “blend in”.
<p>West et. al (2004)</p> <p>【Barriers in inclusive education】</p> <p>【Successful components of inclusive education】</p>	Singapore	To examine the perspectives of VI students on their inclusion in Singapore mainstream (secondary) schools.	Qualitative method was used. Semi-structured interviews with students; diary entries and casual observations were documented. Two-step coding was used for analysis. Specific techniques for generating meaning from the data and confirming findings were adopted. Triangulation was also implemented.	Participants were nine VI students (3 males, 6 females) from ages 13-17 years. Seven had low vision; one used Braille, one used both Braille and low vision technology. All students attended government mainstream secondary schools. Eight were in a normal academic stream; one was in the express stream. All students were educated in special schools during their primary school age years.	Four propositions on perspectives of VI students emerged; need of VI students’ feelings and abilities acknowledged by significant others; must make major adjustments to their new learning environment; benefit of receiving support and assistance from peers; and benefit from the assistance of teachers who acted as a “bridge” in their social relationships with peers.

Author & Date	Country	Research Purpose	Methods	Participants	Findings
Whitburn (2014) 【Successful components of inclusive education】	Australia	To examine the experiences of young people with VI with inclusive schooling	Qualitative exploratory framework was used; grounded theory design. Semi-structured focus group and individual face-to-face interviews were conducted.	Participants included five legally blind students, four boys and one girl, aged 13-17 years, learning in an inclusive secondary school with a specialist teacher of students with VI.	Two elements emerged as central to effective inclusion: (1) having seamless access to the academic and social dimensions of the school, and (2) being able to perform autonomously and independently. Facilitators for inclusion include having physical access to school, being able to select academic subjects freely, and being able to attend the same class with peers. Class teacher's understanding and use of resources, effective pedagogy, and friendship were also important. Overall, students were under pressure to prove their capabilities to both staff and peers by excelling academically and performing well socially.

Barriers in Inclusive Education

Within the 16 articles that we reviewed, 11 articles delineated barriers in inclusive education (Brydges & Mkandawire, 2017; De Verdier & Ek, 2014; George & Duquette, 2006; Jessup et al., 2017; Jessup et al., 2018; Lieberman et al., 2006; Opie, 2018; Opie et al., 2017; Opie & Southcott, 2015; Thurston, 2014; West et al., 2004). The three major barrier components were categorized as *physical or environmental barriers*, *barriers in accessing the curriculum or instruction*, and *social barriers*.

Physical Barriers

Physical barriers refer to the larger space, class size, and the higher noise level of schools, especially in the lower secondary school and high school (Opie, 2018;

Opie et al., 2017; Thurston, 2014). West et al. (2004) investigated the perceptions of nine students with visual impairment learning in a mainstream secondary school. These students had previously attended a special school and had to adjust to the different physical environment. Although physical barriers can be mitigated by students with adequate orientation and mobility training, it was not rare to find that students had to overrely on paraprofessionals or peers because they lacked the necessary skill or the confidence (Brydges & Mkandawire, 2017; West et al., 2004).

Barriers in Accessing Curriculum or Instruction

Barriers pertaining to accessing the curriculum or instruction were most commonly discussed in our review. These barriers were experienced by students in

high school more than in primary school (De Verdier & Ek, 2014; West et al., 2004) and were prevalent more in subjects such as mathematics, science, and physical education (Brydges & Mkandawire, 2017; George & Duquette, 2006; Jessup et al., 2017; Lieberman et al., 2006). This situation was documented by research studies in countries such as the United States, Australia, Canada, Singapore, and Africa, indicating that this may be a universally faced issue.

One of the major factors, which contributed to inaccessibility of the curriculum or instruction, was the lack of adaptation, modification, or differentiation of teaching strategies. For instance, De Verdier and Ek (2014) examined the academic achievement of six students with visual impairment in inclusive settings. These researchers reported that students with visual impairment unintentionally performed tasks that were completely different from their sighted classmates because neither the material nor the activity in class was properly adapted. Inaccessible didactics used by teachers, such as rapid *chalk and talk* (rapidly talking or writing on the board without reading it out loud) and the use of visual aids such as movies without adequate auditory explanations, were also reported as challenges. In addition, the handwritten feedbacks and notes of the teachers were impossible for the students to decipher (Whitburn, 2014).

Although a few researchers indicated that some teachers did provide accommodations, which facilitated accessibility, the reality seems to be that such accommodations depended on the individual teacher. De Verdier and Ek (2014) revealed that the level of modifications varied to an extent that some students with visual impairment in high school had to choose courses/curriculum not based on their interest, but on the teacher's ability and willingness to make the curriculum accessible. Thus, the difficulty in accessibility increased in high school not just because of higher academic demands, but also because of the actions of general education teachers involved with students with visual impairment. Overall, obtaining a satisfactory level of support from school and

classroom teachers seemed to be an *endless struggle* in a number of countries (De Verdier & Ek, 2014; Opie et al., 2017).

In addition to the lack of modifications by teachers, students with visual impairment experienced barriers associated with a *time issue*. Several articles indicated that students in inclusive setting were constantly pressed for time (Opie, 2018; Opie et al., 2017; Thurston, 2014). West et al. (2004) reported that students with visual impairment were often in a situation where they had to choose between academic endeavors or social interactions. That is, the more time students spent studying, the less time they had available for socializing with peers. Some students were left with no option but to leave the accelerated academic stream and enroll in the slower paced academic stream to maintain a balance (West et al., 2004).

In essence, the above *time issue* reflected several complex factors related to barriers. Because of a high academic demand and the fast pace of instruction, all students, including those without disabilities, had little or no free time. This is a universal challenge that all students in high school encountered. For students with visual impairment, time was even more limited. Students who engage in reading using braille via the tactile mode or large print via low vision (or by using low vision devices) required more time to complete tasks.

Whitburn (2014) documented a case where a teacher's handwritten note regarding a room change caused a lost of time for students with visual impairment. That is, students lost valuable instructional time in the classroom because they needed assistance to decipher the written message and, consequently, to orientate to the new locations. In another situation, appropriate materials for students with visual impairment were not ready at the beginning of the class, and students had to attend to the lesson without the materials.

Another barrier example involved the utilization of appropriate technology. Opie et al. (2017) referred to a case where technology, which can be a tool for empowerment, worked against students with

visual impairment. For instance, some technological equipment by students with visual impairment was too large to carry or required too much time to assemble, causing them to lose invaluable instructional time. It is detrimental for students if they are not able to utilize technology during their time in class.

One alarming approach, undertaken by a number of students, was to take digital pictures of the information on the chalkboard. Then, after arriving home, the students recorded (wrote down) the message, which they could not access in the classroom. Rewriting the notes from images meant redoing the entire lesson again, and as Opie (2018) remarked “when where were five to six classes a day, this was just not possible” (p. 657). The above situation can be alleviated if teachers of students with visual impairment obtain sufficient technical training.

Social Barriers

The last barrier identified was the *social barrier*. According to Opie and Southcott (2015), this barrier impacted the student’s academic achievement and sense of well-being. As is the case for all children, social interaction with peers was critical for students with visual impairment. However, because of the visual impairment, many students faced difficulties. For example, these students had difficulty with locating people at a distance and with navigation; this limited peer interactions. Whitburn (2014) quoted one of the students he interviewed: “It [was] hard to engage with friends when you can’t find them” (p. 11). In addition, the challenges of being able to read facial expressions and possessing uneven social skills made social interactions even more complicated.

Building friendship takes time, but for some students, grasping opportunities to build relationships was simply difficult. Opportunities for students with visual impairment to interact with peers in an inclusive setting seem to occur spontaneously and in a *split second*. Opie and Southcott (2015) conducted a single case phenomenological study, which explored the educational experience of a 12-year old

male student with visual impairment. The researchers described a situation, which depicts the harsh reality of the sighted world:

“if someone comes into the quadrangle at a school and says, “how are you?” I naturally just say “I’m good, how are you?” not having a clue who it was and a second later I may realize but it’s too late; it is that split second that separates me from anybody else.”

(p. 73)

Interestingly, several researchers documented the effectiveness of a *buddy system* in facilitated friendships, particularly for students with low vision (Opie & Southcott, 2015; West et al., 2004; Whitburn, 2014). In this system, a classroom teacher assigns a peer or peers to support the student with visual impairment. Whitburn (2014) revealed that low vision students had more friends compared to blind students because low-vision children are paired up with peers in class whereas students with blindness typically received support from teaching assistants or paraprofessionals. Thus, blind students had fewer opportunities to make friends than low-vision students.

Our review of the literature revealed that age and the level of vision influenced the social interactions of students with visual impairment. As students got older, friendships became more difficult to establish; the more severe the vision, the more challenges for students. Male students experienced difficulty in displaying their athletic ability, which was important in joining a circle of friends. Females also struggled socially. Peer exclusion and rejection were experienced by a number of male and female students with visual impairment (Brydges & Mkandawire, 2017; Jessup et al., 2018; Opie & Southcott, 2015). To assist with building social skills, Jessup et al. (2018) suggested the need for developing strategies to cope with exclusion and rejection.

Feelings of Acceptance in an Inclusive Environment

Five studies focused on the feelings of students with visual impairment in the inclusive environment (Brydges & Mkandawire, 2017; Jessup et al., 2017; Jessup et al., 2018; Koutsouris, 2014; Thurston, 2014). In general, the review of literature indicated that students with visual impairment felt accepted and that learning in an inclusive setting was beneficial (Brydges & Mkandawire, 2017; Jessup et al., 2017; Jessup et al., 2018). For instance, by using Experience Sampling Methodology as one of their measures, Jessup et al. (2017) examined the experiences of 12 students with visual impairments. They found that students felt accepted and had enjoyable experiences more than half of the time spent in school. The researchers indicated that students with visual impairment felt they *fit in* when they were engaged in activities, fully aware of the surroundings, and had the support of staff or peers. On the other hand, students felt isolated, least accepted, and most lonely when they were not fully aware of surroundings and situations. Students experienced negative feelings when they were not involved in sports (sitting on the sidelines) or when teachers were using inaccessible instructional methods in class (Jessup et al., 2017). Although students with visual impairment felt accepted, many had the awareness of being *different* from their peers due to their visual disability. Thurston (2014) examined the perceptions of low-vision students with albinism in an inclusive setting. These students indicated that their feeling of “different” stemmed from their conspicuous looks such as light colored hair, nystagmus, and actions to compensate for their disability (such as sitting in the front of the class; using technology). Similarly, Jessup et al. (2018) and Whitburn (2014) stated that students felt different because they had to do things differently, compared to their sighted peers (e.g., use technology or ask for support, etc.).

This feeling of difference seems to be self-driven (i.e., an internal perception). Students with visual impairment were not being treated differently

by peers. However, Thurston (2014) and Whitburn (2014) stated that this feeling of being different led some students to yearn for friendships with sighted peers just to feel normal or to achieve *normalcy*. Thurston described this as the “negative cyclical process of inclusion” (p. 116).

Koutsouris (2014) emphasized the complexity of inclusion in relation to students’ emotions. This researcher documented a tension between *homophily*, which is a preference for social interactions with similar others, and *inclusion*, which can be characterized by the presence of diverse individuals, who are sighted peers. Koutsouris interviewed 27 students, including nine students with visual impairment. The research showed that it was natural for students both with and without disabilities to have a preference for homophily. Students opined that this was an individual choice, which should be respected. However, students also understood the importance of inclusion (and it was more a moral obligation); thus, this created tension. Homophily and inclusion were equally desirable ethical values that needed to be balanced. One of the suggestions was the need for a gradual approach, allowing students to be engaged in multiple dialogues.

Successful Components of Inclusive Education

Nine articles focused on successful components of inclusive education (Bishop, 1986; Chang & Schaller, 2002; George & Duquette, 2006; Hess, 2010; Jessup et al., 2018; Lieberman et al., 2006; Opie & Southcott, 2015; West et al., 2004; Whitburn, 2014). We categorized major themes as *positive school climate and teacher attitude*, *teachers with knowledge and skills*, and *autonomy and assertiveness*.

Positive School Climate and Teacher Attitude

Support for inclusive education requires a positive school climate and teachers’ acceptance of the concept of inclusion as well as of students with visual impairment. In a quantitative study, Hess (2010)

analyzed the interrelationships of the school climate, teachers' attitude, and the quality of life (QOL) of students with visual impairment. The researcher reported that when the school climate and teachers' attitude towards inclusion were positive, there was a positive significant correlation between the teachers' assessment of the students (social, emotional, and learning domains) and the students' evaluation of their quality of life (i.e., attitude, coping strategies, emotional state).

In a single case design, George and Duquette (2006) reported similar findings. They stressed the eminent roles of teachers and the school. In this study, the schoolteachers embraced an inclusive education philosophy. In essence, they saw beyond the student's disability to capitalize on the student's learning strength, similar to what they did with all other students. All students, including those with visual impairments, were an integral part of the learning community.

The positiveness seen in the overall school climate and teacher's attitude seems to be the bedrock of inclusion. This is the case not only because modifications in instructional strategies are needed, but also, without a positive climate, these modifications for students with visual impairment can trigger negative attitudes from other students. This may result in the social isolation of students with visual impairment (Brydges & Mkandawire, 2017; Whitburn, 2014). Furthermore, within a negative atmosphere, students with visual impairment may desire to be seen as *normal* and refuse support, including the use of technology, to supplement their vision (Jessup et al., 2018; Whitburn, 2014).

Teachers with Knowledge and Skills

There is little debate that support from a highly qualified teacher of the visually impaired (TVI) is essential for a successful inclusion environment (e.g., Bishop, 1986). In addition, it is critical for general education teachers to possess knowledge and practical skills to support students' academic and emotional

needs because a TVI is usually only available for a limited amount of time in inclusive settings. Students with visual impairment should be learning the same content as peers without disabilities. These students require accommodations (e.g., providing materials in accessible formats; technology), and general education teachers should have high expectations, equivalent to those for sighted students. Bishop (1986) argued that promotion on the basis of effort or sympathy might create an unnatural success for students with visual impairment and will not be beneficial later in the world of employment. Several studies documented unproductive learning environments, constructed by unsympathetic teachers and paraprofessionals, who misjudged the capabilities of students with visual impairment (Opie et al. 2017; West et al., 2004; Whitburn, 2014).

General education teachers need specific skills such as flexibility (Bishop, 1986; Lieberman et al., 2006), variety in instructional strategies (Chang & Schaller, 2002; Lieberman et al., 2006), and good communication (Opie et al., 2017). Effective instructional strategies include the use of tactile cues, verbal information, active learning, and cooperative learning groups (Chang & Schaller, 2002; Lieberman et al., 2006). Teachers who utilized a combination of different strategies tend to enable students with visual impairment to participate in class on a par with peers (Whitburn, 2014). Good communication with paraprofessionals, TVIs, parents, and students with visual impairment is also necessary (Opie et al., 2017). It is essential for general education teachers to reach out to TVIs and paraprofessionals so that accessible resources are available to students in a timely fashion. Similarly, reaching out to students with visual impairment and also being approachable in and outside class are equally important.

Via semi-structured in-depth interviews, Chang and Schaller (2002) investigated the perceptions of 12 students with visual impairment regarding teachers' support of their needs. The researchers concluded that the emotional connection or closeness with teachers was important for students to develop awareness

of their emotions and strengthen their capacity for coping with stressful situations. There were two broad traits found in teachers, appreciated by the students: The teacher's ability to listen to their emotional needs and to offer encouragement (Chang & Schaller, 2002; see also, George & Duquette, 2006). Students also appreciate teachers who believed that they were as intellectually capable as sighted students and pushed them academically. West et al. (2004) indicated that student's perceptions towards teachers change positively only when they believed that teachers are able to look beyond their visually impairment.

Lastly, teachers, who act as a facilitator or a *bridge* between students with visual impairment and sighted peers, also received a strong appreciation by students. According to West et al. (2004), students with visual impairment found it difficult to ask peers for assistance, even for relatively simple tasks. However, if teachers act as a bridge by initiating buddy partnerships with class peers, students with visual impairment felt much more comfortable to ask for assistance. Similar findings were echoed by the research of Whitburn (2014).

Autonomy and Assertiveness

From our review of the selected articles, the third major component associated with a successful inclusion placement entailed two constructs, autonomy and assertiveness. Students with visual impairment need to possess the ability to work autonomously (or independently) and to be assertive in expressing their needs and in social interactions with others (Jessup et al., 2018; Whitburn, 2014). As reported by Whitburn (2014), students with visual impairment considered inclusive education to be effective if they could make individual choices and were able to complete tasks with minimal intervention from teachers and staff.

Possessing autonomy allows students with visual impairment to feel empowered. Students need to develop adequate skills such as reading and writing, the use of Braille, and orientation and mobility

(Bishop, 1986). Students also needed the skills to utilize a variety of technology. The adequate and ease of use of technology enabled students to take control over their schoolwork by making it accessible without having to depend predominantly on the assistance of others (Jessup et al., 2018).

With respect to assertiveness, Jessup et al. (2018) used a mixed methodology to investigate the inclusion of 12 students in Australian high schools. It was documented that students with visual impairment who felt socially included were those who were assertive in initiating and engaging in productive social interactions. Building relationships with sighted peers required considerable effort for students with visual impairment although assistance from teachers and paraprofessionals certainly helped. In general, students with visual impairment who were not autonomous or assertive felt socially excluded (Jessup et al., 2018).

Developing social interaction skills is part of the Expanded Core Curriculum. In addition, students with visual impairment need to be able to demonstrate their skills and talents in an inclusive setting—that is, they need situations where they can *shine*. Jessup et al. (2018) remarked that many students with visual impairment who were successfully included had a place where they shined, or in other words, engaged in activities they felt skilled at performing and were acknowledged by others. For some students, this was during recess when they were with good friends. For others, it was out of school, where they played adapted sports hosted by a local disability sports group or special schools.

Jessup et al. (2018) emphasized that these activities did not need to be academically related. Rather, it was imperative for students with visual impairment to be engaged in meaningful and productive activities, which led to the cultivation of their self-esteem. These findings were also documented by the work of Opie and Southcott (2015). In their case study, the researchers identified an activity that seem to contribute to a successful inclusive placement—*swish*. This is a version of table tennis developed for

individuals with visual impairment in Australia by an organization for individuals with visual impairment. Similar sport activities, which can promote inclusion and collaboration, include goal ball (playing soccer with a noise-induced ball) and other activities in which sound plays an integral part of the game for individuals with visual impairment.

CONCLUSION

This was a seminal study that provided an integrative analysis of the perceptions of students with visual impairment on inclusive education. We began with an overview of research on inclusion and students with visual impairment and then focused on the perceptions of these students. We categorized the perceptions into three broad areas: barriers, feelings of acceptance, and successful components of inclusion. Admittedly, there were overlaps among these areas, and some studies covered more than one category.

Most of the reviewed articles discussed barriers, which pertained to the physical environment of schools, accessibility, and social interactions or intercourses. Barriers in accessing the curriculum or instruction were the most discussed topic, and specific subjects such as mathematics, science, and physical education were highlighted as most challenging to include students with visual impairment. Students with visual impairment also had challenges with initiating and building friendships with sighted peers.

Insights into the second category, feelings of acceptance, highlighted the social challenges of students with visual impairment. In order to *fit in*, students needed to be fully aware of their surroundings and be supported by teachers, staff, and peers. Students did not want to stand out or feel different albeit some students did support the construct of homophily—that is, the desire to associate with others who are similar in character or attitude.

A number of students did feel that inclusion was beneficial, especially if there was a positive school climate. It was also helpful if general education teachers exhibited a positive attitude and were

accepting of the students, treating them with respect and acknowledging their ability to do well academically and socially with some assistance. General education teachers do need to acquire a better understanding of teaching strategies, including adaptation, modification, and differentiation of materials. It is also critical to understand the importance of instructional presentation of information, orientation and mobility, and the use of technology.

Not surprisingly, students with visual impairment were most successful in an inclusive environment if they possessed autonomy and assertiveness. To feel empowered, students needed skills such as reading, writing, and the use of Braille and technology. With these skills (and others such as self-determination and advocacy), students can work independently with some assistance from teachers and staff. In addition, students may develop a level of self-confidence that can propel them to initiate and build friendships with sighted peers.

Admittedly, the present research is not the first study to emphasize the importance of factors pertaining to school, teachers, and students with visual impairment. For example, Bishop (1986) conducted a survey and reported several factors conducive to successful inclusion. The flexibility of teachers was ranked at the top, followed by student factors such as possessing good social and academic skills and a positive self-image. Similar findings were echoed by Simui et al. (2018), who conducted a literature review on the inclusion of students with visual impairment in higher education.

Nevertheless, the present study is unique in that we focused predominantly on the perceptions of students with visual impairment. We documented the qualities of teachers appreciated by students such as possessing basic knowledge of visual impairment, looking beyond students' disability and believing in their capabilities to perform and be successful as their sighted peers. As mentioned previously, students with visual impairment also acknowledged the need to possess skills that permitted them to be autonomous and assertive. These skills not only facilitated

academic success, but also contributed to feelings of acceptance and fitting in socially with their sighted peers.

Limitations of the present study should be acknowledged. Although this study only included articles that were published in peer-reviewed journals and eliminated articles that had inadequately described methods or results, a rigorous assessment of quality indicators was not conducted (e.g., validity, reliability, etc.). It is recommended that future investigations focus on the evaluation of quality indicators. It is possible that our development of categories and integration of the findings are open to varying interpretations. Our interpretations should be evaluated by other independent scholars. Although, we feel that we conducted a fairly exhaustive review of the literature, it is possible that we have unintentionally neglected to include a few relevant investigations that met our inclusion criteria. In essence, the conclusions of the present study should be viewed with some caution. Nevertheless, it is asserted that the findings advance our understanding of the perceptions of students with visual impairment with respect to developing an effective or successful inclusive education program.

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MODELLING VOLATILITY SPILLOVER BETWEEN CONVENTIONAL AND ISLAMIC STOCK INDEX IN MALAYSIA

Original scientific paper

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ABSTRACT

This paper analyzes the volatility spillover between the conventional index in Malaysia FTSE Malaysia KLCI (KLSE) and the Islamic index in Malaysia FTSE Bursa Malaysia Shariah Index (FTFBMHS). Monthly observations spanning in a period from 2002 to 2018 are obtained from investing.com database. GARCH model and Johansen cointegration test are used to investigate volatility spillover and the relationship between two indices. The results of the analysis indicate that in the short-run there is volatility spillover between FTSE Malaysia KLCI and FTSE Bursa Malaysia Shariah Index, while in the long-run there is no relationship between the two indices. The methodology of compiling Islamic indices is based on Shariah law.

Keywords: *Conventional stock market index, Islamic stock market index, Malaysia, Shariah law, volatility.*

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INTRODUCTION

In the last three decades we can witness that Islamic financial services around the world have a rapid growth.

If we focus on Islamic stock market indices, it can be seen that the most important global stock market index providers have introduced Islamic stock market indices. Based on this fact we are witnessing that many countries have Islamic stock market indices as an option for investors. Besides the most important and developed financial centers some developing countries such are Malaysia, Turkey, Indonesia, Saudi Arabia, etc. have introduced Islamic stock market indices.

These indices and Islamic financial instruments are based on the Shariah law, and therefore they are acceptable from the Islamic perspective. Financial law and its legal provisions in this context is based on the legal norms of the Shariah law, which regulates the legal basis of the matter of financial relations, the legal justification of these relations, and defines the application of existing legal norms. The methodology of compiling Islamic indices itself is based on Shariah law.

Islamic indices can be a good option for all type of investors. This is a way for diversification of investor's portfolio. Furthermore, this is very important option for investors who want to invest based on their religious beliefs. Therefore, we can state that the introduction of Islamic stock market indices is a kind of response to this type of investors' needs. As Ho, Rahman, Yusuf and Zamzamin (2013) suggest "the markets for both conventional and ethics-filtered investments have developed rapidly as new investment instruments over the last two decades. These investments have not only expanded in the conventional capital and money markets but also in the recently-developing Islamic financial markets. Over the past decade, the global capital market scene has witnessed the introduction of Islamic indices, which are designed to filter out the stocks in conventional indices in accordance with the doctrinal position of Islamic laws that introduces a number of ethical considerations for an instrument to be considered as ethically-acceptable. Some of the indices are: Financial Times Islamic Index Series (FTSE), Dow Jones Islamic Market Index (DJIM)".

Furthermore, Ho, Rahman, Yusuf and Zamzamin (2013) mention that "the dedication shown by the global index providers to offer Islamic indices has provided evidence that Islamic investors are showing greater selectivity in their investment choices. Global index providers have shaped these new indices in slightly different ways to take into account different expectations of regulators of both Islamic and conventional markets. It is interesting to note that there has been tremendous interest in Shari'ah compliant investments and indices, mainly due to their more equitable and profit-sharing nature, which draws considerable research interest in recent years.

Abdullah, Roudaki and Clark (2010) suggest that for investors, more precisely Muslim investors, it is important to have the list of Shariah-compliant stock, because it gives to the investors necessary opportunity and confidence to select and invest in the listed companies that comply with the Shariah principles.

Based on the introduction words, we can state that Islamic stock market indices are very important area for researchers. Therefore, knowing behavior, movements and factors that have influence on Islamic indices is very important topic.

Furthermore, since Islamic stock market indices differ from the ordinary conventional indices, because they are "filtered version", it is valuable and interesting to see how these indices respond to their conventional counterpart indices movement. (Djedovic & Ergun, 2018)

It is considered that macroeconomic variables cannot comprise all the information available to the capital market, while stock prices react quickly to publicly disclosed information. Therefore, it is recommended and important to investigate how financial markets variables effect on a stock market index. Therefore, in this study we focus on financial markets variable represented through counterpart conventional stock market index, and its impact on the Islamic stock market index.

This study is focused on the relationship and eventual volatility spillover from the conventional stock market index in Malaysia to the Islamic stock market index in Malaysia. It is important to mention that Malaysia is one of the leading countries in Islamic finance, and

that there is a developed Islamic financial system in that country. The results of the analysis indicate that in the short-run there is volatility spillover between FTSE Malaysia KLCI and FTSE Bursa Malaysia Shariah Index, while in the long-run there is no relationship between the conventional and the Islamic index in Malaysia.

LITERATURE REVIEW

The literature investigating behavior of the Islamic stock market indices is still developing. In this way we are contributing to the present literature through analysis of volatility spillover between the conventional and the Islamic index in Malaysia.

Djedovic and Ergun (2018) investigated volatility spillover between conventional and Islamic index in the UK. They used monthly observations from 2010 to 2017. By using vector auto-regression analysis and impulse response functions they found a significant impact of Dow Jones UK index volatility on Dow Jones UK Islamic index volatility.

Hkiri et al. (2017) in their study examine directional and net volatility spillovers between conventional and Islamic indexes and importance of crisis periods. Their study covers nine regional Islamic stock indexes and their conventional counterparts, using the generalized vector autoregressive framework. Daily data covering the period 1999 to 2014 is used.

Their results show that global financial crises strongly affect the cross-market volatility. Although the contagion hypothesis is evident for both Islamic and conventional indexes, the findings also suggest the presence of a decoupling of the Islamic indexes from their conventional counterparts during turbulent periods. The results confirm that the Islamic financial indexes are a safe haven for investors during financial crises. Furthermore, paper reports significant time-varying patterns in the volatility spillovers for all the Islamic and conventional stock indexes and points out the stress transmitters and receivers.

Jebran, Chenb and Tauni (2017) in their study focusing on Pakistan found significant long run and short run association between Islamic and conventional index. Furthermore, the study finds asymmetric bidirectional volatility spillover between Islamic and conventional index.

Saadaoui and Boujelbene (2015) examined volatility transmission between Dow Jones Stock Index and Emerging Islamic Stock Index. They used daily data from 2005 to 2012. Based on vicariate BEKK-GARCH and DCC-GARCH model, their result shows that there is a transmission mainly during the crisis period which means that the crisis affects all the financial assets whether Islamic or not.

Majdoub and Mansour (2014) find weak correlation between US and five Islamic emerging equity markets over time.

Based on several previous research it can be stated that there are mixed results regarding volatility spillover between conventional and Islamic stock market indices.

DATA AND METHODOLOGY

In the study used are monthly observations of FTSE Malaysia KLCI (KLSE) and FTSE Bursa Malaysia Shariah Index (FTFBMHS). The period that is covered in the study is spanning from 2002 to 2018. The data is obtained from investing.com database.

GARCH analysis is used to estimate short-run impact of conventional index on the Islamic index. Furthermore, Johansen cointegration test is used in order to estimate the long-run relationship between the two observed indices.

The arithmetic return of the indices was estimated by subtracting the index value at time $t - 1$ from the index value at time t and dividing it by the index value at time t as shown in Eq. (1), where R_t is the return at time t , P_t is the index at time t , and P_{t-1} is the index at time $t - 1$.

Equation 1.
$$R_t = (P_t - P_{t-1}) / P_{t-1}$$

The next step was the calculation of the volatility of both indices. Volatility was measured as a square of the deviations from the mean. We considered that Δy_t indicates the series with deviations from the means. As it can be seen in Eq (2), the volatility of the indices was estimated as:

Equation 2. $\Delta y_t^2 = (\Delta y_t - \Delta \bar{y})^2$
 $\Delta y_t^2 = (\Delta y_t - \Delta \bar{y})^2$
 where $\Delta \bar{y} = \frac{\sum \Delta y_t}{T}$ $\Delta \bar{y} = \frac{\sum \Delta y_t}{T}$.

EMPIRICAL ANALYSIS AND RESULTS

This part of the study presents the graphs representing the movement of the two indices (price, return and volatility) over time. Furthermore, it brings the unit root tests for the time series used in the analysis, as well as the results of GARCH and Johansen cointegration test analysis.

ADF Unit Root Test

Table 1. Unit root test for Malaysian stock market prices (growth rates)

Test Statistics		
Variables	Level	1st Difference
GFTSECON ¹	-11,364630*	
GFTSEISL ¹	-7.370.217*	

Note: ¹, ² Indicates Augmented Dickey-Fuller test and Phillips-Perron test respectively, * indicates the series is stationary at 1% significance level

Source: Author's own work

Table 1. represents the results of unit root test for stock market indices growth rates in Malaysia.

Table 2. Unit root test - Volatility of stock market indices in Malaysia

Test Statistics		
Variables	Level	1st Difference
VOLISL ¹	-2,063.802	-11,892820*
VOLCON ¹	-2,191.664	-11,361280*
VOLGISL ¹	-10,893910*	
VOLGCON ¹	-11,758300*	

Note: ¹ Indicates Augmented Dickey-Fuller test, * indicates the series is stationary at 1% significance level

Source: Author's own work

Table 2. represents the results of unit root test for volatility values of stock market indices in Malaysia.

Graphical representation of the variables

In this section, we present the prices, return and volatility values of the conventional index in Malaysia FTSE Malaysia KLCI (KLSE) and the Islamic index in Malaysia FTSE Bursa Malaysia Shariah Index, for the observed period of time.

In Figure 1. graphically are presented the prices of FTSE Bursa Malaysia Shariah index (FTFBMHS) and FTSE Malaysia KLCI (KLSE) index.

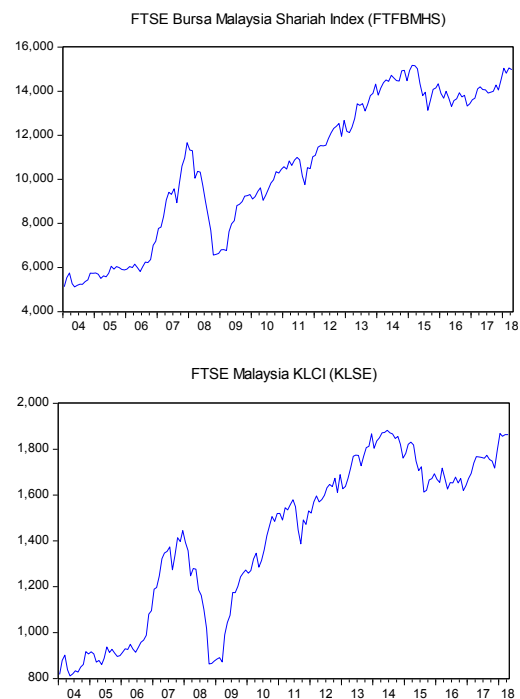


Figure 1. Islamic and conventional indices' prices Malaysia

Source: Author's own work

In Figure 2. presented are return rates of the Islamic and the conventional index in Malaysia. The blue line is representing the Islamic index return rate, while the red line represents the conventional index return.

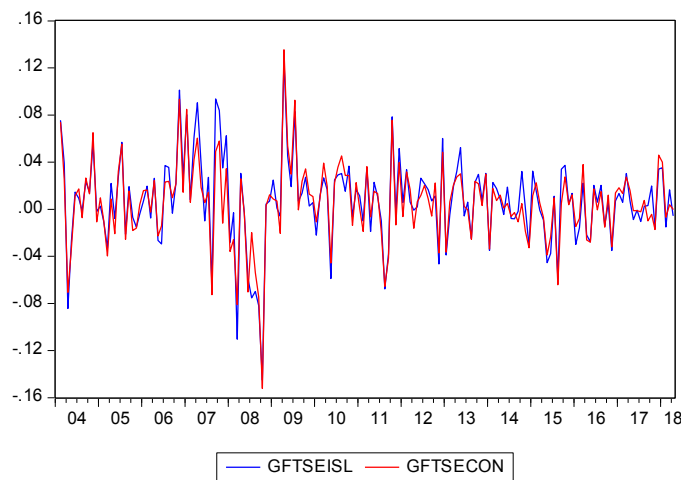


Figure 2. Islamic and conventional index return rates in Malaysia

Source: Author's own work

Figure 3. represents volatilities of the conventional index and the Islamic index in Malaysia. The blue line represents the volatility of the Islamic index, while the red line represents the volatility of the conventional index.

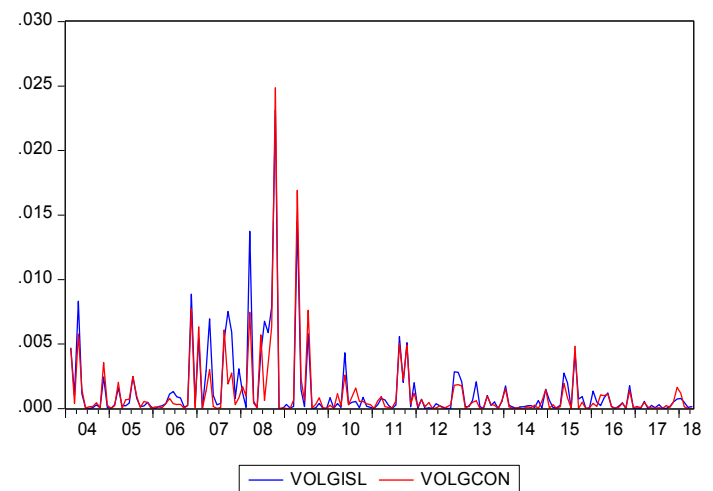


Figure 3. Islamic and conventional index volatility in Malaysia

Source: Author's own work

GARCH analysis

In this part of analysis we employ GARCH model in order to investigate short-run impact (volatility spillover) from the conventional index to the Islamic index in Malaysia.

The results of the analysis are presented in Table 3.

Table 3. Short-run impact of conventional index on Islamic index in Malaysia

Dependent Variable: **GMALISL**

Variable	Coefficient	Std. Error	z-Statistic	Prob.
GMALCON	0.289639	0.017279	1.676.285	0.0000
VOLMALISL	-4.533.967	2.992.670	-1.515.024	0.1298
VOLMALCON	3.013.558	1.810.657	1.664.345	0.0960
C	0.000179	3.22E-05	5.552.224	0.0000
Variance Equation				
C	5.16E-08	3.86E-08	1.335.375	0.1818
RESID(-1)^2	0.003244	0.002763	1.173.847	0.2405
GARCH(-1)	-0.002468	0.001063	-2.322.265	0.0202
GMALCON	4.22E-06	3.51E-05	0.120295	0.9042
VOLMALISL	0.604191	0.058630	1.030.507	0.0000
VOLMALCON	0.062104	0.012475	4.978.386	0.0000

$$\text{GARCH} = \text{C}(5) + \text{C}(6) * \text{RESID}(-1)^2 + \text{C}(7) * \text{GARCH}(-1) + \text{C}(8) * \text{GMALCON} + \text{C}(9) * \text{VOLMALISL} + \text{C}(10) * \text{VOLMALCON}$$

Source: Author's own work

The results form Table 3. indicate that the conventional index return has significant positive short-run impact on the Islamic index return in Malaysia. Furthermore, from the variance equation it can be seen that volatility of conventional index have significant positive short-

run impact on the Islamic index volatility in Malaysia. The results suggest that there is volatility spillover from the conventional to the Islamic stock market index in Malaysia.

Johansen cointegration test - long-run relationship

In this section investigated is the long-run relationship between the conventional and the Islamic index in

Malaysia. In order to investigate this relationship we employed Johansen cointegration test.

The results of the analysis are presented in Table 4.

Table 4. Long-run relationship between conventional and Islamic index in Malaysia

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.005180	1.297.385	1.549.471	0.1158	1.012.808	1.426.460	0.2037
At most 1	0.001458	2.845.772	3.841.466	0.0916	2.845.772	3.841.466	0.0916

Source: Author's own work

The results from Table 4. indicate that there is no cointegrating relationship between variables. This suggests that there is no long-run relationship between the conventional and the Islamic index in Malaysia.

CONCLUSION AND DISCUSION

The main purpose of this research was to investigate the existence of volatility spillover and the nature of the relationship between the conventional stock market index and the Islamic stock market index in Malaysia. The indices that were used for this purpose are Malaysia FTSE Malaysia KLCI (KLSE) which represents conventional index and FTSE Bursa Malaysia Shariah Index (FTFBMHS) which represents Islamic index in Malaysia.

In order to fulfill the research objective employed were GARCH model for short-term relationship, as well as Johansen cointegration test for long-run relationship. Based on the results, the following relationships can be highlighted.

The results from GARCH model indicate that conventional index return has significant positive impact on the Islamic index return in Malaysia. This result suggests that when the conventional index return in Malaysia is higher, then the Islamic index return in Malaysia is also higher. Furthermore, the results from the variance equation suggest that volatility of the conventional index in Malaysia has significant positive impact on the volatility of the Islamic index return in Malaysia. This suggests that the higher the volatility of the conventional index in Malaysia, the higher the volatility of the Islamic index return.

The results investigating long-run relationship among the two indices in the Malaysia indicate that there is no long-run relationship between the conventional and the Islamic index in Malaysia. This result suggests that in the long-run the Islamic index and the conventional index in Malaysia are not moving together.

In the end we can conclude that the movement of the Islamic index can be explained in short-run by using the conventional counterpart index, while in the long-run the Islamic index is moving independently from the conventional counterpart index.

This study contributes to the existing developing literature on the relationship between conventional and Islamic stock market indices in general. We can mention that since there are fundamental differences between Islamic and conventional financial assets, one might argue against the potential transmission of risk or volatility across Islamic and conventional equities.

However, the results of the research indicate that there is volatility spillover from conventional index to Islamic index in the short-run. This suggests that Islamic index is not immune to the volatility changes of conventional index, meaning that since it is part of the integrated domestic market it cannot avoid short-run volatility impact coming from conventional counterpart index. The explanation for this could be found in the following argument. As Djedovic and Ergun (2018) mention, „in a market economy, the value of a firm can be influenced both directly and indirectly. Also, Islamic scholars have made some concessions on the permissible degree of financial leverage and the level of interest income in relation to Islamic indices constituent firms.

Thus, Islamic indices could be expected to be sensitive to conventional stock index changes“.

Practical implication of this study for the investors is that in the long-run there is diversification opportunity when investing in the conventional or the Islamic index in Malaysia, since there is no long-run relationship between the conventional and the Islamic index in Malaysia.

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ATTITUDES OF FOURTH GRADE GYMNASIUM STUDENTS WHO ARE NOT IN MATHEMATICS AND INFORMATICS COURSE IN TERMS OF DESCRIPTIVE GEOMETRY AS A POSSIBLE COMMON SUBJECT IN ALL DIRECTIONS OF GYMNASIUM

Original scientific paper

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ABSTRACT

Gymnasium as a school and as one of the levels in education has changed for decades both in the curriculum and in its duration. Nevertheless, the common goal in each period of Gymnasium education was and remains to provide students with the widest possible general education and to prepare them for further education at various universities of technical, social and natural sciences. In the last stage of socialism in Bosnia and Herzegovina, all high schools in their curriculum aimed to train students for one of the working professions so that each student after graduating from high school acquired a certain knowledge and could be employed in the sector for which educated. During that period, grammar schools were formally abolished. Instead, secondary administrative schools were most often formed, which were most similar to Gymnasium in terms of their curriculum. In the present age, the gymnasium as a school exists with the fact that the curriculum is common to all first and second grades, while the third and fourth grades are divided into directions: mathematics-informatics, natural, social, linguistic and information-communication. Without going into the purpose of the existence of other directions, it should be emphasized that the mathematics-informatics direction aims to bring the students of the final grades of grammar school closer to technical and informatics universities, ie to

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acquaint them with technical and informatics. One of the key subjects at some technical colleges is descriptive geometry. These would primarily be the universities of architecture, civil engineering and mechanical engineering. In informal conversations between fourth graders regardless of direction and their teachers from time to time the topic is the subject of descriptive geometry. From the mentioned conversations, two mutually opposing hypotheses crystallized in terms of the importance of descriptive geometry, ie whether or not descriptive geometry should be introduced in all directions of Gymnasium. In order to determine which of these two hypotheses prevails, a generic / developmental method was applied, ie a survey was used as one of the research techniques. The survey was conducted in February 2020. A sample of 80 fourth-grade students from the „Muhsin Rizvić“ Gymnasium in Kakanj and the „Visoko“ Gymnasium in Visoko, who are not in the mathematics and computer science trend, was selected for the survey. As can be seen, the importance of descriptive geometry as a subject will be expressed by those students who do not have descriptive geometry as a subject according to the curriculum.

Key words: *general education, school material, descriptive geometry, orientation, space, technical universities.*

PROBLEM AND SUBJECT OF RESEARCH

Although the current gymnasiums in the third and fourth grade are divided by directions, there is still the possibility that students can enroll in any university after graduating from the gymnasium, regardless of which direction they completed the gymnasium. This means that the current Gymnasium, regardless of the direction, must train students to enroll in any of the universities. It is for this reason that perhaps some of the subjects that are only in one direction of the gymnasium should be extended to all other directions. In this particular case, it is the subject of descriptive geometry, ie whether the subject of descriptive geometry should be introduced as a common subject in the fourth grade of gymnasium in all directions.

“Contemporary thinking about teaching and educational process is within the theory of curricula (which we interpret as an organized arrangement of the learning process and content with regard to certain purposes and goals).

The long-term goals of the teaching process as an educational process are: to teach the student to think, to be creative, cultured, honest and self-aware, and independent in learning.

An individual subject, including descriptive geometry, can be understood as a polygon for achieving long-term goals. The teacher is a mediator, a moderator in a well-organized process” (Lipošinić, 2003).

Bearing in mind all the above, one can rightly think about the possibility of introducing the subject of descriptive geometry in the teaching of the fourth grade of gymnasium in all directions. In that direction, we should first investigate the attitude of the students themselves about the mentioned possibility.

Therefore, the subject of this research is to check whether the students of the fourth grade of gymnasium would like to have the subject of descriptive geometry in class, even though they did not opt for the mathematical-informatics direction.

AIM AND TASKS OF THE RESEARCH

The main goal of this research is to determine whether fourth grade gymnasium students who have not opted for mathematics and computer science, are interested in introducing them to regular classes on the basics of descriptive geometry in which they would briefly acquire basic knowledge of descriptive geometry and technical drawing.

The research tasks derive from the subject of the research and the formulation of the goal:

1. To determine whether the students think that the knowledge they acquired in primary school in the subject of technical education is enough for them to be able to continue their education at one of the technical universities after gymnasium.
2. To determine whether students who are not in the

mathematics and computer science department think that their knowledge of descriptive geometry and technical drawing would be good if they decided to enroll in one of the technical universities after graduating from gymnasium.

3. To determine whether the students think that their knowledge of descriptive geometry would contribute to the expansion of general culture since they did not opt for the mathematics and informatics direction.

HYPOTHESES

From the stated goal and tasks of the research, the null hypothesis is set first, which reads:

H_0 : Fourth grade gymnasium students who did not opt for mathematics and computer science, believe that the knowledge of technical education they acquired in primary school is quite enough and that this knowledge is a good basis for them to continue their education at one of the technical universities. Their opinion is that the introduction of some new subjects in teaching that are not directly related to the direction they have chosen, is superfluous. It can only further burden the already difficult and extensive material of numerous subjects that are studied in gymnasium.

In contrast to the null hypothesis, the main research hypothesis follows:

H: Fourth grade gymnasium students who have not opted for mathematics and informatics, believe that the general technical knowledge they acquired in primary school is not enough and cannot be the basis for continuing their education at one of the technical universities. Therefore, they believe that the introduction of the subject of descriptive geometry in regular classes in all fourth grades of gymnasium, regardless of the direction, would be welcome. The introduction of such a subject in the regular classes of the gymnasium would also contribute to the expansion of general culture and education, which is otherwise a characteristic of the gymnasium itself.

SAMPLE, RESEARCH ORGANIZATION AND STATISTICAL DATA PROCESSING

In order to ensure the best possible conditions of the survey, while obtaining the most authoritative empirical data, the characteristics of the sample and its size were taken into account. The sample consisted of fourth grade students who are not in the mathematics and computer science department of the Gymnasium "Muhsin Rizvić" in Kakanj and the Gymnasium "Visoko" in Visoko. A total of 80 students took part in the survey. In general, this is a medium-sized sample, but in this case the number of respondents is not as important as the results of the research itself.

Given the purposefulness, quality and success of the survey, care was taken to ensure that the questionnaire was compiled to meet the appropriate requirements, which are:

- "that the respondents are highly motivated to answer the questions, ie that the survey is interesting to them with its content;
 - to receive relevant information from the respondent that cannot be obtained in any other way;
 - the questionnaire is not too long and that the filling does not require a lot of time;
 - that the questionnaire has an aesthetic quality (arranged and reviewed);
 - not to enter the intimate life of the respondents;
 - that the anonymity of the respondents is guaranteed;
 - that the questions are completely clear;
 - that the questions are formulated briefly, unambiguously, understandably, without superfluous words, unusual and unknown terms and that the questions are not too grammatically complicated;
 - that the questions are not of a suggestive nature.
- “(Selimović, Rodić & Selimović, 2013.)

From the general data, each respondent had to enter the average grade in mathematics, department and gender on the questionnaire.

The questionnaire was closed-ended and consisted of nine questions. Three possible answers were offered to each question. The answers were graded from one to three, but so that the way of scoring was not known to the respondents so that the questions would not be suggestive.

The offered answers scored with one point each were formulated in support of the null hypothesis. Those answers that were scored with two points each, indicate an equal outcome between the zero and the main hypothesis, and finally the answers scored with three points each were formulated in support of the main hypothesis.

The compiled questions for the questionnaire and possible answers with scoring are presented as follows:

1. Do you remember what you learned from the subject of technical education in primary school?
 - a) Yes. I remember just as much as the other subjects. (2)
 - b) What did not interest me did not remain in my memory. (1)
 - c) Yes. That subject was particularly interesting to me. (3)
2. Are you thinking of continuing your education at one of the technical universities, even though you did not choose the mathematics and informatics department at the Gymnasium?
 - a) Of course. That's what I intend to do. (3)
 - b) If I thought about it, I would not choose this direction in the Gymnasium. (1)
 - c) I don't think, but it is possible that it will happen. (2)
3. If you would still enroll in one of the technical universities, do you think that the knowledge you acquired in primary school in the subject of technical education will be a good basis for continuing your education at that university?
 - a) I'm not sure. (2)
 - b) This knowledge can in no case be a good basis for continuing education at any of the technical universities. (3)
 - c) I think that the subject of technical education from primary school is a good basis for continuing education at one of the technical universities. (1)
4. Do you know, unlike you, that your colleagues in

the fourth grade of the Gymnasium of Mathematics and Informatics, in addition to other subjects, have the subject of descriptive geometry?

- a) I don't know. (1)
 - b) Yes, I learned that from a colleague recently. (2)
 - c) Yes, I know from before. (3)
5. Do you know what the subject of drawing geometry studies?
- a) In that subject, one learns how to write technical letters and how to draw various geometric pictures and figures. (2)
 - b) From this subject, one learns how to technically present various objects in space. (3)
 - c) I don't know. (1)
6. If the subject of descriptive geometry were common to all directions in the Gymnasium, do you think that knowledge from that subject would be good for you in case you still decide to continue your education at one of the technical universities?
- a) Of course. (3)
 - b) However, one should also think of those students who would never enroll in one of the technical universities and would not even want to have the subject of descriptive geometry in the Gymnasium. (1)
 - c) I didn't think about it. (2)
7. Do you think that knowledge of descriptive geometry would contribute to a better perception of objects around you?
- a) No (1)
 - b) Yes (3)
 - c) I didn't think about it. (2)
8. If you possessed a basic knowledge of descriptive geometry and technical drawing, do you believe you could understand some simpler technical drawings?
- a) I think in that case I could understand simpler technical drawings. (2)
 - b) I have no idea. (1)
 - c) I believe that in that case with a little more interest I could understand some simpler technical drawings. (3)
9. Do you think that your knowledge of descriptive geometry would contribute to the expansion of general education and culture in the event that this subject is common to all directions in the Gymnasium?

- a) I think that the introduction of descriptive geometry in all directions in the Gymnasium would be superfluous. (1)
- b) Certainly, my knowledge of descriptive geometry would enrich my general education, which I normally acquire in Gymnasium. (3)
- c) Maybe. (2)

The scoring of the offered answers to the given questions from the questionnaire is made so that the sum of points of the completed questionnaire cannot be less than 9 or more than 27. From the stated range of possible sum of points of the completed questionnaire a scale is made groups as follows:

1. group → 9-16 points

This group includes those respondents who are against descriptive geometry being a common subject in all directions in the Gymnasium.

2. group → 17-20 points

This group includes those respondents who are undecided on the issue of descriptive geometry being a common subject in all directions in the Gymnasium.

3. grupa → 21-27 points

This group includes those respondents who would like the descriptive geometry to be a common subject in all directions in the Gymnasium.

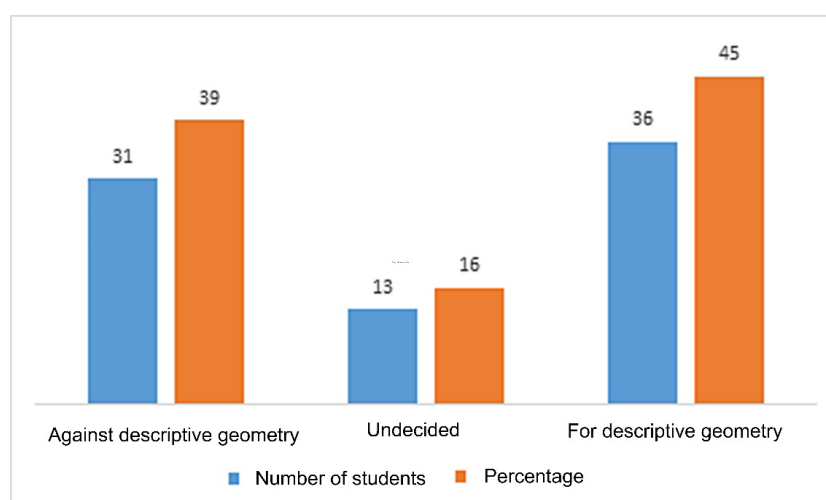
RESULTS

When processing and interpreting the test results, the percentage procedure was used as the fastest and simplest type of statistical processing.

Therefore, after conducting a survey on a sample of a total of 80 fourth-grade students who are not in mathematics and computer science at Gymnasium “Muhsin Rizvić” in Kakanj and Gymnasium “Visoko” in Visoko and reviewing and processing the questionnaire, the results are shown in summary Table 1 and Graph 1.

Table 1.

	Number of students	Percentage (%)
Against descriptive geometry	31	39
Undecided	13	16
For descriptive geometry	36	45
In total:	80	100

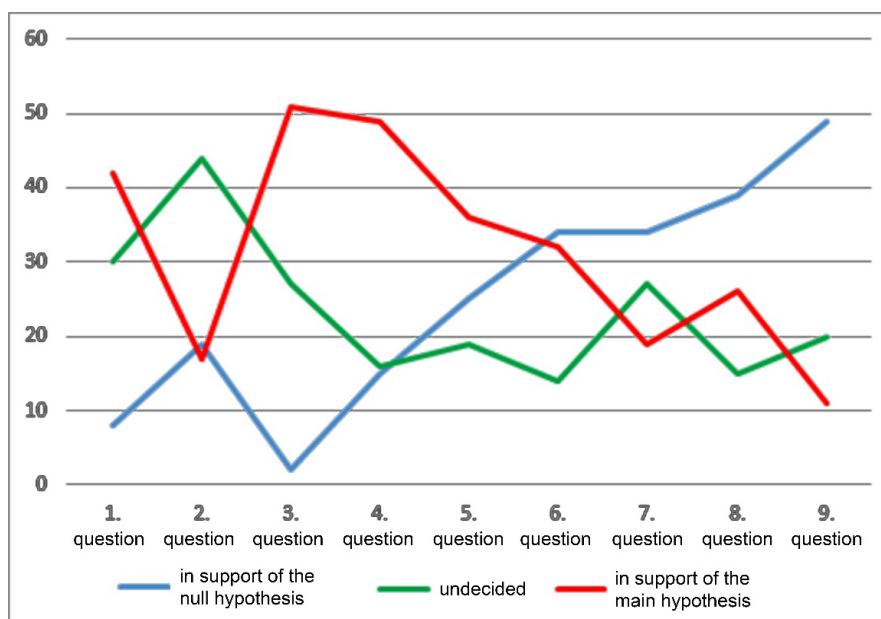


Graph 1.

The response structure of the conducted survey is shown in Table 2 and Graph 2.

Table 2. The response structure of the conducted survey

		In support of the null hypothesis	Undecided	In support of the main hypothesis
1.	question	8	30	42
2.	question	19	44	17
3.	question	2	27	51
4.	question	15	16	49
5.	question	25	19	36
6.	question	34	14	32
7.	question	34	27	19
8.	question	39	15	26
9.	question	49	20	11



Graph 2. The response structure of the conducted survey

CONCLUSION

Based on the obtained research results, it can be formally concluded that according to previously determined criteria, 39% or approximately 8/20 of the representative sample are those respondents who are against descriptive geometry being a common subject in all directions in the Gymnasium.

At the same time, 16% of the representative sample, or approximately 3/20, are those respondents who are undecided that the descriptive geometry should be a common subject for all directions in the Gymnasium. And finally, 45% of the representative sample, or approximately 9/20, are those respondents who would like the descriptive geometry to be a common subject for all directions in the Gymnasium.

According to the obtained research results, the main hypothesis was formally confirmed.

However, these results should be taken with a grain of salt for the following reasons:

There is very little difference between the number of respondents who completed the questionnaire in support of the null hypothesis and the number of respondents who completed the questionnaire in support of the main hypothesis (only 5 respondents or 6%).

If we look at the structure of the answers of the survey, to the questions that directly mention the introduction of descriptive geometry for all students of the Gymnasium, regardless of the direction, a larger number of respondents gave answers in favor of the null hypothesis. These are the answers to questions 6; 7; 8 and 9.

Thus, despite the formally obtained results in support of the main hypothesis based on the given assumptions, it is still not possible to discuss that descriptive geometry should be a common subject for all Gymnasium students regardless of direction.

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BOSNIAN LANGUAGE AND BOSNIAKS

Professional paper

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ABSTRACT

Bosnian language is a very important factor of Bosniak identity. It owns active and passive vocabulary. Bosniak identity is confirmed by the Bosnian language. Identity and language are causally linked.

Key words: *language, identity, bilingualism, folklore, global interests*

BOSNIAN LANGUAGE AND BOSNIAKS

Language is man's greatest freedom (Anić, 1998) and no one has the right to judge a man by the language he speaks. The voice of mother tongue is adopted already in bladder and it cannot be deleted by anything. One is totally free in choice of words, in building words in syntagmatic and sentence constructions, and within context of the language structure (grammar) which he considers his or her own internal (own, national, ancient...) language. Through its language, one preserves its identity, for language reliably stores tradition, custom, folklore, work and everything else through which individual and collective are expressed. That means that, by language, as very important creator and preserver of

identity, history is also preserved, and religion, and art, geography, anthropological values and many other values of individual, nation, state, society etc.

However, new technologies, modern flows of humanity development, new profiles of state, society, religion, nation and everyday needs for numerous and very far communication and understanding, before many linguists, but also before every man, have created a significant problem: global language – local language (unification, assimilation, dying or parallel survival, bilingualism, common language, understanding and local language of national folklore). Since, in both variances, it more or less represents the question of identity, it is a fact that with slight deviation, an equality sign can be put between national language and identity.

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With the fact that English language is more and more a global language, for Bosnian language, it can be said that it is, besides other things, a factor of Bosniak identity, but also of all others who inside or outside of Bosnia and Herzegovina feel Bosnian language as inextricable part of their own colloquial feeling.

David Crystal (2009), the author who wrote about English language for Cambridge University Press, considers that language has global status in moment when it gets special role recognized in every country. That role is evident in countries where people speak that language as their mother tongue. When it comes to English language, those countries are: United States of America, Great Britain, Canada, Ireland, Australia, New Zealand, South Africa and the Caribbean. But only the usage of mother tongue does not give a global status to that language, because language must be accepted in other countries around the world, meaning also in countries where there are no native speakers of that language. That status can be achieved through marking some language as official, i.e. that language is used as means of communication in government, judiciary, media and educational system. The best example of official language today is English language which today has (global) special status in more than 70 countries. This position is more than any other language has ever achieved, although French, German, Spanish, Russian and Arabic languages also have significant official use.

Other way of gaining special status is giving priority in teaching certain language, even when that language does not have official status. English language is thought as a foreign language in more than 100 countries around the world, and from 1996 English has replaced French and is thought again as foreign language in schools of Algeria (ex French colony).

When it comes to identity, it is interesting why one language becomes global language regardless of number of speakers? Crystal states that this is the matter of who speaks that language. Latin has become an international language in Roman Empire, not because the Romans were most numerous, but because they were most powerful. Analogue to that, without strong

political, military or economic power, no language can prosper as international mean of communication. Crystal (2002:7-8) concludes that language becomes international due to political, military and economic power of certain nation. English language is no exception. British political imperialism has spread English language all over the world in 19th century. During the 20th century, the presence of English language has kept and continued through economic predominance of the new American force. And the language that stands in front of, besides and behind American dollar is English.

How many languages in the world today has such kind of support and where within those frames is Bosnian language as factor of Bosniak identity?

Significant usages thrive from the existence of global language, but there is also certain risk i.e. possible consequences. Maybe the existence of global language will accelerate the disappearance of minority languages or maybe the final threat will come true that all other languages will become unnecessary. To some, that idea is partly materialized, which is confirmed through existence of artificial universal language of Esperanto. Vice-president of Esperanto society dr. Lee Chong-Yeaong stresses that the problem of language in UN system is hegemonic status given to English language, which will result in language hegemony. Crystal also considers possible consequences which occur with global status of some language, in this case English language. Before all, Crystal speaks of linguistic advantage. Real risk is that people, to whom a global language is mother tongue, will be in advantage in relation to those who must learn it as foreign or official language. That means that scientists, to whom English language is not mother tongue, will have difficulties in realization of creative work, or that their works will, if they are written in mother tongue, be ignored in international community. As solution for this problem, Crystal proposes that global language should be introduced into educational system as soon as possible, so that language capacity could be achieved in time. Second consequence of which he speaks is linguistic complacency.

People, to whom global language is mother tongue, lose motivation for learning other foreign languages. Sometimes the reason is of financial nature, but mostly it is a lack of interest, because whether they visit other countries as tourists or that they are simply using internet, native speakers of English language encounter it everywhere.

Such fate is awaited by the Bosnian language too. However, even if it does go to folklore, does that mean that cohesive power of Bosniak (and other) identity ceases to exist in Bosnia and Herzegovina. Bosnian language is not global, but it is global in colloquial sense of the people, the country, administration, even for centuries, so in that way, it became a national treasure chest and state treasury and historic linguistic archive. Another consequence of existence of global language is so called linguistic death. However, through history, it is shown that domination and disappearance of some languages have developed independently of the existence of global language. Some languages ceased to exist because the nations who spoke them were assimilated into dominant society and have accepted its language. Once language disappears, a lot is lost for good, especially if language was never written down. Identity of people is lost. Scientists who have gathered at a meeting of AAAS (American Association for Advancement of Science) in Seattle, Washington, warned that half of the languages which are spoken today will disappear by the end of this century.

Through disappearance of some language, a national and cultural identity of certain nation is at question. Crystal proposes solution for this problem – bilingualism, whereby people would speak global language as mean of access to world community and the language of the region in which they live due to communication in that region. The functions of these two languages would be complementary and would meet different needs. We can assume that many have the same opinion for two reasons: preserve the local language and preserve national/state and/or other identity. It would be solution for Bosnia and Herzegovina too, and for Bosnian language.

When we consider minority languages and the possibility of their disappearance, there are also other reasons which question that disappearance. If we take for example Bosnian language, we can see that, especially in after war situation in Bosnia and Herzegovina, there are many reasons which support further existence of Bosnian as life language, than reasons which would make us think that, within appropriate time, Bosnian language could only be preserved in written or electronic form. Before all, because of warfare which recently ended in Bosnia and Herzegovina, the conscience of people on the importance of language as national identity has increased. However, people have also seen a great need for usage of global i.e. English language in modern and developed society. Although English language is imposed on cultural field and is present in daily life of Bosnians and Herzegovinians (television, music, internet, press and similar), still, on the other hand, the presence of Bosnian language in those and other fields is greater. The fact that mother tongue is adopted without any effort in early childhood, and the fact that a tremendous effort must be put into learning foreign language, speaks to the favour of further survival and wide usage of Bosnian language. When we consider the number of speakers of this language, without taking into consideration the existence of wide diasporas which already partly ceases to use Bosnian language and overtakes the language of the country where they are currently situated, still, in Bosnia and Herzegovina itself, there is a large number of people who use Bosnian language in daily use. Entrance into the European Union requires retention of own identity in national languages as characteristic of certain nation and for communication in certain region, but also the introduction of global language as mean of understanding within the Union. Stated reasons assume survival of Bosnian language as minority language. Important contribution to that is the fact that, through language, identity forms itself for years and centuries, so the assumption of disappearance of language is conditioned by disappearance of identity.

Since the changes of social awareness happen very slowly (as per some, in seventy years), centuries are needed for change of identity. It is even questionable whether it can happen until the end, for language, most often, permanently remains in onomastics (less in anthroponomastics and much more in toponomastics). All current hydronyms are older than toponyms, many toponyms, hydronyms, oronyms etc. by arrival of a new nation and language have kept their original name, or they have formed it as calque. Even today that is the case with Bosnia and Herzegovina, Bosniaks, Bosnian language (even in anthroponomastics: Đula-Ruža, Nura-Svjetlana, Demir-Gvozden, Melaka-Anđela...). Language remains in work, customs, culinary, social forms of living, etc. Still, one should not doubt that language can roughly administratively be exterminate, through pseudostandardization, denationalization in all ways and daily assimilation, elimination, pseudoarchaisation, as well as in other ways. Language is best preserved by those who speak it and who feel it as important factor of their own, family, national, state-building identity.

For English language, the way in which cultural heritage of colonial era and technological revolution are present on international scene is very important. English language occurred as means of communication in development countries which gradually shaped the character of daily and professional life of 20th century.

Global presence of English language gives it the possibility and strength of cultural imperialism. English is official language of many international political gatherings, institutions and organizations such as: United Nations, South African Nation Society, Commonwealth, Council of Europe and the European Union. Today, any kind of consideration of politics leads to the role of media. Newspapers such as: The New York Times, The Washington Post, The Wall Street Journal, The Times and The Sunday Times are the leading in the world, and are published in English language. Newspapers of great importance International Herald-Tribune, US Weekly and International Guardian intended for world readers,

are also printed in English. Massive production has increased the flow of goods and imposed competition among producers. Posters, billboards, illuminated advertising are part of daily life, and with expansion of world market they are more and more manifestations of English language. When it comes to broadcasting of the Voice of America, service for broadcasting outside of the country, broadcast program from the United States in English and 45 other languages across the world, together with Freedom Radio and Free Europe Radio. Development of technology has significantly changed the nature of home and public amusement, and by that also broke a path for development and expansion of English language. In mid nineties of past century, the United States have controlled 85 percent of world movie market of Hollywood movies which dominated in cinemas across the world. So, large number of movies which are shown in cinemas and on television are in English language (usually with sub-titles). Crystal states one more type of amusement which new technology has improved, and which arose at the end of 19th century – music industry. Today, radio all over the world witnesses domination of English language in popular music. In past century 70-ies, world fame was achieved by Swedish pop group ABBA singing in English language. Crystal states data from encyclopedia The Penguin Encyclopedia of Popular Music that in 1990 out of 557 pop groups, 549 of them (99 percent) sung exclusively or mostly in English language. On basis of above stated, it can be concluded that domination of one language on cultural, political and economic level actually represents sort of imperialism and attempt of expansion of influence of certain countries on wide territories through language. Bosnia and Herzegovina and Bosnian language are exposed to such influences. For now, there are no more reliable shapes of resistance than its Bosnian lingual feeling as a strong factor of individual and collective identity.

Another exceptionally important segment of global society is under domination of English language today, an international media, because of which we often hear phrase “global village”, and that is internet.

Through internet, not only that people all over the world who have access to computer are connected with each other, but also it has a large number of information for all users. Crystal mentions the fact that around 80 percent of electronically saved information in the world is in English language. It is also important to mention that all systems for data transfer through network are made for English alphabet, which significantly aggravates the existence of multi-language systems for data transfer having in mind that Arabic, Chinese or other alphabets have special symbols. It is not only a matter of textual content, but also of the money, measuring systems, dates and other specific conventions.

Designing of such systems which in future will give bilingual data presentation represents a long-term goal, but until then, lingua internet will obviously be English. So, internet users, besides knowledge of computers, also need to have English language knowledge if they want to use the advantages that internet offers, by which English becomes the largest and most effective American “product” for export. Citizens of Bosnia and Herzegovina are exposed to such influences, but they need not be assimilatory, but on the contrary they can help in motivation to preserve own language and identity.

English language domination is evident in modern society, but the opinions of whether that will be the case in the future are divided. Crystal considers that the position of English language as global language is secured, but one must be careful with predictions when it comes to language. He bases his opinion on the fact that no language has ever been so widespread nor used as English. Relation between the need for mutual understanding and identity is sensitive, and can easily be disrupted by social changes such as new political alliances and changes in status and politics of certain country.

However, there is no doubt that those nations and those countries which culturally close themselves are losing for sure. Each sealing, even linguistic, means impoverishment, isolation. Meeting the other and accepting something that is a need and necessity in own development, does not mean losing own identity. In language that is specially seen (Kordić, 2010) because

even when some foreign words are accepted, they most often remain as lexical choice between the two or more words, they ease linguistic marking, weaken or strengthen expression, etc. That however does not mean that one must advertise the usage of foreign words, and it does not mean that literally and simply fond of words of one language can be replaced by fond of words of other language. In words of one language is not only that what is outside, but also what is inside a man, gauzy nor meaning, their historic ethnologic portrait, etc.

Bosnian language today is a very important factor of Bosniak identity because, besides other, it remained in very turbulent and disinclined further and closer past regime. From such past it has preserved nearly four thousand words only in culinary, it has written monuments in more letters than anybody has (Glagolitic, Cyrillic, Bosančica, Matufica, Latin), for centuries it has been preserved in bilingualism (Arabic, Turkish, Persian, Latin, German) etc. Even today, many Turkish loanwords (Oriental loanwords) are used in it which do not feel like words from foreign languages (for example French, German, English), because original words have, in different ways of formational shaping, totally acclimated and within period of six centuries, accommodated into linguistic structure of Bosnian language. All that has today resulted in a kind of state in dictionary wealth of Bosnian language. An individual in his speech feeling owns two dictionaries: active (which consists of all words which one knows and which one uses daily) and passive (which consists of all words which one knows but many of which one rarely or no way uses, because one does not more or less consider it as its own identity). If an individual has managed to preserve and further develop its language in conditions of absolutely disinclined regimes, if language is active besides two vocabularies, it is evident that not only is it adequate to objective reality of its speakers, but it is also developing, because the people who speak it have subjected, perpetuated, expressed its emotion and thought, total ethnologic identity precisely by that language. That is why a reciprocal influence is preservation and development of: Bosnian language and Bosniak identity.

CONCLUSION

Language is man's greatest freedom. Through language, individual and collective conscience is expressed. Problem of global language – local language is the best solution for bilingualism. Economic, military and political power represents also a linguistic power. One of the most important factors of Bosniak identity is Bosnian language. Customs, tradition, folklore, work, working means, working methods, culture and everything else that belongs to Bosniaks is preserved through it.

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DEVELOPING THE MOTIVATION OF DEAF AND HARD OF HEARING STUDENTS TO LEARN AND ACADEMIC ACHIEVEMENT

Professional paper

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ABSTRACT

If a student's goal is academic achievement and he/she makes an effort to achieve it, he/she will become involved in classroom activities because they are a means for him/her to achieve that goal. Motivation, as an influence that brings about, directs and sustains an activity, is very important for learning. The aim of this paper is to point out the relationship between motivation to learn and academic achievement of deaf and hard of hearing students and to emphasise the importance of appropriate involvement of parents and teachers in the teaching process and the development of motivation in these students. Variables that correlate with academic achievement are presented. Views of the author are stated, which are based on research results and practice, according to which it appears that deaf and hard of hearing students usually have poorer academic achievement than their hearing peers, as well as a lower level of motivation to learn. It can be concluded that the development of interest and motivation to learn is not paid sufficient attention by both deaf and hard of hearing students themselves and their environment (parents and teachers). Where parents and teachers have high expectations of students and take into account all their personal characteristics and other factors, and where parents and teachers are appropriately involved in the teaching process, deaf and hard of hearing students show high levels of interest and motivation to learn and attain better academic achievement.

Keywords: *deaf, hard of hearing, motivation, learn, academic achievement*

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INTRODUCTION

Becoming involved in an activity implies the existence of a reason that had led to the involvement. Persisting in this activity leads to the conclusion that there is also a certain goal which the person strives to attain by engaging in the activity. Factors that bring about an activity, sustain it and direct it towards a goal can be explained by motives. „Motives are hypothetical constructs used to explain why people are doing what they are doing. Motives are distinguished from related constructs such as goals (the immediate objectives of particular sequences of behavior) and strategies (the methods used to achieve goals and thus to satisfy motives)“ (Brophy, 2004, p. 3).

Behaviour (activity) caused by a certain motive can be attributed to motivation. Motivation encourages activity and gives it direction, intensity and duration. To be motivated means to be encouraged to do something. Motivation is a “multifaceted set of goals and beliefs that guide behavior” (Guthrie & Wigfield, 1999, p. 199). Motivation is a theoretical construct used to explain the initiation, direction, intensity, persistence, and quality of behavior, especially goal-directed behavior (Maehr & Meyer, 1997; see Brophy, 2004). „Most contemporary theories of motivation assume that people initiate and persist at behaviors to the extent that they believe the behaviors will lead to desired outcomes or goals“ (Deci & Ryan, 2000, p. 227). By such motivation people are stimulated to successfully complete an assignment, achieving a goal or a degree of qualification in their professions (Mohamadi, 2006; see Amrai, Motlagh, Zalani, & Parhon, 2011).

Motivation, as an influence that brings about, directs and sustains a desired behaviour, is very important for learning. Understanding motives and motivation of students can provide guidelines for encouraging and developing commitment to learning in order to attain better academic achievement. The importance of motivation for learning and academic achievement and for successful mastering of certain programmes

that enable one to complete his/her education and to gain an academic title is reflected in the development of a positive attitude towards school and school obligations. If a student's goal is academic achievement and he/she makes an effort towards achieving this goal, he/she will become involved in classroom activities because they are a means for him/her to achieve that goal. This will ultimately be verified by grades, certificates, diplomas and the like. Lack of interest in work and school obligations is an indication that the student is not motivated or that he/she does not understand the goal of learning.

„Multiple reasons might drive study behavior, such as a spontaneous interest in the learning material, a desire to prove oneself by getting high grades, external expectations, or future professional goals. Nevertheless, some motives might be more dominant for some students, whereas different motives might be of greater importance to others“ (Vansteenkiste, Sierens, Soenens, Luyckx, & Lens, 2009, p. 671). When it comes to deaf and hard of hearing students, they approach classroom obligations and learning with varying interest. They display different forms of behaviour and are persistent to a greater or lesser extent in performing their school obligations. These children set different goals when it comes to their academic achievement. These differences in involvement and engagement indicate the existence of different motives that drive them to action as well as different forms of motivation that sustain their action.

ACADEMIC ACHIEVEMENT OF DEAF AND HARD OF HEARING STUDENTS

„Academic achievement is one of the most important indicators of learning and understanding in all educational systems. Identifying factors affecting students' performance in this course and determining the size of these effects can be critically important in helping students improve their academic achievement“ (Rahmani, 2011, p. 803).

Deaf children possess the same intellectual potential as hearing children, they are capable of high academic achievement even when they do not have full command of all aspects of English (Miller, 2004b; see Moores & Martin, 2006). „The range of intelligence levels of students with deafness does not differ from the range in their hearing counterparts. Academic performance must not be equated with intelligence. Most children who are deaf have normal intellectual capacity and it has been repeatedly demonstrated that their scores on non-verbal intelligence tests are approximately the same as those of the general population“ (Ogundiran & Olaosun, 2013, p. 42). „In order to fully understand the characteristics of deaf learners, including both strengths and weaknesses, it is necessary to understand the interactions of cognitive, social, and linguistic factors in the environment. Without that information, we cannot provide fair assessments of deaf students and thus we cannot educate them appropriately“ (Marschark, 2001, p. 1). In fact, Marschark (2003; see Moores & Martin, 2006), reports that research involving cognition and memory among deaf and hearing individuals consistently shows both similarities and differences in their performance. Marschark stresses that a difference does not imply a deficiency; in some tasks deaf subjects have an advantage. By further investigating and understanding relationships between cognition and deafness, we can improve educational instruction of deaf learners.

Despite the efforts of educators and parents, the academic performance of deaf children frequently lags behind that of hearing peers (Allen, 1986; Lang, 2003; Marschark, Lang, & Albertini, 2002; Traxler, 2000; see Marschark, Convertino, & Larock, 2006). Stinson and Kluwin (2003; see Richardson, Marschark, Sarchet, & Sapere, 2010) reviewed the literature with regard to academic placement for DHH students and concluded that the largest contribution to academic achievement came from differences in student and family characteristics (e.g., age of hearing loss onset, prior academic achievement, and parental hearing status). Apart from the obvious effects of the degree, type and quality of instruction,

five variables appear to be closely correlated with the academic achievement of students with hearing impairment (Moores, 1985, Paul & Quigley, 1990; see Ogundiran i Olaosun, (2013):

1. The severity of hearing impairment – The greater the hearing loss, the more likely the child will experience difficulty in learning language and academic skills.
2. The age of onset of hearing loss – A child who loses his hearing before acquiring speech and language (usually before age 2) is at a much greater disadvantage than a child with a post lingual hearing impairment.
3. Intelligence test scores – As with children with normal hearing, higher scores on standardized tests of intelligence are correlated with greater amounts of academic success.
4. Socio-economic status of the family – A child with hearing impairment whose parents are affluent and college educated is more likely to achieve academic success than a child with hearing impairment from a low-income and less educated family.
5. The hearing status of the parents – A child with deafness from parents with deafness is considered to have better chances for academic success than a deaf child born by hearing parents, particularly if the parents are highly educated.

Degree of hearing loss does not appear to be a direct predictor of academic achievement (Allen, 1986; Powers, 2006; Tymms, Brien, Merrell, Collins, & Jones, 2003; see Richardson et al., 2010). Nevertheless, it does affect access to communication within the classroom and has more subtle long-term effects insofar as cognitive skills, world knowledge, and fluency in language are acquired through an incremental and interactive process extending over many years. „It is assumed that due to the lack of auditory modality there is certain psychological restructuring in relation to the communication models, which in turns affects the development of cognitive functions, due to which deaf people differ significantly from hearing people in terms of psychological characteristics“ (Hasanbegović & Sinanović, 2008). Untreated hearing loss in a child has a significant impact on their auditory brain development that results in serious consequences for

speech, language, literacy, academic achievements, and social/emotional development for the children's life term. These chronic disabilities also impact significantly on the family and community (Olusanya, Ruben, & Parving 2006; see Dornan, 2010).

Deficits in vocabulary, syntax and the ability to use abstract language, all of which have been documented for a large portion of deaf and hard-of-hearing children, directly impede acquisition of literacy (reading, writing) skills and thus limit academic experiences (Marschark et al, 2002; see Marschark & Spencer, 2009). "The results of cognitive function research indicate poorer results among deaf respondents compared to the hearing ones, which is a consequence of the insufficiently developed semantic function of speech" (Hasanbegović, 2008). While the development of speech, as a learning tool, can frequently be an obstacle to learning among deaf and hard of hearing children, in order for the education process to feature optimal planning, preparation and implementation, it is important to take into account all of the children's relevant personal characteristics and all environmental factors. Stinson and Walter (1997) argued that, beyond communication, DHH students' academic success is strongly influenced by less tangible variables, such as self-efficacy, study habits, program satisfaction, and enrollment in academically rigorous courses (Powers, 2006; see Richardson et al., 2010).

Since academic achievement is the result of implementation of the rehabilitation-educational process, the question arises as to whether appropriate methods and techniques of work are applied during this process, or in other words, whether the cause of poor academic achievement of deaf and hard of hearing students may be attributed to the approach of persons who directly work with this population, or the cause is in the students themselves? „It is recommended that teachers and the professionals who work with individuals with deafness should be trained to have a deep understanding of the cultural, linguistic, sociological, psychological, educational and prosthetic aspects of deafness and continually update these skills so as to be able to offer more effective interventions“ (Ogundiran & Olaosun, 2013, p. 46).

Schick, Williams, and Kupermintz (2006; see El-Zraigat, 2013) maintain that among educational needs of deaf and hard-of-hearing students are learning environment, educational interpreters, communication, using visual approach, and applying evidence based practices in instruction.

THE ROLE OF PARENTS AND TEACHERS IN THE DEVELOPMENT OF MOTIVATION OF DEAF AND HARD OF HEARING STUDENTS TO LEARN AND ACADEMIC ACHIEVEMENT

A child's interest and motivation in science will influence his confidence in activities and observational learning that a child (Lang, 2006; see Naidoo, 2009).

Some authors point out that that DHH students have even larger interest for studying, practicing curriculum, adopting new contents but that there is also indifference and unconcern. Deaf persons do not have enough motivation and developed interests (Levine, 1981; see Radoman, 2003). "Factors which create challenges for the learners and the educators were categorized as intrinsic factors (which included literacy, sign language, interest & motivation and assimilation) and extrinsic factors (the science curriculum, parental involvement and resources" (Naidoo, 2009, p. 103).

The motivation of deaf and hard of hearing students may be affected by poor auditory perception, which leads to difficulties in understanding and mastering certain classroom contents, which in turn diminishes the interest in a certain area and the student fails to make an effort to master the material. If a student's attention has been attracted to a particular material, by means of easy to understand and appropriately introduced content, he/she will understand the purpose of learning, which will in turn arouse his/her interest and thereby his/her persistence in performing activities related to the task. The task of parents and teachers is to strengthen and support the competence and autonomy of deaf and hard of hearing students, which will serve to also strengthen their self-esteem and self-efficiency, as well as their motivation to learn and to attain academic achievement.

Many participants in Reiff et al.'s (1995; see Jacobs, 2010) study reported that anger originating from incidents in childhood, particularly anger toward the school system, was a catalyst for what would later become successful professional and social outcomes. Other participants maintained their Desire into adulthood through rewards gained from particular endeavors, encouragement from significant others (e.g., family and teachers), or understanding that basic academic survival required sustained determination. Many participants also appeared determined to prove the stereotypes of their disability wrong (e.g., low expectations imposed by others) and that these external influences would not decide their fate.

Parental and teacher expectations for deaf students — and perhaps students' expectations for themselves — play an important role in academic success. Although there has been little attention given to achievement motivation in deaf children, Stinson (1974, 1978) found that hearing mothers of deaf children did not have as high expectations for their children's achievement motivation as hearing mothers of hearing children (Marschark, Convertino & LaRock, 2006). The role of the family's value system in generating successful psychosocial outcomes has appeared in studies with students who were deaf and their families (e.g., Luckner & Muir, 2001; Toscano et al., 2002; see Jacobs, 2010). Elements of these value systems included goal setting, constant motivation to achieve academically, acceptance of deafness, and not using deafness as an excuse for poor performance. Toscano, McKee, and Lepoutre (2002; see Marschark, Convertino, & LaRock, 2006) found that deaf college students who demonstrated high academic literacy skills tended to have parents who were very involved in their early educations, effective family communication (regardless of mode), early and intensive exposure to reading and writing, and high expectations on the part of their parents. „Parental support, appropriate educational style and parent involvement, degree of support and control are positive factors in the development of self-esteem, social skills development and competence, motivation and school

achievement” (Povlakić Hadžiefendić, Mahmutović, & Hasanbegović, 2019, p. 83). „Although parental involvement in their deaf child's school-based education program can positively contribute to academic performance, parental communication skill is a more significant predictor for positive language and academic development“ (Calderon, 2000, p. 140). Many participants in Reiff et al.'s (1995; see Jacobs, 2010) study emphasized the importance of emotional support and social connectedness that continued from childhood into adulthood. Participants reported that their parents persevered through external challenges, such as educators' discriminatory behaviors and low expectations. Parents helped instill a value system consisting of proactive lifestyle practices that led to proactive professional and social outcomes for their children.

According to McIntosh et al. (1994: 481; see Naidoo, 2009), instructional strategies are a key aspect of the role of the teacher. The teacher's interpretation of his or her role, what is taught, how it is taught, use of resources, attitudes and belief's determines how the learners feel about themselves and what they are learning.

Teachers should also bear in mind at all times that deaf and hard of hearing students are capable of learning and they should expect more from them. By fulfilling their tasks, teachers work to ensure that these students fully accept themselves, and they encourage and motivate them.

Skilled teachers of the deaf are able to motivate DHH students or utilize methods adapted to their strengths and needs such that those students can learn just as much as their hearing peers. Relatively little is known about the relation between teaching methods and academic outcomes for DHH students, however, even if some best practices have been identified (Spencer & Marschark, 2010; see Richardson et al., 2010). „If we are to increase academic performance among children who are deaf or hard of hearing, we must renew our attention to effective instructional practices where measurement of student growth informs instruction and the decision-making process“ (Rose, 2007, p. 7).

Authors have argued that while much instructional classroom time with students who are deaf has been focused on academic subjects and the improvement of language and speech skills, the curriculum generally does not cover the development of proactive psychosocial skills (Bowe, 2003; Calderón & Greenberg, 2000; see Jacobs, 2010). „The many studies indicate that we need to re-examine our assumptions, conclusions, and approaches - in both research and education - if we really want to understand and optimize educational opportunities for individuals who are deaf or hard-of-hearing. The purpose of conducting assessment research and educational research, is to understand how our methods work, to ensure that they are valid and reliable, and to improve them. If we do not really understand the individuals with whom we are working it is impossible to provide fair and appropriate evaluations of what they know or develop teaching strategies to help them learn more“ (Marschark, 2001, p. 10). „Decades of research on educational and basic scientific questions relating to deaf children have yielded a wealth of knowledge about how they learn and develop as thinking, social, problem-solving individuals. However, we currently lack channels for communication from teachers to researchers about the priorities in education and from researchers to teachers about scientific progress that might be effectively utilized in the learning context. As a result, research often fails to address educational priorities, knowledge gained from relevant investigations is rarely translated into practice, and decision-making is often governed by administrative expedience rather than evidence“ (Swanwick & Marschark, 2010, p. 217).

CONCLUSION

Deaf and hard of hearing students approach classroom obligations and learning with varying interest. They set different goals when it comes to their academic achievement. There are various internal and external factors that correlate with academic achievement. According to the views of the author that are based on

research results and practice, it appears that deaf and hard of hearing students usually have poorer academic achievement than their hearing peers, as well as a lower level of motivation to learn. The development of interest and motivation to learn among deaf and hard of hearing students is not paid sufficient and appropriate attention by both the students themselves and their environment (parents and teachers). If parents and teachers had high expectations of students and took into account all their personal characteristics and other external factors, and where parents and teachers were appropriately involved in the teaching process, deaf and hard of hearing students showed high levels of interest and motivation to learn and attained better academic achievement. In order to ensure high academic achievement of deaf and hard of hearing students, in addition to other factors, it is particularly important that there is a strong motivation to learn, appropriate involvement of parents, a high level of competence and engagement of teachers, and especially a connection between scientific research and practice, i.e. communication between teachers and researchers.

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