Best Practices of the Regular Teachers Handling Students with Hearing Impairments

Susan Vicente D. Villarente and Sheila May Donayre*

Department of Education, University of Southeastern Philippines

ABSTRACT

Teachers serving students with hearing impairments employ specific strategies that profoundly impact their educational outcomes. By integrating these practices, they create an inclusive learning environment that accommodates the unique challenges faced by hearing-impaired students. Research shows that when implemented effectively, these specialized approaches can significantly enhance these learners' academic performance and social development. Hence, this study aimed to identify the best practices employed by regular teachers handling students with hearing impairments. A qualitative, phenomenological approach was utilized to describe these practices. Purposive sampling was employed to select 11 regular teachers from a public elementary school in the Digos City Division during the 2023-2024 school year. Data were analyzed using Creswell's Thematic Analysis. The findings revealed several best practices: strategic physical seating arrangements, peer tutoring, fostering a warm environment, collaboration with parents and special education teachers, printed and learning materials, and visual communication. Also, regular teachers emphasized the importance of being patient and considerate, integrating life skills, increasing teacher training in sign language, and providing appropriate technology. These results imply that regular teachers effectively employ practices that enhance hearing-impaired learners' performance and educational experience, helping them succeed and complete their elementary education. Therefore, schools should implement a comprehensive approach that includes specialized teacher training, inclusive curriculum design, and strong collaboration among administrators, teachers, specialists, and parents to create supportive learning environments for hearing-impaired students. Regular assessment of these practices alongside continued research will help identify gaps and develop evidence-based interventions.

Key Words: special education, learners with hearing impairment, best practices, phenomenology

INTRODUCTION

The integration of deaf children into mainstream classrooms has garnered significant interest worldwide. Regular teachers face challenges in supporting these learners to complete elementary school due to the shift toward inclusive education. Teachers must continually adapt and refine their teaching practices and strategies to encourage children with hearing impairments to regularly attend school. Best practices include using visual aids, implementing sign language interpreters, providing written instructions, and employing assistive listening devices. Despite the challenges, regular teachers use these methods to ensure that young pupils with hearing impairments receive a high-quality education. Bajenio et al. (2023) argued that teaching students with hearing impairments presents challenges and opportunities in today's inclusive education system. As schools fully implement inclusion, teachers must develop versatility to serve both typical learners and those with disabilities effectively.

Developments in the science and practice of pedagogy are transforming the education and care of children with special needs, particularly those who are deaf, by motivating them to attend school consistently. As a result, regular teachers employ proven, effective teaching strategies to support students with hearing impairments (Cole & Flexer, 2019). While learner motivation is crucial for successful learning, a research gap exists in understanding the most effective techniques for teaching children with hearing impairments. However, further research is needed to identify specific methods that consistently yield favorable outcomes for deaf students. This

study addresses this gap by exploring and validating best practices in teaching strategies for children with hearing impairments. Despite improvements, deaf students still lag behind their hearing peers in educational attainment. Laws and improved institutional accessibility have led to increased enrollment of deaf children in educational programs, yet significant disparities remain (Mousley & Chaudoir, 2018).

In the United States, teachers of students with hearing impairments in regular classrooms find it difficult to teach these students pronunciation and ensure that instructions are understood. Adjusting the physical environment to lower signal-to-noise ratios is one of the most effective ways to assist deaf and hard-of-hearing pupils (Marschark et al., 2017). Between 2012 and 2022, students with hearing impairments receiving special education in the United States attended school for extended periods, with most completing elementary school and exhibiting dropout rates comparable to the general population.

In Australia, regular teachers employ assistive listening devices, such as induction loops, and provide written materials to supplement lectures and tutorials to motivate students with hearing impairments to attend classes regularly (Allam & Martin, 2021). Over 85% of deaf youngsters in Australia receive their education through mainstream inclusive educational programs. Since hearing loss is an invisible condition, other factors must be considered when analyzing student progress (McFarland et al., 2018).

In Digos City Division, Philippines, several regular teachers working with students with hearing impairments revealed that some students lack motivation to attend classes. Teachers use various techniques to inspire students with hearing impairments to attend class regularly, despite their lack of formal training in sign language, by adapting lessons and assessment tasks for these learners (B. Obenza, personal communication, May 20, 2023). Since the SPED center opened, 45 hearing-impaired students in regular classes have completed elementary education—44 graduates in 2022 compared to just one in 2005. Twelve hearing-impaired students are enrolled in regular classes across all grade levels for the 2023–2024 academic year. This data indicates a rising number of hearing-impaired learners enrolled in regular classes.

These studies highlight why deaf children may be demotivated to attend school regularly and the efforts of regular teachers to employ best practices in inclusive education. The necessity of conducting this study arises from discovering additional best practices used by regular teachers to help hearing-impaired learners graduate from elementary school and to gather their insights about this phenomenon. Limited studies have been conducted in the local setting. Thus, this prompted the researchers to undertake this study and investigate the best practices of regular teachers in teaching learners with hearing impairment (HI) and their insights or recommendations for other teachers teaching learners with hearing impairment (HI).

METHODS

This study utilized the phenomenological approach to explore the best practices employed by regular teachers in handling learners with hearing impairment. Phenomenological research is a qualitative research approach that focuses on exploring and understanding individuals' lived experiences and the meanings they attach to those experiences (Moustakas, 1994). The phenomenological approach was used to ascertain the participants' lived experiences. Phenomenological research is a type of qualitative inquiry that prioritizes and maintains objectivity around the collective experiences of a particular group of people—in this case, the regular teachers working with students with hearing impairments.

The primary data sources for this research were the 11 regular teachers of students with hearing impairments who participated in Key Informant Interviews (KII) and Focus Group Discussions (FGD). The researcher obtained in-depth knowledge about the issue and was able to unearth the true and profound meanings of the participants' experiences through these interviews. The reviewed literature and studies further elucidate the background of the issue and the development of this case study. The secondary data sources were the anecdotal records of the learners with hearing impairments. The study participants included five regular teachers in the Key Informant Interviews and six regular teachers in the Focus Group Discussion. Most teachers manage one to two hearing-impaired (HI) students in regular classrooms. They have been working with HI students for two to three years. Moreover, purposive sampling was used in this study to choose participants. Purposive or judgment sampling involves selecting informants based on their attributes. No predetermined participant count or set of

underlying theories is required for this non-random technique. According to Creswell and Creswell (2017), a phenomenological study involving five to twenty-five participants could produce robust and dependable results.

The researchers used a questionnaire designed as an interview guide during the interview. This guide included primary questions and follow-up inquiries to elicit relevant answers for the study. Each primary question was accompanied by probing questions to ensure comprehensive responses. To ensure the guide's effectiveness, it underwent content validation by experts in the field. These professionals provided suggestions and recommendations, particularly concerning the probing questions. The researcher revised the instrument accordingly, incorporating the feedback to enhance its quality and relevance. Furthermore, the researchers utilized Creswell's Thematic Analysis for their data analysis. Creswell (2013) outlined six key steps in the qualitative data analysis process. First, the researcher organized and prepared the data by transcribing interviews. Next, the researcher engaged in a comprehensive reading of all the data to understand and reflect on its overall significance. Following this, the researcher systematically organized the collected data by categorizing the text and labeling these categories with appropriate terms. In the fourth step, a coding process was applied to describe individuals, settings, or categories/themes for analysis. This step was vital as it enabled the creation of detailed descriptions relevant to various research projects. The penultimate step involved determining how the qualitative narrative would present the identified themes and descriptions. Finally, the last step focused on interpreting the findings or results, requiring the researcher to reflect on the insights gained during the analysis.

Further, this study applied ethical considerations which include protecting participants' rights, obtaining informed consent, and the institutional review process. In this study, the researcher provided adequate information on these aspects. Protection of participants' rights includes anonymity, confidentiality, and informed consent. Ethical consideration in qualitative research involves ensuring human subjects' protection. As a researcher, she was responsible for protecting the participants' privacy in the study.

RESULTS AND DISCUSSION

Best practices of regular teachers in teaching learners with hearing impairment

A thorough one-on-one interview was conducted with five regular teachers of HI learners, and a focus group discussion was conducted to answer the research questions. The participants were invited to share their best practices and insights in teaching HI learners in the mainstream classroom. Some probing questions led to the best practices and insights in handling HI learners in the mainstream classroom. Specifically, participants were asked to share their stories about handling HI learners, including how they managed these students, the challenges they encountered, practices that engaged HI learners in classroom discussions and activities, adaptations they made, and technologies they adopted to enhance the learning experiences of HI learners. Five key themes emerged from these discussions as best practices in teaching HI learners. These are (a) employing physical and seating arrangements, (b) implementing peer tutoring and fostering a warm environment, (c) collaborating with parents and special education (SPEd) teachers, (d) using printed materials, and (e) utilizing visual communication and hand gestures. The data presented in Table 1 provides critical insights into the best practices for teaching HI learners.

Employing physical/seating arrangement

The first theme that emerged as one of the best practices of regular teachers in handling learners with hearing impairment is employing physical/seating arrangements. The everyday activities conducted by regular teachers to teach learners with hearing impairment employ physical/seating arrangements. This implies that regular teachers of HI learners are assigned seats for these learners. Moreover, teachers believe that this strategy is effective in helping learners with special needs complete the tasks assigned to them.

"Sometimes, in the physical setup of the classroom, adjustments need to be made, like ensuring the student is placed at the front so they can see immediately." (P1)

"Most of the time, the physical setting always allows you to see them immediately." (P2)

"I asked the student to sit in front." (P5)

"She should be seated in front to avoid distractions." (P1)

"I'll let her sit wherever she's comfortable so she'll be at ease." (P3)

The result of the study supports the study of Frey (2018), who stated that the instructor could make the deaf or hearing-impaired student feel at ease, successful, and productive in the general education classroom by using a few modifications. In this sense, regular teachers of students with hearing impairments make some modifications, such as allowing the students to sit in front or where they are comfortable. Moreover, the results parallel those of Goodman et al. (2017), who stressed that regular teachers make modifications such as fostering a sense of community in the classroom. This can be achieved by providing deaf or hard-of-hearing students with a comfortable and supportive area. Garberoglio (2017) suggested that teachers must establish a welcoming environment, especially if students feel uneasy about their disability. In such an atmosphere, students feel safe and secure, making them more at ease and better able to focus on their studies.

These findings agree with Bronfenbrenner's Bio-Ecological Model, which asserts that the environment significantly impacts the academic performance of hearing-impaired learners. A positive learning outcome can be achieved by addressing the unique needs of these learners through accommodations and modifications. Moreover, Vygotsky's Zone of Proximal Development (ZPD) concept offers valuable insights for tailoring accommodations and modifications for learners with hearing impairments. According to Vygotsky, learning and growth are influenced by the learning context. Regular teachers must mentor hearing-impaired learners as they work through assignments and acquire new concepts, bridging the gap between what they can do independently and what they can achieve with support.

Employing peer tutoring and fostering a warm environment

The second emerging theme as the best practice of regular teachers in handling HI learners is peer tutoring and fostering a warm environment. A peer tutor is assigned to a student with a hearing impairment. This way, the HI learner would be guided on the classroom activities and tasks. The result supports the study of Okilwa and Shelby (2015), who revealed that peer tutoring has a positive academic effect on students with disabilities in Grades 6 through 12, regardless of disability type. Marchand-Martella and Martella (2020) also found that peer tutoring has been established to increase opportunities to respond and enhance activity comprehension. Fuchs, Fuchs, and Burish (2018) added that peer tutoring also minimizes problem behaviors and improves the on-task behavior, academic performance, and social interactions of children with disabilities in regular classrooms.

"The students are oriented to their [HI] disability so that they understand and are open-minded to befriend HI learners." (P1)

"I also make them participate in group activities, sometimes they are given tasks so that they feel needed and welcome in the classroom so that they can be sociable and not shy." (P5)

"But there are also favors to be given to them, such as my leniency, then, it makes it easier for me as a teacher because they have a classmate to tutor them. Encourage their participation." (P2)

"Sometimes in the small group activity, they also have a partner or peer to teach them" (P3)

"I will give instruction to the regular students then they will help him" (P4)

"Her classmates are very supportive because they help her in the lesson even though they do not know how to use sign language." (P3)

"Sometimes I let my regular learners monitor and assist my HI learners. Like if there are worksheets, their classmates will be the ones to explain the lesson." (P5)

Peer tutoring and creating a welcoming environment are consistent with Bronfenbrenner's Bio-ecological Model since they improve direct social interactions inside the microsystem, such as between students and teachers. These tactics foster supportive relationships between diverse microsystems, such as family and school, to build a positive mesosystem. They also reflect and impact the exosystem by supporting inclusive educational practices that can inform more extensive educational policy. On a social level, these techniques are consistent with the principles of inclusivity and cooperation. As part of the chronosystem, consistent routines contribute to long-term favorable outcomes for hearing-impaired pupils, such as increased academic and social development.

The result supports the Zone of Proximal Development (ZPD) developed by Russian psychologist Lev Vygotsky. Applying the ZPD in peer tutoring involves thoughtful pairing of students, designing activities within the ZPD, providing scaffolded support, gradually releasing responsibility, encouraging reflection, and fostering a collaborative learning environment. This approach can optimize the benefits of peer tutoring and enhance the overall learning experience for all students involved.

Collaboration with parents and SPEd teachers

The third theme that emerged is collaboration with SPEd teachers and parents. The result implies that the regular teacher ensured that the learners with hearing impairment were serious and diligent in learning and attended classes to avoid missing them. They also coordinated with the SPEd coordinator and teachers on the progress of the academic performance of the HI learners. This result corroborates the study of Marschark and Spencer (2014), which states that good communication and teamwork between parents and teachers are important to the academic success of learners with hearing impairment. The result of the study means that parents' and teachers' involvement with the child's schooling helps his/her academic success.

"I also coordinated with their guardians or parents so that they could be helped with their school tasks at home. The lessons will be reinforced at home. They are also monitored by their SPEd teacher and Maam Solis regarding their classroom performance and attendance." (P2)

"I motivate them to go to school so that their attendance is regular, and I also talk to the parents because I tell them that their children must attend regularly so they can also experience going up on stage during the closing ceremony." (P4)

"We're discussing with his SPEd teacher. The SPEd teacher is monitoring the student's performance here. They are very good." (P4)

"Their attendance is generally okay. However, there are times when they are absent." (P1)

"After giving all the instructions, I immediately asked them if they understood. Sometimes, I also channel it through their adviser and the Special Education (SPEd) teacher for additional assistance." (P6)

This notion aligns with the findings of Adams et al. (2018), which suggest that teachers and parents can collaborate as a creative partnership to achieve inclusion within a regular classroom. Consequently, it can offer valuable insights into special educational needs, strengthen the willingness to communicate about special educational needs, establish roles in implementing special educational needs, and set clear expectations for each other's responsibilities in implementing special educational needs. The study further emphasizes the practical steps necessary to achieve this goal. This collaboration enhances the mesosystem by fostering strong connections between home and school, which research has shown to be critical for effective special education. It is also aligned with Vygotsky's Zone of Proximal Development (ZPD) by providing the necessary support and guidance that enables children to achieve skills beyond their current capabilities. This partnership creates a scaffolded learning environment where adults help bridge the gap between what the children can do independently and what they can achieve with assistance. Furthermore, research shows that such collaboration enhances the child's learning and development by leveraging the combined expertise of parents and teachers to tailor educational strategies to the child's unique needs.

Using printed teaching and learning materials

The fourth theme that emerged as a best practice among regular educators in supporting students with hearing impairments (HI) is using printed teaching and learning materials. These materials encompass all the physical resources an instructor employs to deliver instruction and facilitate students' achievement of educational objectives. Such resources can enhance a student's understanding of the learning experience by making it more engaging, interactive, and tangible. They can take various forms, including images, real-life objects, models, specimens, and printed materials like textbooks, workbooks, and digital resources. The right materials can significantly impact students' participation and comprehension during lessons. While many of these materials are suitable for use with students with and without special educational needs, some may require modifications to effectively address the specific needs of students with disabilities, thereby improving their learning outcomes.

"It is more on written works. I always provide them with printed materials to answer. I also use pictures during discussions." (P1)

"I usually use pictures or visuals in my class because she can understand easily if there are pictures." (P3)

"I give them modules and worksheets so that they have materials to bring home and their parents can assist them, sometimes they also go to their SPEd teachers if they experience difficulty. They ask for help there. It is nice that the lessons are visuals." (P1)

"Worksheets…I make sure that there are pictures so that it will be easy for them to answer. They like pictures." (P3)

"I usually give her a worksheet for her to answer at home. Even if she's absent, she still understands the lesson." (P4)

"Printed worksheets are really good for them because they can read and understand the lesson. It is really good if they have a book and worksheet so that they can study in advance with parents." (P6)

The findings align with the study conducted by Krasavina et al. (2019), which suggests that when designing training materials for deaf and hearing-impaired students, it is advisable to include tasks that demand concentration and attention, such as instructions and search problems in printed format. Additionally, Krasavina et al. (2022) emphasized the importance of consolidating new information in various ways, beginning with providing a printed lecture plan that highlights fundamental concepts and culminating in reinforcing logical connections with previously acquired information. The Bioecological Model of Bronfenbrenner, encompassing biological and environmental influences on development, offers valuable insights into the applicability of printed materials for learners with hearing impairment. While printed materials can be beneficial, their effectiveness requires a nuanced understanding of the interplay between individual factors and the surrounding environment.

Using printed materials aligns with Vygotsky's Zone of Proximal Development (ZPD) by serving as tools that can scaffold a child's learning, helping them progress from what they can do independently to what they can achieve with guidance. These materials provide structured opportunities for practice and exploration, enabling children to engage with content at a level just beyond their current capabilities when supported by a knowledgeable adult or peer. Research indicates that using printed materials in guided instruction can significantly enhance learning outcomes by effectively bridging the gap within the ZPD.

Using Visual Communication

Visual communication is the fifth emerging theme and the best practice for regular teachers in handling HI learners. Most participants mentioned using picture labels and visual pictures on bulletin boards in the classroom to ensure that HI learners can also understand messages or announcements. Hand gestures are also a form of visual communication that regular teachers handling HI learners use. Picture labels enhance comprehension and provide essential information, making them valuable communication and education tools.

"I use pictures or visuals in class because she understands better when there are pictures." (P3)

"Capture their attention by writing or signaling to them. If you want to say something, signal slowly so they can understand. When asking questions, the answers should not be long. They should be just Yes or No only." (P2)

The findings align with the study of Marschark et al. (2017), which demonstrated that deaf individuals rely more on vision than audition in communication (e.g., speechreading, sign language) and information processing in general. However, this reliance on vision does not necessarily make one a visual learner, unlike individuals with a more verbal or linguistic orientation or learning style. Furthermore, considering the diversity in hearing thresholds and visual acuity, the extent to which individual deaf learners, with or without cochlear implants, will rely on visual or auditory information in various contexts will vary widely. This aspect warrants further empirical study. Additionally, Lukitasari (2024) revealed that visual communication media is crucial for comprehending lecture material that can be visually perceived, read, and studied repeatedly. Visual displays that can replace words or sentences in a single visual presentation are one way to achieve this. For instance, visualizing icons can be an effective method.

This result also supports Vygotsky's Zone of Proximal Development (ZPD) by providing scaffolding that helps learners perform tasks beyond their capabilities. These visual aids act as tools that can bridge the gap between what learners can do independently and what they can achieve with assistance, thus facilitating cognitive development. Research shows that visual communication and gestures enhance understanding and retention by making abstract concepts more concrete and accessible, aligning with Vygotsky's emphasis on the social context of learning.

Insights of regular teachers in handling learners with hearing impairment

In the interview conducted with the participants, the researcher gathered several information and thoughts from their sharing. Probing questions were asked to discover the best practices of the regular teachers in handling HI learners. Specifically, they were asked for the following: Four themes emerged as their best practices in teaching HI learners: patience and consideration, provision of technological materials, integration of social and vocational skills, and more teacher training in Sign Language. The data presented in Table 2 provides critical perception into the insights of regular teachers in handling learners with HI.

Being patient and considerate

The first theme that emerged as insights of the regular teachers handling learners with hearing impairment is to have more patience. Teaching this kind of learner is not easy. It needs enough patience to accommodate these students in the classroom and to modify classroom strategies for them to cope with the lessons. Evidence from the study revealed that the mainstream classroom curriculum is designed for children without hearing impairments. Most teachers admitted that they taught as if they were teaching children who were physically and mentally the same.

"There were times when she was behind the lesson. I just let her be. If she cannot do it on time, I will let her bring the task home and submit it the next day." (P2)

"Patience as a teacher. We should love them all. I will be happy if they can still remember me as their adviser." (P3)

"Give considerations when accomplishing their work and deepen the instruction." (P1)

"You need to have a lot of patience. Teachers should be open-minded and not easily get angry. Patience is crucial with children and with yourself as a teacher, because if we put ourselves in a situation like having a family similar to that, it becomes very challenging." (P3)

"We need to be patient so they can be given equal rights as regular students. And what we go through should be done with Tender Loving Care (TLC). And it should be done with compassion." (P6)

Musyoka et al. (2016) highlighted the importance of understanding and learning with deaf students. They also emphasized the need to negotiate support from students' parents and the school. Additionally, the study underscored the need to address conflicting roles between teachers' training and professional expectations. The teachers reported that valuing their students and demonstrating patience with them was a sustaining and nourishing force in their professional journey. Moreover, Meriç (2023) supported that, as in most professions requiring intense communication with people, it is essential to be patient in teaching, especially when handling learners with disabilities. Teachers in this setting may face difficult situations with their pupils, coworkers, school administration, and parents. Patience and tolerance are required when dealing with these difficult situations. Because education is a long-term work, the desired outcomes are seen over time. As a result, success and the acquisition of required professional products take time. To be successful, instructors must be patient and keep this awareness while practicing their vocation.

The Zone of Proximal Development can be applied to the result since learners with Hearing Impairment are involved in a patient and individualized approach to teaching. Recognizing the specific needs of each student, providing appropriate support, and fostering a positive learning environment contribute to the practical application of the ZPD in handling learners with HI. Moreover, Bronfenbrenner's Bioecological Systems Theory for learners with Hearing Impairment involves recognizing and addressing the interconnected systems and contexts that influence the individual. By being patient and considerate in understanding the microsystem, fostering collaboration in the mesosystem, navigating community resources in the exosystem, respecting cultural influences in the macrosystem, and adapting to changes in the chronosystem, educators can provide effective and comprehensive support for learners with HI.

Integration of Life Skills

The second emerging theme in the insights of the regular teachers in handling HI learners is the need to include social and vocational skills in the lesson. Social skills are behaviors that allow a child to interact with others successfully (Gresham & Elliot, 2014). Social skills are actions that help people interact with others. The interactions may be with teachers, classmates, and other school staff. Later in life, the interactions may be with supervisors, coworkers, friends, and others.

"When going to school, I always think of what is the best activity for them. It is needed to teach them life skills so that they can use them when they become adults." (P2)

"I realized that they can mingle with others. That is why it is needed to teach them life skills." (P3)

"Indeed, some schools even take their Hearing Impaired (HI) students to malls or grocery stores to teach them practical skills like how to use a punch card or how to pay at the cashier. They focus more on real-life, hands-on experiences." (P2)

"Yes, that's correct. Teaching vocational skills is aimed at making them independent, even with a disability, so they can function independently. This way, they won't become a burden to their families." (P5)

The result supports the study of Badza and Chakuchichi (2015), who stated that in the mainstream classroom, HI learners should be taught life skills. Education equips students with the necessary skills to navigate the social world. However, like other forms of disability, hearing impairment poses limitations in acquiring social skills, daily living skills, peer interaction, self-concept, grooming, and other essential abilities. Learners with hearing impairment learn appropriate social behaviors only when deliberately sequenced into the curriculum since most social skills and behaviors are transmitted through communication with other people (Northern & Downs, 2015). Teaching these HI learners assists them in behaving appropriately according to the norms of society in all standard social settings (Warnock, 2016). According to Butler (2018), vocational skills should be taught to HI learners to make the education of HI learners holistic. Teaching them vocational skills enables them to function independently as adults by assuming responsibility for their conduct. These vocational skills also help them obtain and keep employment.

In the ZPD framework, educators can equip HI learners with social and vocational skills to lead fulfilling and independent lives. Teaching social and vocational skills to hearing-impaired learners involves recognizing individual abilities, providing scaffolding support, creating real-life scenarios, promoting peer collaboration, and continually assessing and adjusting instructional strategies to meet the unique needs of each learner.

More teacher training in sign language

During the in-depth interview, it was highlighted that regular teachers should receive training in sign language. Sign language is a visual language that communicates through physical movements rather than spoken words. It relies on visible cues from the hands, eyes, facial expressions, and movements. While sign language is primarily used by individuals with hearing impairments, it is also utilized by many hearing people.. The In-depth interview and FGD results support the study of Hardman et al. (2015), who stated that many regular teachers of learners with hearing impairment lack the necessary skills and expertise in Sign Language. These teachers have difficulty communicating with the HI learners using the standard language.

"More on training in Sign Language so that we can also communicate. More strategies so that we will be effective in teaching them." (P4)

"All teachers should be familiar with sign language to teach effectively in the classroom. Not all can understand. It is better to conduct training on sign language." (P5)

"Yes, indeed. There is a need for more training and increased patience, especially in sign language." (P1)

"Self-effort or self-training is also important because many tutorials are available on YouTube, which can make learning more accessible." (P3)

Regular teachers, as revealed by Sacks (2021), were the least prepared for inclusive education of children with disabilities. They lacked training in understanding individual differences and specific instructional processes tailored for special needs students. Consequently, the roles and responsibilities of regular education teachers remained unclear, leaving teachers and their regular students ill-equipped to handle the inclusion of children with disabilities. Furthermore, Agbenyega and Deku (2021) emphasized the crucial role of teachers' knowledge and skills in the success of inclusive education. They highlighted that children with special needs often face challenges in regular classrooms due to teachers' lack of proficiency in sign language, which hinders their ability to effectively teach and engage these students. These findings underscore the urgent need to assess and address the competencies required of teachers to meet the diverse needs of children in inclusive education settings. In application, the ZPD framework can empower educators to effectively support HI learners in mainstream classrooms and create a more inclusive and accessible learning environment for all by learning sign language. The ZPD is dynamic and evolves throughout the learning process. It is important to provide ongoing support and opportunities for professional development to ensure teachers continue to improve their sign language skills.

Provision of Technology

The fourth theme that emerged as insights of the regular teachers in handling learners with hearing impairment is the need to provide and use technology to supplement the discussion. The result supports the study of Gorder (2018), which states that the most important factor in integrating ICT effectively in the classroom is the teacher's ability and efficiency to organize technology-embedded learning activities to meet the learner's needs. Moreover, the study of Kuzu et al. (2020) stated that the students with hearing impairment are disadvantageous compared to the other students because of their disabilities in oral and verbal communication. With the help of developing technology, this disadvantageous circumstance can be balanced by organizing interactive learning environments appropriate to the hearing-impaired students' needs, which may help them gain new learning experiences.

"I don't use *Bitaymax*, I am purely digital. Laptop, videos, and everything…because in the Grade 6 level, there are already downloaded modules." (P5)

"In my case, Ma'am, I have a TV in the classroom for my lessons. Sometimes, I use videos from YouTube to aid in the delivery of the lesson." (P5)

"I also have a TV, Ma'am. Additionally, I have a laptop that I use for lessons, particularly for PowerPoint presentations." (P2)
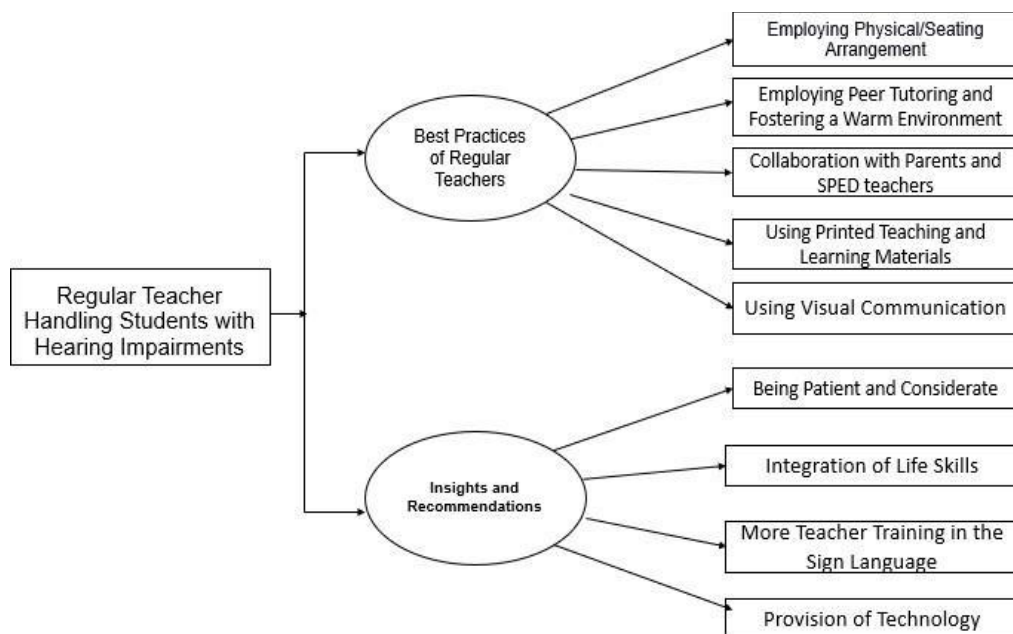

Figure 1. Regular Teachers Handling Students with Hearing Impairment

The framework for inclusive education for hearing-impaired (HI) learners integrates several critical components, synthesizing the findings from various studies and participant insights. Educators should strategically arrange physical spaces and seating to optimize visual access and facilitate communication. Fostering a warm and supportive environment is imperative. This can be achieved through empathy, understanding, and encouragement, creating a sense of belonging for all students. Peer tutoring initiatives are also crucial as they enhance academic and social growth, promoting student engagement and collaboration while addressing individual learning needs.

Collaboration between parents and teachers is essential, ensuring consistent support and understanding of the unique requirements of HI learners both at home and in school. Utilizing printed materials alongside verbal instruction enhances comprehension and engagement, while visual communication and hand gestures bridge communication gaps and reinforce understanding. These strategies collectively create a conducive learning environment accommodating diverse learning styles and needs. By integrating these elements, educators can cultivate an inclusive classroom where all students feel valued, supported, and empowered to thrive academically and socially, including those who are hearing-impaired. Furthermore, the insights shared by the participants highlight additional key strategies. Teachers must cultivate patience and consideration, understand HI students' unique challenges, and create a supportive learning environment that fosters their sense of belonging and inclusion. Integrating life skills into the curriculum empowers HI learners to confidently navigate real-world situations, enhancing their independence and overall quality of life. Providing comprehensive training in sign language equips teachers with the necessary communication skills to interact effectively with HI students, facilitating clearer understanding and meaningful engagement.

Ongoing teacher training programs focusing on sign language and inclusive teaching strategies are essential to continuously enhance educators' abilities to meet the diverse needs of HI learners. Technology, such as assistive devices and communication tools, can further facilitate communication and learning for HI students, enabling them to participate in classroom activities and access educational resources fully. By incorporating these themes into professional development initiatives and classroom practices, regular teachers can effectively support and empower HI learners to achieve academic success and thrive in inclusive educational settings.

CONCLUSION

This study has the potential to positively impact the educational experiences of students with hearing impairments. By equipping regular teachers with the knowledge and tools necessary to create an inclusive learning environment, we can ensure these students have equal access to education and opportunities for academic success. Ensuring hearing-impaired (HI) learners have a clear view of the teacher and visual aids can significantly enhance their motivation to attend school. This inclusive setup fosters a sense of belonging and accessibility, making HI learners feel more supported and valued. As a result, these positive classroom experiences can boost their motivation and enthusiasm for learning, leading to improved attendance and academic performance. Regular classroom teachers implementing targeted strategies enhance educational outcomes for students with hearing impairments. These strategies create inclusive environments where these learners can thrive academically and socially. Strategic physical arrangements, visual communication techniques, and collaborative approaches between teachers, specialists, and parents form a comprehensive support system that addresses unique learning challenges. This research shows that when regular teachers use specialized practices like peer tutoring, visual aids, sign language training, and appropriate technology, hearing-impaired students experience increased motivation, better classroom participation, and improved self-confidence. Ultimately, this prepares them for successful integration into educational settings and broader society. Therefore, schools should adopt a holistic approach that includes specialized teacher training, inclusive curriculum design, and collaborative efforts among administrators, teachers, specialists, and parents to foster supportive learning environments for hearing-impaired students. Regular assessments of these practices, coupled with ongoing research, will help identify areas for improvement and develop evidence-based interventions that align with academic standards while enhancing both educational outcomes and social integration for these learners.

REFERENCES

1. Adams, D., Harris, A., & Jones, M. S. (2018). Teacher-parent collaboration for an inclusive classroom: Success for every child. MOJES: Malaysian Online Journal of Educational Sciences, 4(3), 58-72.
2. Agbenyega, J., & Deku, P. (2011). Building new identities in teacher preparation for inclusive education in Ghana. Current Issues in Education, 14(1), 1-36. Retrieved from https://cie.asu.edu/ojs/index.php/cieatasu/article/view/554
3. Allam, F. C., & Martin, M. M. (2021). Issues and Challenges in Special Education: A Qualitative Analysis from Teacher's Perspective. Southeast Asia Early Childhood, 10(1), 37-49. https://doi.org/10.37134/saecj.vol10.1.4.2021
4. Bajenioa, D. R., Cagape, W. E., Gallegod, N. D., & Gadingane, R. F. (2020). Teaching accommodations: The experiences of teachers handling learners with hearing impairment. International Journal of Research Publications, 67(1), 87-98. DOI: 10.47119/IJRP1001261620225007
5. Butler, S.R. (2018). The exceptional child: An introduction to special education. Toronto: Harcourt Bruce Javonich Publishers.
6. Cole, E. B., & Flexer, C. (2019). Children with hearing loss: Developing listening and talking, birth to six. Plural Publishing.
7. Creswell, J. W. (2013). Qualitative Inquiry and research design choosing among five approaches (3rd Ed). Thousand Oaks, CA: Sage Publications.
8. Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications.
9. Frey, W. H. (2018). A demographic bridge to America's diverse future. UNLV University Libraries. Retrieved from: https://digitalscholarship.unlv.edu/brookings_lectures_events/126
10. Fuchs, D., Fuchs, L. S., & Burish, P. (2000). Peer-assisted learning strategies: An evidence-based practice to promote reading achievement. Learning Disabilities Research & Practice, 15(2), 85-91. https://doi.org/10.1207/SLDRP1502_4
11. Garberoglio, C. L. (2017). Secondary analyses with large-scale data in deaf education research. In S. Cawthon & C. L. Garberoglio (Eds)., Research in deaf education: Contexts, challenges, and considerations (pp. 121-140). Oxford University Press.

12. Gresham, F. M., & Elliott, S. N. (2014). Social skills assessment and training in emotional and behavioral disorders. In H. M. Walker & F. M. Gresham (Eds.), Handbook of evidence-based practices for emotional and behavioral disorders: Applications in schools (pp. 152–172). The Guilford Press.

13. Goodman, N., Morris, M., & Boston, K. (2017). Banking status and financial behaviors of adults with disabilities: Findings from the 2017 FDIC national survey of unbanked and underbanked households and focus group research. National Disability Institute.

14. Gorder, L. M. (2018). A study of teacher perceptions of instructional technology integration in the classroom. The Delta Pi Epsilon Journal, 1(2),63 – 76.

15. Hardman, M. L. Drew, G. L., and Egan, M. W. (2015). Human exceptionality in society, school, and family. Boston: Allyn and Bacon

16. Krasavina, Y., Ponomarenko, E., Zhuykova, O., & Serebryakova, Y. (2022). Designing E-Courses for Hearing Impaired Students: Practices and Challenges. ARPHA Proceedings, 5, 951-964. DOI: 10.3897/ap.5.e0951

17. Krasavina, Y., Serebryakova, Y., Ponomarenko, E., & Zhuykova, O. (2019). Based Teaching of Hearing-Impaired Students. ARPHA Proceedings, 1, 1789-1801. DOI: 10.3897/ap.1.e1316

18. Kuzu, A., Odabasi, H. F., & Girgin, M. C. (2011). Use of mobile technologies to supoort students with hearing impairment: a case from Turkey. Educational Technology Theory and Practice, 1(2), 52-82.

19. Lukitasari, E. H. (2024). The Pictogram Icon as a Learning Media for Deaf Students in Visual Communication Design. In ICEETE Conference Series (Vol. 2, No. 1, pp. 1-8).

20. Marchand-Martella, N., & Martella, R. (2002). An overview and research summary of peer-delivered corrective reading instruction. The Behavior Analyst Today, 3(2), 213. https://doi.org/10.1037/h0099966

21. Marschark, M., Paivio, A., Spencer, L., Durkin, A., Borgna, G., Convertino, C., & Machme, E. (2017). Don't assume deaf students are visual learners. Journal of Developmental and Physical Disabilities, 29, 153-171. https://doi.org/10.1007/s10882-016-9494-0

22. McFarland, J., Cui, J., Rathbun, A., & Holmes, J. (2018). Trends in high school dropout and completion rates in the United States: 2018. Compendium Report (NCES 2019-117). National Center for Education Statistics.

23. Meriç, E. (2023). Patience as a predictor of teachers' classroom management skills. International Online Journal of Education and Teaching (IOJET), 10(2). 959-982.

24. Mousley, V. L., & Chaudoir, S. R. (2018). Deaf stigma: Links between stigma and well-being among deaf emerging adults. The Journal of Deaf Studies and Deaf Education, 23(4), 341-350. h ttps://doi.org/10.1093/deafed/eny018

25. Moustakas, C. (1994). Phenomenological research methods. Thousand Oaks, CA: Sage Publications.

26. Musyoka, M. M., Gentry, M. A., & Bartlett, J. J. (2016). Voices from the classroom: Experiences of teachers of deaf students with additional disabilities. Journal of Education and Training Studies, 4(2), 85-96. DOI: 10.11114/jets.v4i2.1113

27. Northern, L.L. & M.P. Downs (2015). Hearing in children. Baltimore: Williams and Wilkins.

28. Okilwa, N. S. A., & Shelby, L. (2015). The effects of peer tutoring on academic performance of students with disabilities in grades 6 through 12: A synthesis of the literature. Remedial and Special Education, 31(6), 450-463. https://doi.org/10.1177/0741932509355991

29. Sacks, A. (2021). Special education: Contemporary education issues. Oxford: ABC-Clio, Inc.

30. Warnock, H.M. (2016). Special education needs report of the committee of handicapped children and young people. London: Her Majesty's Stationery Office.