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DEAF AND HARD OF HEARING STUDENTS IN INCLUSIVE EDUCATION CLASSROOMS

Jačova Z., Kovačević J., Ristovska L., Radovanović V.

University "Ss. Cyril and Methodius"- Skopje, Faculty of Philosophy-Institute of Special Education and Rehabilitation[1],University of Belgrade, Serbia[2,4],City General Hospital "8th Septemvri", Department of otorhinolaryngology, Department of audiology, Skopje, Republic North of Macedonia[3]

Introduction

Inclusion is the goal in education today, which means that all children should be able to study in the same school, and support services should be available there.

School placement for deaf children ranges from specialized schools for the deaf, through special units or classrooms in regular schools, to full inclusion through co-enrolment programmes or individual placement. Mainstream placement does not eliminate the need for services, which will vary depending upon the child's age, school curriculum, language, and other child-specific factors.

***Method:** A professional review approach was utilized, and relevant journal articles to understand the effects of inclusion as well as the factors of a successful inclusive education program for d/Dhh students were selected and analysed.*

***Results:** Research have demonstrated that deaf children generally lag behind hearing peers in terms of academic achievement. Findings demonstrating that deaf and hearing children differ in domains such as visual-spatial processing and memory. The literature review has indicated that there are several conditions, such as teachers' qualifications, access to phonology, access to the general curriculum, and the availability of supports and services, that may be critical for developing language and literacy skills of d/Dhh students in inclusive education classrooms.*

***Conclusion:** The positive effects of inclusive education increase when d/Dhh students receive supports and services. Support for learning included universal design for learning, behavioural interventions, adaptations and modifications. In order to improve the development of inclusive education for students with hearing impairment, a good and regular evaluation is the precondition of development for students with hearing impairment. Suitable form of education and flexible academic achievement evaluation should be provided to development of speech communication competencies for students with hearing impairment.*

***Key words:** Deaf and hard of hearing students; inclusive education classrooms; hearing impairment and support.*

Introduction

Inclusion is the goal in education today, which means that all children should be able to study in the same school, and support services should be available there (Ainscow & César 2006; Lomazzi, Borisch & Laaser 2014).

School placement for deaf children ranges from specialized schools for the deaf, through special units or classrooms in regular schools, to full inclusion through co-enrolment programmes or individual placement. Statistical information from the US Department of Education indicate that approximately 19.4% of d/Deaf and hard of hearing (d/Dhh) students receive 40% to 70% of their education in general education classrooms and about 61.8% of those students receive 80% or more of their education in general education classrooms. In addition, it has been reported that about 13.8% of students with hearing loss receive less than 40% of their education in general education classrooms, and about 2.9% are in special schools for d/Dhh students. About 2.1% of those students are placed in separate residential facilities or regular private schools, such as homebound/hospital placements, and correctional facilities (Alasim, 2019).

Mainstream placement does not eliminate the need for services, which will vary depending upon the child's age, school curriculum, language, and other child-specific factors. The goal of mainstreaming has been to provide students with disabilities with educational opportunities that are equivalent to those of their peers who are nondisabled. Educational opportunities include academic content as well as social experiences (Kauffman, 1993). Mainstreaming was based on the premise that students with disabilities, who were able to adapt to general education classes, could receive their education in the mainstream setting. This legislation opened the doors for students who were deaf and hard of hearing to attend regular education classes. It provided accommodations for them, including interpreters, tutors, and note takers so those with varying degrees of hearing loss could sit in the same classrooms and compete with their peers who could hear (Scheetz, 2012).

There are different kinds of mainstreaming for DHH students, including regular education, resource rooms, and self-contained classrooms. DHH students who attend self-contained classrooms stay with special education teachers for most of their classes. However, students who attend regular education and resource rooms have to cope with the same instruction as their hearing classmates. Some of these students receive special accommodations, such as a few classes per week with special education teachers (Tsach & Most, 2016).

The term mainstreaming refers to the placement of DHH students in regular or general classrooms in public schools. The terms mainstreaming and integration are at least synonymous. Two types of mainstreaming are discussed: individual/full mainstreaming and group mainstreaming. Individual/full mainstreaming refers to those students who are the only DHH student, or one of very few DHH students, within their school. Oliva (2004) refers to these students as

"solitaires." Group mainstreaming refers to situations where there are a number of DHH students grouped together in a unit within a mainstream school.

Hopper (2011) made some specific recommendations that would be applicable to these environments, emphasizing that transforming these environments to be accessible for all students, including deaf and hard-of-hearing students, is necessary if schools want to be truly inclusive. Her participants suggested innovative uses of electronic devices as "text translators" that could be placed in such environments, where voice recognition software could pick up conversation. Another suggestion from her study is for schools to collaborate with interpreter preparation programs to provide internships where interpreting students would "follow" a hard-of-hearing or deaf student and make notes of conversations passing around to share with the student.

Inclusion may also require a lot of adaptations, accommodations, and modifications. The changes required by a student may prove quite important when his or her classroom placement is considered. The changes can come in the form of accommodations and modifications. Curricular adaptations is viewed as transformations that are acceptable in the educational surroundings that permit equal opportunity for students to get accessibility, results, benefits, and levels of achievement. That is to say, curricular modifications should permit students with disabilities to participate in an encompassing environment which compensates for their deficiency as learners (Mweri, 2022). Access to the general education curriculum implies that d/Dhh students should study the academic curriculum content (reading, mathematics, science, etc.) of their hearing peers at the same grade level. According to this IDEA's amendment, it is not allowed for schools and teachers to develop or use specialized curricula for d/Dhh students (Hardman & Dawson, 2008; Smith et al., 2016).

Although students, both with and without hearing loss, found it difficult to comprehend in a noisy classroom, it is important to note that DHH students require better acoustics. It is known that understanding speech in the presence of background noise or competitive speech is harder for people with hearing loss compared with people with normal hearing (Best et al., 2010). Furthermore, classrooms of mainstream DHH students should be accommodated specifically to meet their special auditory needs.

Morningstar et al. (2015) studied six inclusive schools and detected two dimensions of supporting inclusion: (1) *support for participation* and (2) *support for learning*. Support for participation consisted of instructional staffing and format, peer-supported learning, adult engagement and access to academic curricula content. Support for learning included universal design for learning, behavioural interventions, adaptations and modifications.

Support was given more at the secondary stage, mainly pedagogical or technical support, including various oral and written instructions, clear speech, having pupils working in small groups and using various technical devices. Nevertheless, pedagogical support had more variety at the primary stage. Assistants or interpreters were not available for the HI-pupils very often, but if they

were, only at the primary stage. Pupils with cochlear implants had more often individual educational plans. Some subject-specific support services could be found, but mainly, the support forms were general, fitting into many subjects, like clear speech. The difference between intensified and special support was not clear (Takala & Sume, 2017). When DHH students do not receive professional support, it may perpetuate their difficulties and increase their frustration. The behaviours and feelings, social inferiority, and general difficulties that DHH students experience at school should not be ignored (Tsach & Most, 2016).

Method

A professional review approach was utilized, and relevant journal articles to understand the effects of inclusion as well as the factors of a successful inclusive education program for d/Dhh students were selected and analysed.

Results

Deaf individuals are a highly heterogeneous population with characteristics that often intersect between language, disability, communication, and cultural identity. The current and most preferred term in use internationally is "*deaf and hard-of-hearing*" (shortened to DHH). The use of this term seeks to avoid the pathological connotations of loss or impairment and is inclusive of diverse cultural perspectives and audiological experience. This term usefully reminds that there is a broad spectrum of hearing loss from profound to mild and so provides an inclusive stance (Swanwick, 2017). There are several factors that can affect research results, including degree of hearing loss, communication and language skills, age at hearing loss identification, receiving early intervention services, home related factors (e.g., parental involvement; language and literacy experiences), and school related factors (e.g., teacher competency; teachers' and students' attitudes). Additionally, d/Dhh students come from different racial, ethnic, and economic backgrounds (Antia, S.D., Jones, P.B.,Reed, S., Kreimeyer, K.H., 2009; Powers, 2002; Trezek, B., Wang, Y.& Engler, K., 2011). For the child or student who is deaf, there are a variety of factors that influence developmental progress or educational success, whether these services are provided in the home, in preschool, or in elementary or secondary school. Of all these factors, the most powerful is a child's or student's teacher or therapist (Mason-Williams, 2014). Changes in teaching methods and teaching environments, changes in the policy of family-based early intervention, and advances in technology, such as cochlear implants, give rise to the need for teachers, therapists, and other qualified professionals to reassess the current competencies or standards that apply to educating and rehabilitating children and students who are deaf, and to guiding their families. To examine the issue globally, a study was made of documents used in teacher trainer institutions in Europe—in particular, in Ger-

many, the United Kingdom, the United States, Canada, and Australia, where ToD competencies were already listed in some form. According Lichtert et al. (2016) eighty-seven competencies were categorized into three groups: *knowledge and understanding* (for example, understand how children and young people process auditory and visual information, and how this might affect the teaching and learning approach), *professional skills* (for example, provide a wide range of opportunities for the development of receptive and expressive language), and *personal attributes* (for example, has good communication skills, and a knowledge and skills base that inspires confidence from families, children, and other stakeholders).

Newburn hearing screening programs, early access to language, and advanced hearing assistive technology, including digital hearing aids and cochlear implants, have changed the landscape of deaf education. The literature documents sizeable gains in the speech perception and receptive and expressive spoken language, and it was anticipated that improvements in spoken language would also lead to improvements in other language skills such as writing. However, gains in this area have been less remarkable, and reading and writing continue today to be a major challenge for children with cochlear implants (Hartman, M., Nicolarakis, & Wang, Y., 2020). Among the increasing number of children receiving cochlear implants, most research produced from the early 2000s and into the early 2010s noted a high degree of variability in the outcomes of children who are d/Dhh. Although some children did achieve age-appropriate listening and spoken language abilities, many continued to show significant deficits. Geers, Tobey, Moog, and Brenne (2008) evaluated the listening and spoken language outcomes of 181 children who were eight to nine years old and who had received a cochlear implant prior to five years of age. They reported that only 30% of the children had developed language comprehension abilities comparable with those of their peers with typical hearing.

There is no consensus on the definition of "success" regarding the inclusion of DHH students (Eriks-Brophy et al., 2006; Powers, 2002; Silvestre et al., 2007). According to the literature, as well as to conversations with teachers and parents of DHH children, it is common to assess the quality of inclusion by academic achievements as well as by social and emotional aspects.

Diverse subgroup characteristics raise the requirement for multiple studies to test the efficacy of interventions across the broader population of deaf students. Deaf children who arrive in school with a fluent sign or spoken language tend to be more successful in school and develop literacy skills commensurate with their hearing peers (Hrastinski & Wilbur, 2016). These are fundamental issues for the discussion of linguistic plurality and diversity, but the differences between deaf and hearing learners extend beyond the domain of early language and literacy. Findings demonstrating that deaf and hearing children differ in domains such as visual-spatial processing, memory, and executive functioning provide directions for both future research and practice. First, however, teachers and other professionals need to recognize that deaf children are not simply

hearing children who cannot hear. Only then can teaching methods and materials fully accommodate their strengths and needs (Marschark & Knoors, 2012). A growing body of research suggests that the learning styles and profiles of deaf children differ from those of hearing children. This has been explored in terms of cognitive and metacognitive processes and, in particular, visual perception, attention, and working memory (Marschark & Hauser 2008; Marschark & Knoors, 2012). For students who are d/Dhh, very few studies have examined their metacognitive skills, and the available data often suggest difficulties in this area (Borgna et. al., 2011; Schirmer et. al., 2004). However, research on skilled deaf readers suggested that they were able to use metacognitive strategies as proficiently as their hearing peers, and that the competent use of metacognitive strategies distinguished skilled deaf readers from non-skilled deaf readers (Banner &Wang, 2011; Wang, Silvestri & Jahromi, 2018).

As a result of auditory deprivation, many DHH children have deficits in their spoken language skills, showing semantic difficulties in receptive and expressive spoken vocabulary (Fegan & Pisoni, 2010; Wake et al., 2004) as well as in the areas of phonology, morphology, and syntax. These difficulties are expressed in word repetition and grammatical judgments, as well as in production of nominal adjectives, irregular plurals, prepositions, passive structure, finite verbs, and relative clauses (Delage & Tuller, 2007; Friedmann & Sztrezman, 2006; Norbury et al., 2001).

Harris and Moreno (2006), as well as Luetke-Stahlman and Nielsen (2003), found that more proficient deaf readers used more phonology than less proficient deaf readers. Kyle and Harris (2006; 2010; 2011), in three different studies also showed that some deaf readers access phonological processing, although usually to a lesser degree than hearing readers. Spencer and Tomblin (2008), reported phonological awareness to be predicative of reading abilities in cochlear implant users. In a longitudinal study of children in Australia who used cochlear implants and digital hearing aids, Ching, Day, and Cupples (2014), as well as Cupples et al. (2014), found that phonological awareness was a significant predictor of reading at age five, after controlling for receptive vocabulary and nonverbal cognitive ability. A number of more recent studies (Goldberg &Lederberg, 2015; Nittrouer et al., 2014) have also suggested phonological skills as the key to reading for young children who are d/Dhh.

Marschark et al. (2015) examined the attainment of 500 DHH secondary school students on the Passage Comprehension, Mathematical Calculation, Social Studies and Science subtests of the Woodcock-Johnson III and found that DHH students had mean scores below their hearing peers in all four subtests. Holt, (1994) examined the reading comprehension and mathematics computation achievement of d/Dhh students in a variety of school settings in the USA. Descriptive and inferential methods were utilized to analyse the relationships among the achievement scores of a sample of d/Dhh students, aged 6 through to 21 years. Findings showed that the reading comprehension scores of d/Dhh students who received their education in general education classrooms with

hearing students were higher than those of students in segregated settings (Paul & Alqraini, 2020).

Spencer and Marschark (2003) evaluated the writing skills of 16 pediatric cochlear implant users and 16 age-matched, normal-hearing children, who were all educated in mainstream classes. Children with cochlear implants performed significantly poorer than children with normal hearing on the expressive "Sentence Formulation" subtest. The cochlear implant users also produced fewer words on the written narrative task than did the normal-hearing children, although there was not a significant difference between groups with respect to total words per clause. Furthermore, there was a strong correlation between language performance and total words produced on the written performance measure for children using cochlear implants. Mayer et al., (2016) assessed the writing skills of 33 nine to 16-year-old cochlear implant users, most of whom were educated in mainstream schools and used oral communication in school. Free writing samples showed that 25% were performing at the expected level for their age, 19% were performing above average, and 56% were performing below average. Influences on outcomes included age at implantation, bilateral implantation, and age at testing. Writing outcomes were not as strong as in reading, but did show the use of non-standard English that was typical of d/Dhh children in the past, and the writing samples showed writing strategies such as invented spelling, which is common in hearing children.

The correlation between the ability to follow teachers' instructions and speech perception of sentences in background noise emphasizes the need to assess speech perception in noise as an indicator of students' ability to understand the teacher during class. This finding supports previous studies that demonstrated that noisy environments affect speech understanding of DHH students negatively (Eriks-Brophy et al., 2006; Mather & Clark, 2012; Powers, 2002) as well as show a positive impact of improving the signal-to-noise.

Many studies have examined the psychological and social aspects of mainstream educational placements for DHH individuals, with topics such as overall social adjustment, interactions with hearing peers, and development of identity to the fore. Feelings of loneliness and adjustment problems were also found by most (2007) in both mainstream DHH students and in those who attended special classes for DHH students.

A significant relationship was found between student ability to follow teacher instructions and their social behaviour. This finding supports previous findings by Antia et al. (2011), which indicated that classroom participation is related to positive social relationships inside and outside the classroom. Students who participated in the classroom were perceived positively by the teacher and other students. Punch and Hyde (2011) found that DHH students were less involved in group activities compared with hearing students. Wauters and Knoors (2008) reported that mainstream DHH students were rated lower by their classmates regarding their willingness to help friends and their ability to cooperate with others compared with hearing students.

The mainstreaming of deaf education has been a cause of great inquiry and indeed much controversy (Antia, Stinson, and Gaustad 2002; Marschark, Shaver, Nagle, and Newman 2015). Despite Mainstreaming Deaf Education, the appearance of inclusive spaces created due to mainstreaming, DHH students have sometimes described the experience in mainstream programs as lonely (Kent 2003), accompanied by feelings of rejection and social isolation.

Conclusion

Inclusive education is important to improve the abilities of students with hearing impairment, and show the respect to the equal right and different culture in education. In order to improve the development of inclusive education for students with hearing impairment, it is necessary to make efforts from the following aspects. The diagnosis should be as earlier as possible, a scientific new born hearing screening plays an important role in it. With the ageing and development of students with hearing impairment, the hearing and speech-language evaluation should be given regularly; Second, pay more attention to develop the speech communication competencies of students with hearing impairment. Hearing aids are helpful for students of hearing impairment to rebuild their auditory abilities. Besides, a good interaction and communication environment is vital, so it is important to provide more interaction and communication chance between the students with hearing impairment and their families and peers with normal hearing. It is also important to ensure enough time of language rehabilitation and speech therapy for students with hearing impairment. (Lin, L. & Miloň, P., 2022).

The literature review indicated that there are several conditions, such as teachers' qualifications, access to phonology, access to the general curriculum, and the availability of supports and services, that may be critical for developing language and literacy skills of d/Dhh students in inclusive education classrooms. The effects of these conditions should be addressed further by investigators to understand how d/Dhh students can succeed in inclusive education classrooms and, specifically, how to improve their literacy and other academic skills. Accordingly, the curricula in teacher preparation programs in deaf education should include (1) the diversity of individuals who are d/Dhh, including those with multiple disabilities; (2) understanding of an individual's type and degree of bilingualism or multilingualism; (3) language and literacy development theories, as well as assessment frameworks for consistent progress monitoring; and (4) evidence-based practice in facilitating the language and literacy development of individuals who are d/Dhh, particularly the strategies in providing rich and varied language experience (Hartman, M., Nicolarakis, & Wang, Y.,2020). The positive effects of inclusive education increase when d/Dhh students receive supports and services. Support for learning included universal design for learning, behavioural interventions, adaptations and modifications. In order to improve the development of inclusive education for students with hearing im-

pairment, a good and regular evaluation is the precondition of development for students with hearing impairment. Suitable form of education and flexible academic achievement evaluation should be provided to development of speech communication competencies for students with hearing impairment.

When deaf and hard-of-hearing students are seen as part of the broad diversity of the school as a whole, they have an increased chance of being valued; adults will be more likely to seek or invent activities that support bridging social capital. It is also more likely that viewing deaf and hard-of-hearing students through a diversity lens would illuminate more clearly their need for connections with others like themselves (Oliva & Lytle, 2014).

References

1. Ainscow, M., & César, M. (2006). Inclusive Education Ten Years after Salamanca: Setting the Agenda. *European Journal of Psychology of Education* 21, 231–238.
2. Alasim, N. K. (2020). Reading Development of Students Who Are Deaf and Hard of Hearing in Inclusive Education Classrooms. In Paul, P. *The Education of d/Deaf and Hard of Hearing Children Perspectives on Language and Literacy Development, Education Sciences,* 9, 201. 159-173 doi: 10.3390/educsci9030201
3. Angelides, P. &Aravi, C. (2007). The development of inclusive practices as a result of the process of integrating deaf hard of hearing students. ***European Journal of Special Needs Education****. 22*, 63–74.
4. Antia, S. D., Jones, P., Luckner, J., Kreimeyer, K. H., & Reed, S. (2011). Social outcomes of students who are deaf and hard of hearing in general education classrooms. *Exceptional Children*, *77*(4), 489–504.
5. Antia, S. D., Stinson, M. & Gaustad, M. (2002). Developing Membership in the Education of Deaf and Hard-of Hearing Students in Inclusive Settings. *Journal of Deaf Studies and Deaf Education* 7 (3), 214–29.
6. Antia, S.D., Jones, P.B., Reed, S. & Kreimeyer, K.H. (2009). Academic status and progress of deaf and hard-of-hearing students in general education classrooms. *J. Deaf Stud. Deaf Educ.*, *14*, 293–311. doi:10.1093/deafed/enp009.
7. Antia, S.D. (1998). School and classroom characteristics that facilitate the social integration of deaf and hard-of hearing children. In *Issues Unresolved: New Perspectives on Language and Deaf Education*; Wiesel, A., eds.; Washington: Gallaudet University Press. 148–160.
8. Banner, A. & Wang, Y. (2011). An analysis of the reading strategies used by adult and student deaf readers. *J. Deaf Stud. Deaf Educ., 16*, 2–23.
9. Best, V., Gallun, F. G., Mason, C. R., Kidd, J., & Shinn-Cunningham, B. G. (2010). The impact of noise and hearing loss on the processing of simultaneous sentences. *Ear & Hearing*, *31*(2), 213–220.
10. Borgna, G., Convertino, C., Marschark, M., Morrison, C. & Rizzolo, K. (2011). Enhancing deaf students' learning from sign language and text: Metacognition, modality, and the effectiveness of content scaffolding. *J. Deaf Stud. Deaf Educ. 16*, 79–100.
11. Ching, T.Y., Day, J. & Cupples, L. (2014). Phonological awareness and early reading skills in children with cochlear implants. *Cochlear Implant. Int., 15*, S27–S29.72.
12. Cupples, L., Ching, T.Y., Crowe, K.,Day, J.& Seeto, M. (2014). Predictors of early reading skill in 5-year-old children with hearing loss who use spoken language. *Read. Res. Q., 49*, 85–104.

13. Delage, H., & Tuller, L. (2007). Language development and mild to moderate hearing loss: Does language normalize with age? *Journal of Speech, Language, and Hearing Research*, *50*, 1300–1313.

14. Eriks-Brophy, A., Durieux-Smith, A., Olds, J., Fitzpatrick, E., Duquette, C., & Whittingham, J. (2006). Facilitators and barriers to the inclusion of orally educated children and youth with hearing loss in schools: Promoting partnerships to support inclusion. *The Volta Review*, *106*(1), 53–88.

15. Fegan, M. K., & Pisoni, D. B. (2010). Hearing experience and receptive vocabulary development in deaf children with cochlear implant. *International Journal of Deaf Studies and Deaf Education*, *15*(2), 149–161.

16. Friedmann, N., & Sztrezman, R. (2006). Syntactic movement in orally trained children with hearing impairment. *Journal of Deaf Studies and Deaf Education*, *11*(1), 56–76.

17. Geers, A., Tobey, E., Moog, J. & Brenner, C. (2008). Long-term outcomes of cochlear implantation in the preschool years: From elementary grades to high school. *Int. J. Audiol. 47*, S21–S30.

18. Goldberg, H.R. & Lederberg, A.R. (2015). Acquisition of the alphabetic principle in deaf and hard-of-hearing pre-schoolers: The role of phonology in letter-sound learning. *Read. Writ*, *28*, 509–525.

19. Hardman, M.L. & Dawson, S. (2008). The impact of federal public policy on curriculum and instruction for students with disabilities in the general classroom. *Prev. Sch. Fail., 52*, 5–11.

20. Harris, M. & Moreno, C. (2006). Speech reading and learning to read: A comparison of 8-year-old profoundly deaf children with good and poor reading ability. *J. Deaf Stud. Deaf Educ., 11*, 189–201.

21. Hartman, M., Nicolarakis, & Wang, Y. (2020) Language and Literacy: Issues and Considerations. In Paul, P. *The Education of d/Deaf and Hard of Hearing Children Perspectives on Language and Literacy Development, Education Sciences, 9*, 180, doi:10.3390/educsci9030180

22. Hopper, M. (2011). Positioned as by standers: Deaf students' experiences and perceptions of informal learning phenomena. PhD dissertation, University of Rochester.

23. Hrastinski, I., & Wilbur, R. B. (2016). Academic achievement of deaf and hard of-hearing students in an ASL/English bilingual program. *Journal of Deaf Studies and Deaf Education,* 21(2), 1-15

24. Kauffman, J. M. (1993). How we might achieve the radical reform of special education. *Exceptional Children,* 60, 6–16

25. Kent, B. A. (2003). Identity Issues for Hard-of-Hearing Adolescents Aged 11, 13, and 15 in Mainstream Settings. *Journal of Deaf Studies and Deaf Education* 8 (3), 315–24.

26. Kyle, F.E. & Harris, M. (2010). Predictors of reading development in deaf children: A 3-year longitudinal study. *J. Exp. Child Psychol., 107*, 229–243.

27. Kyle, F.E. & Harris, M. (2006). Concurrent correlates and predictors of reading and spelling achievement in deaf and hearing school children. *J. Deaf Stud. Deaf Educ., 11*, 273–288.

28. Kyle, F.E. & Harris, M. (2011). Longitudinal patterns of emerging literacy in beginning deaf and hearing readers. *J. Deaf Stud. Deaf Educ., 16*, 289–304.

29. Lichtert, G., Miller,K., Okalidou, A., Simpson, P. & Wieringen van A. (2016). High Standard Competencies for Teachers of the Deaf and Other Qualified Professionals: Always Necessary, Not Always Guaranteed. In Marschark, M., Lampropoulou, V. & Skordilis, K. E.eds. *Diversity in deaf education.* New York: Oxford University Press. Ch.6.

30. Lin, L. &Miloň, P. (2022). Inclusive Education of students with hearing impairment. *Eduport,* 6 (1), 1-10. DOI: 10.21062/edp.2022.002

31. Lomazzi, N., Borisch, B. & Laaser, U. (2014). The Millennium Development Goals: Experiences, Achievements and what's next. *Global Health Action 7*, 1–9.

32. Luetke-Stahlman, B. & Nielsen, D.C. (2003). The contribution of phonological awareness and receptive and expressive English to the reading ability of deaf students with varying degrees of exposure to accurate English. *J. Deaf Stud. Deaf Educ.8*, 464–484.

33. Marschark, M., & Hauser, P. (2008). *Deaf cognition: Foundations and outcomes*. New York: Oxford University Press.

34. Marschark, M., & Knoors, H. (2012). Educating deaf children: Language, cognition, and learning. *Deafness and Education International. 14*(3), 136–160. doi:10.1179/1557069X12Y.0000000010

35. Marschark, M., Shaver, D., Nagle, K. &Newman, L. (2015). Predicting the Academic Achievement of Deaf and Hard-of-Hearing Students from Individual, Household, Communication, and Educational Factors. *Exceptional Children* 81 (3): 350–69. doi: 10.1177/0014402914563700.

36. Mason-Williams, L. (2014). Unequal opportunities: A profile of the distribution of special education teachers. *Exceptional Children*, *81*(2), 247–262.

37. Mathews, S. E. (2017). Language, power, and resistance: mainstreaming deaf education. Washington: Gallaudet University Press.

38. Morningstar, E., Shogren, A., Lee, H. & Born, K. (2015). Preliminary Lessons about Supporting Participation and Learning in Inclusive Classrooms. *Research and Practice for Persons with Severe Disabilities* 40 (3), 192–210.

39. Most, T. (2006). Assessment of school functioning among Israeli Arab children with hearing loss in the primary grades. *American Annals of the Deaf*, *151*(3), 327–335.
40. Mayer, C.,Watson, L., Archbold, S., Ng, Z.Y.& Mulla, I. (2016). Reading and writing skills of deaf pupils with cochlear implants. *Deaf. Educ. Int. 18*, 71–86.
41. Mweri, J. (2022). From policy to practice: Inclusion and the education of the deaf child in Kenya. *International Journal of Science and Research Archive*, 07(01), 186–197
42. Nittrouer, S., Caldwell-Tarr, A., Sansom, E., Twersky, J. &Lowenstein, J. (2014). Nonword repetition in children with cochlear implants: A potential clinical marker of poor language acquisition. *Am. J. Speech Lang. Pathol*, *23*, 679–695.
43. Norbury, C. F., Bishop, D. V. M., & Briscoe, J. (2001). Production of English finite verbmorphology: A comparison of SLI and mild-moderate hearing impairment. *Journal of Speech, Language and Hearing Research*, *44*, 165–178.
44. Oliva, G. A., & Lytle, L. R. (2014). *Turning the tide: Making life better for deaf and hard-of-hearing schoolchildren*. Washington, DC: Gallaudet University Press.
45. Paul, P., Wang, Y. & Williams, C. (2013). *Deaf Students and the Qualitative Similarity Hypothesis: Understanding Language and Literacy Development.* Washington: Gallaudet University Press
46. Paul, P. & Alqraini, F. (2020). Conclusion: Perspectives on Language, Literacy, and Deafness. In Paul, P. *The Education of d/Deaf and Hard of Hearing Children Perspectives on Language and Literacy Development, Education Sciences,* 9, 286. 174-187. doi: 10.3390/educsci9040286
47. Powers, S. (2002). From concepts to practice in deaf education: A United Kingdom perspective on inclusion. *Journal of Deaf Studies and Deaf Education*, *7*(3), 230–243.
48. Punch, R., & Hyde, M. (2011). Social participation of children and adolescents with cochlear implants: A qualitative analysis of parent, teacher and child interviews. *Journal of Deaf Studies and Deaf Education*, *16* (4), 474–493.
49. Scheetz, A. N. (2012). *Deaf education in the 21st century: topics and trends*. 1th ed. New Jersey: Pearson, 155-156
50. Schirmer, B., Bailey, J. & Lockman, A. (2004). What verbal protocols reveal about the reading strategies of deaf students: A replication study. *Am. Ann. Deaf. 149*, 5–16.
51. Silvestre, N., Ramspott, A., & Pareto, I. D. (2007). Conversational skills in a semi-structured interview and self-concept in deaf students. *Journal of Deaf Studies and Deaf Education*, *12*(1), 38–54.

52. Silvestri, J. & Wang, Y. (2018). A grounded theory of effective reading by profoundly deaf adults. *Am. Ann. Deaf*, *162*, 419–444.

53. Smith, T., Polloway, E., Doughtry, T., Patton, J. & Dowdy, C. (2016) *Teaching Students with Special Needs in Inclusive Settings.* Boston: Pearson

54. Spencer, P. & Marschark, M. (2003) Cochlear implants. In Marschark, M., Spencer, P., Eds. *Oxford Handbook of Deaf Studies, Language, and Education.* New York: Oxford University Press 434–448. ISBN 978-0195149975.

55. Spencer, L.J. & Tomblin, J.B. (2008). Evaluating phonological processing skills in children with prelingual deafness who use cochlear implants. *J. Deaf Stud. Deaf Educ.*, *14*, 1–21.

56. Swanwick, R. (2017). *Languages and language in deaf education: a framework for pedagogy*. NY: Oxford University Press. 11

57. Takala, M. & Sume, H. (2018). Hearing-impaired pupils in mainstream education in Finland: teachers' experiences of inclusion and support. *European Journal of Special Needs Education.* 33(1), 134-147 doi.org/10.1080/08856257.2017.1306965

58. Trezek, B., Wang,&Y. Paul, P. (2010). *Reading and Deafness: Theory, Research and Practice.* New York: Cengage Learning

59. Trezek, B.J. & Wang, Y. (2017). Evaluating evidence-based practices in reading interventions for deaf students. In Cawthon, S.W., Garberoglio, C.L., eds. *Research in Deaf Education: Contexts, Challenges, and Considerations.* New York: Oxford University Press. 277–308, ISBN 978-0190455651.

60. Tsach, N. & Most, T. (2016). The Inclusion of Deaf and Hard-of-Hearing Students in Mainstream Classrooms: Classroom Participation and Its Relationship to Communication, Academic, and Social Performance in Marschark, M., Lampropoulou, V. & Skordilis, K. E.eds. *Diversity in deaf education.* New York: Oxford University Press. Ch.13.

61. Wake, M., Hughes, E. K., Poulakis, Z., Collins, C., & Rickards, F. W. (2004). Outcomes of children with mild-profound congenital hearing loss at 7 to 8 years: A population study. *Ear and Hearing*, *25*(1), 1–8.

62. Wang, Y. & Engler, K. (2011). Early intervention. In *Hearing and Deafness*; Paul, P.,Whitelaw, G., Eds.; Sudbury: Jones & Bartlett. 241–268.

63. Wang, Y., Silvestri, J.A. & Jahromi, L.B. (2018). Selected factors in reading comprehension for deaf and hearing adults: Phonological skills and metacognition. *Am. Ann. Deaf, 162*, 445–462.

64. Wauters, L. N., & Knoors, H. (2008). Social integration of deaf children in inclusive settings. *Journal of Deaf Studies and Deaf Education*, *13*(1), 21–36.

ГЛУВИ И НАГЛУВИ УЧЕНИЦИ ВО УЧИЛНИЦИТЕ ЗА ИНКЛУЗИВНО ОБРАЗОВАНИЕ

Јачова З., Ковачевиќ Ј., Ристовска Л., Радовановиќ В.

Универзитет „Св. Кирил и Методиј"- Скопје, Филозофски факултет-Институт за специјална едукација и рехабилитација[1], Универзитет во Белград, Србија[2,4], Градска болница „8 Септември", Одделение за оториноларингологија, Одделение за аудиологија, Скопје, Република Северана Македонија[3]

Вовед

Инклузијата е целта во образованието денес, што значи дека сите деца треба да можат да учат во исто училиште и таму да бидат достапни услуги за поддршка.

Сместувањето во училиште за глувите деца се движи од специјализирани училишта за глуви, преку специјални одделенија или училници во редовните училишта, до целосна инклузија преку програми за заедничко запишување или индивидуално сместување. Сместувањето во редовно училиште не ја елиминира потребата за услуги, кои ќе се разликуваат во зависност од возраста на детето, училишната програма, јазикот и други фактори специфични за детето.

***Метод:** Применет е пристап на професионален преглед и беа селектирани и анализирани релевантни статии од списанија за да се разберат ефектите од инклузијата како и факторите за програми за успешно инклузивно образование на глувите и наглувите ученици.*

***Резултати:** Истражувањето покажа дека глувите ученици генерално заостануваат зад врсниците кои слушаат во однос на академските достигнувања. Наодите покажуваат дека глувите и децата кои слушаат се разликуваат во домените на визуелно-просторното процесирање и меморијата. Прегледот на литературата покажа дека постојат неколку услови како што се квалификациите на наставниците, пристапот до фонологијата, пристапот до општата наставна програма и достапноста на поддршка и услуги што може да бидат од клучно значење за развивање на јазикот и вештините за описменување на глувите и наглувите ученици во училниците за инклузивно образование.*

***Заклучок:** Позитивните ефекти на инклузивното образование се зголемуваат кога глувите и наглувите ученици добиваат поддршка и услуги. Поддршката за учење вклучува универзален дизајн за учење, бихевиорални интервенции, адаптации и модификации. Добрата и редовна евалуација е предуслов за развојот на учениците со оштетен слух, со цел да се подобри развојот на инклузивното образование за учениците со оштетен слух. Потребно е да се обезбеди соодветна форма на образование и флексибилна евалуација на академските достигнувања за развој на вештини за говорна комуникација кај учениците со оштетен слух.*

***Клучни зборови:** глуви и наглуви ученици; училници за инклузивно образование; оштетување на слухот и поддршка.*