



Students with Hearing Loss in the Inclusion Environment and Special Education Support Service

Gamze Ak¹, Elif Akay²

Anadolu University, Turkey¹
Anadolu University, Turkey²

Abstract

Inclusion practices for students with hearing loss have gained momentum both in Turkey and in the international literature in recent years. With the development of technology from the recent past to the present, children with hearing loss can have early diagnosis and early device opportunities. Improvements are made in the oral language of students with hearing impairment, thanks to factors such as increased access to high-quality hearing technology such as hearing aids, cochlear implants and FM systems, early diagnosis, early education interventions, and various teaching adaptations. Thus, it is seen that students with hearing loss continue their education through mainstreaming by being placed in general education classes with their peers. However, hearing aid technologies such as cochlear implant applications or hearing aids alone do not guarantee students with hearing loss to be successful in mainstreaming. At this point, support special education services have an important place in the support and success of inclusive students with hearing loss. In this study, researches in the international and national literature that provide special education support services to students with hearing loss in the inclusive environment were examined and it was aimed to emphasize the importance of support education services. For this purpose, the studies in the literature were determined and the results of the research were compiled.

Keywords: *Students with hearing loss, special education support services*

1. Introduction

As a result of the developments in hearing aids and cochlear implant applications in recent years, children with hearing loss show similar performance to their normal hearing peers in oral language skills [12]. However, hearing aid technologies such as cochlear implant applications or hearing aids alone do not guarantee the development of academic skills of students with hearing loss in an inclusion/integration environment. Therefore, there is a need for instructional adaptations and special education support services that start with early education interventions and continue throughout the entire education process for the success of students with hearing loss in the inclusion environment [7] [15] [21]. In this study, it is aimed to examine the studies that provide special education support services to students with hearing loss in an inclusion environment.

2. Research Methodology

In this study, a systematic review method was used in order to reveal the results of the studies on the support special education services offered to inclusive students with hearing loss. Oxford Journals, Taylor and Francis, JSTOR, Science Direct, Tr Index databases were searched in April 2023. The keywords "special education support services", "support services", "hearing loss" and "hearing impairment" were used in different combinations in the search. Articles published in peer-reviewed journals between 2000-2023 were included in this study, since there were no applications and researches on classroom support services before 2000 in the national literature, and all types of special education support services were frequently offered in the international literature in the 23-year period. As a result of the search, 473 research articles were found. By examining the articles reached, 35 articles involving students with hearing loss were included in this study.

3. Findings

As a result of the analysis of the research data, four main themes were reached. (Table 1).

Themes
1. Types of Special Education Support Services



2. Support Special Education Services Practices
3. Benefits of Special Education Support Services
4. Problems Encountered in Special Education Support Services

Table 1. Themes

3.1. Types of Special Education Support Services

When the studies were examined, it was seen that the students with hearing loss in the inclusive environment generally received itinerant teacher service [8] [15] [13] [16] [18] [21] [29] [31] [25] [32]. It has been stated that itinerant teachers work directly with students with hearing loss [16], performing the tasks of making a general assessment of the student and adapting the classroom materials [22]. Apart from this, it is seen that students with hearing loss receive special education support services from special education teachers [20] [26] [34], teachers of children with hearing impairment [5] [33], sign language interpreters [30] [31] [33], psychologic counselors [19] and general education teachers [27]. In the studies, it is emphasized that instead of focusing on a single type of support education for students with hearing loss in an inclusive environment, it should be presented in a holistic approach where different support education services are offered [18] [26] [30] [32]. For this purpose, it is important to support students with hearing loss in and out of the classroom. It is recommended that these services be provided in cooperation with different field experts such as special education teachers, teachers for the hearing impaired, sign language interpreters, language therapists, psychologic counselors, audiologists and general education teachers, in accordance with the needs of students with hearing loss. It is stated that the support education services offered in this way will contribute to the development of language and academic skills of students with hearing loss [1] [23] [30].

3.2. Support Special Education Services Practices

When the studies were examined, it was found that language and literacy skills development practices [2] [8] [13] [32] [36] were frequently applied to inclusive students with hearing loss. Apart from this, it has been determined that one-to-one or group lessons are held outside the general education classroom [15] [18], and the pull-out model is generally applied [20] [25]. A study has been found indicating that the adaptations made in the curriculum are also an effective application for students with hearing loss [24]. In addition, it is stated that working with students with hearing loss in resource room in the inclusive environment is more productive because it provides a good listening environment [8] [26]. In particular, applications for the development of vocabulary, abstract concepts and literacy skills are recommended [1] [18].

3.3. Benefits of Special Education Support Services

When the studies are examined, it has been found that the special education support services are effective in the academic success of the students with hearing loss [19] [20] and that they benefit the development of literacy and primary reading skills [2] [1] [13] [32] [36]. In addition, it has been revealed that special education support services are effective in increasing classroom participation and social adaptation of students with hearing loss [1] [30]. In addition to the collaboration of families and experts [29], the importance of experts working in collaboration with each other is emphasized [26]. In addition, the development of professional competencies of experts [30] and the use of information technologies in the support education service provide rich audio-visual support, providing students with hearing loss important learning opportunities [21].

3.4. Problems Encountered in Special Education Support Services

In some of the studies, it has been emphasized that there are various problems in the implementation of special education support services. In one study, it was found that itinerant teachers had difficulties in planning their pre-support training lessons and assessments [22]. In another study, it was stated that general education teachers had difficulties in planning support education because they did not implement the subjects as in the annual plan [4]. In some studies, the duration of special education support services was found to be short and inadequate [4] [3] [21]. However, in a study, it was stated that 40 minutes of support education service every day is sufficient [1]. Another problem encountered is that the physical structure of the institution providing special education support services and the number of the students in the classroom are not suitable for support education [1] [4] [11] [24] [28]. In some studies, it was found that the general education teacher could not provide one-to-one support to the student with hearing loss [28] and they could not adapt to the needs of the student [22] or they



made non-systematic support education practices [3] [7]. Apart from these, it was determined that general education teachers did not receive adequate training on special education support services and were inadequate in applying the IEP program [10]. Except for general education teachers, it was found that support education teachers did not conduct any study for students with hearing loss [34] and were inadequate in using support services such as FM systems [31]. In addition to these, it has been stated in studies that there are no or insufficient expert support services such as itinerant teacher [25], sign language teacher [18], special education teacher [24], language and speech specialist [7], audiologist [21]. Besides these, it is seen that there is an abundance of researches that conclude that the cooperation between the stakeholders in special education support services is insufficient [4] [5] [13] [20] [34]. It is known that these problems negatively affect both the supportive education process and the academic and social development of students with hearing loss in the inclusive environment. [1] [33]. It is important to contribute to the professional development of experts who provide support special education services to students with hearing loss in order to solve the problems, and therefore, it is recommended to provide training for the factors that contribute to the support education process such as IEP preparation, adaptation, and use of information technologies [6] [28]. In addition, it is emphasized that improvements should be made in the physical structures of inclusive environments for students with hearing loss with the support of the Ministry of Education [11] [26]. Finally, it is suggested that support education services should be handled with a holistic perspective for qualified practices [21] [30].

4. Conclusions

19 of the 35 studies examined in this study are related to the problems encountered in special education support services. It has been seen that these problems have been put forward to increase the quality of special education support services. The intervention-based practices for solving these problems encountered in future research can contribute to the special education support services process.

References

- [1] Akay, E. (2023). Teachers' opinions on the attending of the hearing-impaired students in the inclusion environment and the resource room services. *Journal of Qualitative Research in Education*, 33, 112-131. doi: 10.14689/enad.33.882
- [2] Akay, E. (2015). Investigating affordances of resource room activities for mainstreamed hearing impaired primary school students' Turkish language classes. *Journal of Education & Special Education Technology*, 1(1), 1-14. DOI: 10.18844/jeset.v1i1
- [3] Akay, E. ve Gürgür, H. (2018). Professional development of a teacher providing special education support service: Mentoring. *Journal of Qualitative Research in Education*, 6(1), 9-36. DOI: 10.14689/issn.2148-2624.1.6c1s1m.
- [4] Akay, E., Uzuner, Y., & Girgin, Ü. (2014). The problems and solution efforts of the resource room application designed for the mainstreamed primary school aged hearing impaired students. *Journal of Qualitative Research in Education*, 2(2), 42-66.
- [5] Akmeşe, P. P., & Kayhan, N. (2016). Opinions of the teachers about the communication modes/approaches used in the education period of the hearing impaired children educated at pre-school level. *Ege Journal of Education*, 17(2), 296-332. <https://doi.org/10.12984/egeefd.280747>
- [6] Aktürel, İ. E., & Gürgür, H. (2020). How is physics course conducted at vocational high schools' inclusion classes? *Ankara University Faculty of Educational Sciences Journal of Special Education*, 21(4), 687-709. doi: 10.21565/ozelegitimdergisi.547702
- [7] Alasim, K. (2019). Inclusion programmes for students who are deaf and hard of hearing in Saudi Arabia: Issues and recommendations. *International Journal of Disability, Development and Education*, 67(6), 571-591. <https://doi.org/10.1080/1034912X.2019.1628184>
- [8] Antia, S. D., & Rivera, M. C. (2016). Instruction and service time decisions: Itinerant services to deaf and hard-of-hearing students. *Journal of Deaf Studies and Deaf Education*, 21(3), 293-302. <https://doi.org/10.1093/deafed/enw032>



- [9] 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. *The Journal of Deaf Studies and Deaf Education*, 14(3), 293-311. <https://doi.org/10.1093/deafed/enp009>
- [10] Aslan, S.T. & Çıkkılı, Y. (2021). Evaluation of support education services provided for students with hearing impairment according to the opinions of teachers. *Journal of Social and Humanities Sciences Research*, 8(71), 1535-1548. <http://dx.doi.org/10.26450/jshsr.2505>
- [11] Atmaca, U. ve Uzuner, Y. (2020). The opinions of teachers working in special education and rehabilitation centres about the support services for individuals with hearing loss: A phenomenologic study. *Journal of Qualitative Research in Education*, 8(4), 1214-1248. doi: 10.14689/issn.2148-2624.8c.4s.7m.
- [12] Borders, C. M., Barnett, D., & Bauer, A. M. (2010). How are they really doing? Observation of inclusionary classroom participation for children with mild-to-moderate deafness. *Journal of Deaf Studies and Deaf Education*, 15(4), 348-357. DOI: 10.1093/deafed/enq028
- [13] Checker, L. J., Remine, M. D., & Brown, P. M. (2009). Deaf and hearing impaired children in regional and rural areas: Parent views on educational services. *Deafness & Education International*, 11(1), 21-38. <https://doi.org/10.1002/dei.251>
- [14] Deliveli, K. (2020). A qualitative research about the evaluation of the educational services offered to hearing-impaired students. *SDU International Journal of Educational Studies*, 7(1), 26-44. DOI: 10.33710/sduijes.609666
- [15] Eriks-Brophy, A., & Whittingham, J. (2013). Teachers' perceptions of the inclusion of children with hearing loss in general education settings. *American annals of the deaf*, 158(1), 63-97. DOI: 10.1353/aad.2013.0009
- [16] Foster, S., & Cue, K. (2008). Roles and responsibilities of itinerant specialist teachers of deaf and hard of hearing students. *American Annals of the Deaf*, 153(5), 435-449. <https://www.jstor.org/stable/26234551>
- [17] Gürgür, H., Büyükköse, D., & Kol, Ç. (2016). Support services for students with hearing loss provided by special education and rehabilitation centres: Opinions of the teachers. *Elementary Education Online*, 15(4), 1235-1253. <https://doi.org/10.17051/ie.2016.32423>
- [18] Hadjikakou, K., Petridou, L., & Stylianou, C. (2005). Evaluation of the support services provided to deaf children attending secondary general schools in Cyprus. *Journal of Deaf Studies and Deaf Education*, 10(2), 203-211. <https://doi.org/10.1093/deafed/eni020>
- [19] Hadjikakou, K., Petridou, L., & Stylianou, C. (2008). The academic and social inclusion of oral deaf and hard-of-hearing children in Cyprus secondary general education: investigating the perspectives of the stakeholders. *European Journal of special needs education*, 23(1), 17-29. <https://doi.org/10.1080/08856250701791211>
- [20] Jarvis, J. (2002). Exclusion by inclusion? Issues for deaf pupils and their mainstream teachers. *Education 3-13*, 30(2), 47-51. <https://doi.org/10.1080/03004270285200231>
- [21] Khalid, L., Asghar, M. Z., Masri, S., & Akhter, M. (2021). Parents' perspectives on challenges faced by hearing-impaired in inclusive primary schools. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 18(08), 963-984.
- [22] Luckner, J. L., & Ayantoye, C. (2013). Itinerant teachers of students who are deaf or hard of hearing: Practices and preparation. *Journal of deaf studies and deaf education*, 18(3), 409-423. <https://doi.org/10.1093/deafed/ent015>
- [23] Madhumitha, R., & Prathiba, D. G. (2021). Mainstream school performance of children with hearing impairment using cochlear implant: a preliminary report from a teacher's perspective. *Language in India*, 21 (2), 110-119. <http://languageinindia.com/feb2021/dawsoncochlearimplanthearingfinal.pdf>
- [24] Mapepa, P., & Magano, M. D. (2018). Support to address barriers to learning for learners who are deaf. *African Journal of Disability*, 7(1), 1-8. <https://hdl.handle.net/10520/EJC-11ef0a4074>
- [25] Miller, K. J. (2015). Thinking anew: Trends in the education of students who are deaf or hard of hearing and their implications. *Perspectives on Hearing and Hearing Disorders in Childhood*, 25(1), 37-44. <https://doi.org/10.1044/hhdc25.1.37>
- [26] Miller, K. J. (2022). Perspectives on inclusion of students who are deaf or hard-of-hearing in Armenia. *Education 3-13*, 1-22. <https://doi.org/10.1080/03004279.2022.2112734>



- [27] Musengi, M., & Chireshe, R. (2012). Inclusion of deaf students in mainstream rural primary schools in Zimbabwe: Challenges and opportunities. *Studies of Tribes and Tribals*, 10(2), 107-116. <https://doi.org/10.1080/0972639X.2012.11886648>
- [28] Nīmante, D., & Ekša, L. (2020). Inclusion of a child with a hearing impairment in a mainstream school, single case study. *Human, Technologies and Quality of Education*, 62-77. <https://doi.org/10.22364/htqe.2020.05>
- [29] Pedersen, H. F., Askvig, B. A., Spooner, D., & Halvorson, M. (2022). Parent perceptions of itinerant services for students who are deaf or hard of hearing. *Deafness & Education International*, 1-19. <https://doi.org/10.1080/14643154.2022.2160009>
- [30] Prinzi, L. M. (2023). Deaf Student–Interpreter Relationships and Feedback Practices in K-12 Mainstream Deaf Education. *The Journal of Deaf Studies and Deaf Education*, 28(1), 68-83. <https://doi.org/10.1093/deafed/enac026>
- [31] Punch, R., & Hyde, M. (2010). Children with cochlear implants in Australia: Educational settings, supports, and outcomes. *Journal of deaf studies and deaf education*, 15(4), 405-421. <https://doi.org/10.1093/deafed/enq019>
- [32] Reed, S. (2003). Beliefs and practices of itinerant teachers of deaf and hard of hearing children concerning literacy development. *American Annals of the Deaf*, 148(4), 333-343. <https://www.jstor.org/stable/26234623>
- [33] Reed, S., Antia, S. D., & Kreimeyer, K. H. (2008). Academic status of deaf and hard-of-hearing students in public schools: Student, home, and service facilitators and detractors. *Journal of Deaf Studies and Deaf Education*, 13(4), 485-502. <https://doi.org/10.1093/deafed/enn006>
- [34] Slobodzian, J. T. (2009). The devil is in the details: Issues of exclusion in an inclusive educational environment. *Ethnography and Education*, 4(2), 181-195. <https://doi.org/10.1080/17457820902972804>
- [35] Sucuoğlu, B., & Kargin, T. (2006). Inclusive practices: Approaches, methods, techniques. *İstanbul: Morpa*.
- [36] Tozak, E., Karasu, H. P. ve Girgin, Ü. (2018). Investigation of the process of supportive education designed for the reading skills of a student with hearing loss in inclusion environment. *Journal of Qualitative Research in Education*, 6(2), 161-186. DOI:10.14689/issn.2148 - 2624.1.6c2s8m
- [37] Yazçayır, G. H., & Girgin, M. C. (2019). Assessment of the opinions of the classroom teachers in developing listening skills of hearing impaired students. *Pamukkale University Journal of Education*, 45(45), 56-77. doi: 10.9779/PUJE.2018.222