



Literacy in Early Childhood with Hearing Loss: Challenges and Strategies in Education

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Abstract

This research analyzes literacy development in children with hearing loss, focusing on the challenges faced and strategies used in the educational context. Literacy plays a vital role in learning and social integration, yet children with hearing loss may face barriers in developing these skills. Through interviews with notable education experts, parents and teachers, this study identifies specific literacy development patterns and uncovers the challenges faced. The results of this study are expected to provide a better understanding of literacy development in children with hearing loss and provide insights into the challenges and effective educational strategies. The implications of this study can contribute to the development of better inclusive curricula and the provision of appropriate support for children with hearing loss in developing their literacy skills.

Keywords: *Educational Strategies, Hearing Loss, Inclusive Education*



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INTRODUCTION

Education is one of the key aspects in the development and fulfillment of individual potential, especially at an early age (Kristianto, Susetyo, Utama, Fitriyono, & Jannah, 2023). Early childhood has an extraordinary ability to absorb information and learn through interaction with the surrounding environment. One of the important things to focus on in early childhood education is literacy, the ability to read, write and understand text (Purnamasari, 2023). Literacy in early childhood forms an important basis for their future learning abilities. Education plays a crucial role in shaping and optimizing individual potential throughout life. It is important to shape a child's early development through a foundation of cognitive, emotional and social development that is built with seriousness and precision. Children at this age have an extraordinary capacity to absorb information from their surroundings quickly and efficiently. Interactions with parents, peers, and the physical environment become the primary means for them to understand the world around them (Utama, 2017).

Amid all this learning, literacy plays a central role. Through literacy, children develop better communication, better understand the world around them, and stimulate critical thinking and creativity (Ardoin & Bowers, 2020). It also strengthens their independence in learning, opens the door to lifelong learning that goes beyond the classroom and fosters social connections through sharing stories and knowledge (Kartikawati, Roni, & Purwanti, 2022). Thus, literacy prepares children for the future and provides them with essential tools to face challenges and opportunities in their life journey. In early childhood, literacy involves developing language skills that open the door to understanding the world through words and being able to respond to them with appropriate expression (Baniyah, Jannah, & Utama, 2023). Understanding and processing texts, from stories to instructions, equips children with essential tools to access deeper knowledge and experiences.

In the context of education, early childhood literacy is not only the ultimate goal, but also the foundation for future learning success (Pan, López, Li, & Liu, 2021). Learning to read and write at this age helps shape critical thinking, encourages intellectual exploration and broadens their worldview. Children who have a strong literacy foundation have a greater chance of developing a deep interest in reading and are able to access new information and knowledge more easily. The importance of literacy in the early years has significant implications for educators, parents and society as a whole (Ferdian Utama, 2017). Efforts to build literacy skills in children should start early, with approaches that take into account children's developmental characteristics (Dickinson, Darrow, & Tinubu, 2008). Therefore, an in-depth understanding of how literacy is formed, as well as effective strategies in developing it, is essential in ensuring an inclusive, creative and competitive educational future.

However, reality shows that there is a group of young children in the Bandar Lampung area who face particular challenges in developing literacy, namely children with hearing loss. Hearing loss is a condition that affects a person's ability to receive information through hearing, which can have a significant impact on their language and literacy development. Children with hearing loss often face difficulties in understanding spoken language, recognizing important sounds and communicating with their surroundings (Kushalnagar, 2019). Despite this, early childhood education experts, child development psychologists, teachers and parents are constantly seeking solutions for children with hearing loss (Nittouer, Lowenstein, & Antonelli, 2019). We

can see this in the results of research that has been carried out related to the theme of discussion in the study.

As research has been conducted by Jauhari that hearing loss in early childhood can be detected from the beginning of the child's birth so that in the future the right solution and treatment can be given so that the growth and development process can run smoothly (Jauhari, 2020). Lack of hearing or hearing loss in early childhood is categorized into children with special needs in the category of hearing impaired (Amanullah, 2022). Every child who is categorized as hearing impaired, must have a problem with the element of hearing, resulting in inhibition of the interaction carried out by the child, this is explained in the research conducted by Akhmad Syah Roni Amanullah. From the hearing loss that children of this age have experienced, it turns out that several solutions are presented through research conducted by Zaenuri, et al that the mnemonic strategy can be a solution for children who have hearing loss so that children can interact well (Zaenuri & Maemonah, 2021). Through the above research, there are similarities with the research conducted by researchers, as for the similarities, namely discussing hearing problems in early childhood, but there are differences in the solutions provided by previous research. These differences make the current research a refinement and elaboration of solutions for early childhood who have hearing loss.

This research aims to dig deeper into the challenges and strategies associated with developing literacy in early childhood with hearing loss. By understanding these dynamics, educators, parents and related parties can develop more effective and inclusive approaches to facilitating literacy development in children with hearing loss. In this study, it will identify the barriers faced by children with hearing loss in developing literacy, including access to literacy materials, social interaction and language development. It will also examine strategies implemented in early childhood education for children with hearing loss, such as assistive technology, specialized teaching methods, psychosocial support and parental participation. It is hoped that the results of this study will provide valuable insights for developing more effective inclusive education for young children with hearing loss. With a deeper understanding of the challenges and strategies in literacy development in this group, we can create an educational environment that stimulates the potential and provides equal opportunities for all children, regardless of hearing ability.

METHODOLOGY

This section discusses the research design, research subjects, data collection procedures and data analysis used in this study. This study aims to analyze literacy development in children with hearing loss, focusing on the challenges faced and strategies used in the educational context. Thus, appropriate research methods will be required to gain a deep insight into the research conducted. This research used a qualitative approach with a case study as its research design (J.R. Raco, 2010). Case studies were chosen because they allow researchers to gain an in-depth understanding of the experiences of children with hearing loss in developing their literacy. This research will involve participants from various backgrounds, including education experts, parents and teachers. The research subjects in this study are children with hearing loss, education experts, parents and teachers. The process of selecting subjects

will be done carefully to ensure sufficient variation in experiences, knowledge and views related to the literacy development of children with hearing loss. Data collection will be done through in-depth interviews with relevant participants. Interviews with education experts will provide insights into theoretical perspectives and approaches that have been applied in the education of children with hearing loss.

Interviews with parents and teachers will provide practical insights into the challenges faced and strategies used in supporting children's literacy development. The data obtained from the interviews will be analyzed using a content analysis approach (Sugiyono, 2020). This analysis will involve a process of coding and categorizing relevant data to identify patterns of literacy development, challenges faced and strategies used. The results of the analysis will be interpreted thoroughly to gain an in-depth understanding of literacy development in children with hearing loss. With the right approach, this research will hopefully provide valuable insights into literacy development in children with hearing impairment as well as the challenges and effective educational strategies.

RESULTS AND DISCUSSION

Literacy in Early Childhood Education

The importance of literacy in education cannot be ignored. Literacy goes beyond just the ability to read and write (García & Kleifgen, 2020). It involves students' ability to understand, analyze and interpret information from a variety of sources. Students who have good literacy are able to think critically, evaluate the veracity of information and make informed decisions. In addition, literacy also enables students to communicate effectively, both orally and in writing. In an increasingly digitally connected world, media literacy is also important, teaching students to understand and evaluate content on social media, online news and other digital platforms. Therefore, successful education must dedicate time and effort to developing students' literacy in various aspects.

Some key points of literacy in education. First, literacy is not just about reading and writing, but also about the ability to analyze and interpret information. This ability helps students think critically and develop evaluation skills. For example, students who are informally literate will be more likely to check the veracity of claims or facts before accepting them at face value. Then, the paragraph highlights the importance of literacy in communication. The ability to communicate well through oral and written means is important in various aspects of life, from academic to professional. Literacy is also related to media literacy, which includes recognizing credible sources and understanding different types of media. In the digital age, these skills are essential to combat the spread of false or biased information. It is important to note that successful education must consider literacy as a key component. Teachers and education systems need to pay sufficient attention to students' literacy development through supportive curricula, innovative teaching and approaches that encourage critical and creative thinking (Carless & Winstone, 2020). In this way, students will be prepared for an information-rich world and able to participate actively in society.

The importance of literacy in education and learning is that it helps students to understand and interpret different types of information, including printed texts, digital media, images, graphics and others. It helps them become intelligent and critical consumers of information. Literacy enables students to continue learning

throughout their lives. They can access information, learn new skills and keep up with science and technology. Literacy involves critical thinking skills, where students do not just passively receive information, but are also able to analyze, evaluate and integrate information from various sources. Literacy supports active participation in a democratic society. Individuals who have good literacy are better able to engage in public discussions, understand complex issues and make informed decisions. Literacy is not only about understanding information, but also about the ability to communicate ideas and thoughts effectively through writing, speech and other media. Literacy helps students in solving problems in a structured and logical way. They can analyze situations, gather necessary information and make good decisions. Literacy stimulates imagination and creativity by exposing students to different types of texts and stories that encourage them to think outside the box.

Strategies for developing literacy in education and learning can teach students to read with comprehension, analyze content and ask questions about what they read (Jalil et al., 2021). Teach students how to analyze and evaluate digital media, including understanding information sources, context and potential bias. Fostering classroom discussions that encourage students to talk and think critically about various topics.

Give students project assignments that involve researching, analyzing, and presenting information. Teaching students to write clearly and effectively and to develop creative writing skills. Teach how to use technology wisely, including searching for information online and communicating through social media. Train students in identifying credible and valid sources of information. Recognize the importance of cross-cultural and multilingual literacy, enabling students to understand the world in a broader perspective. By developing solid literacy, students will be better prepared to face the challenges of a modern world full of information and complexity. Literacy is an essential concern for education, especially literacy for early childhood education.

Early childhood education literacy involves a deep understanding of how young children learn, interact with their environment and develop the skills essential for reading, writing, speaking and listening (Ardoin & Bowers, 2020). Early childhood education literacy is not just about teaching children to recognize letters and numbers, but also includes the development of cognitive, language, social and emotional skills that support children's holistic growth. Early childhood education literacy goes beyond letter and number recognition. It is a holistic approach that aims to support children's cognitive, language, social and emotional development in the early phases of their lives. Literacy-focused early childhood education seeks to form a strong foundation for lifelong learning and help children become smart, creative individuals who are ready to face future challenges.

Literacy in early childhood education involves developing cognitive skills such as comprehension, problem-solving and critical thinking. Children are encouraged to explore their environment, observe and ask questions. This helps them build a foundation of logical and analytical thinking that will aid them in their learning later in life. Early childhood literacy also includes the development of language skills. Children are encouraged to talk, listen and interact with words and language. This supports the development of their communication skills, including understanding the meaning of words, expressing themselves and participating in conversations. Through

interactions with peers and caregivers, children learn about social skills such as sharing, collaborating and understanding the feelings of others. Early childhood education literacy helps children build these skills, which are important for forming positive relationships with others. Literacy also helps children develop emotional skills by helping them recognize and manage their feelings. Children are encouraged to feel safe in exploring, talking about their emotions and understanding that feelings are a normal part of life. Early childhood education literacy stimulates children's creativity and imagination through stories, tales and games. It helps children think outside the box, create creative solutions and develop abstract thinking skills (Jeong, Franchett, Ramos de Oliveira, Rehmani, & Yousafzai, 2021). It's important to remember that early childhood education is not about emphasizing higher academic achievement at a young age. Instead, this approach aims to help children grow holistically by building a solid foundation for future learning. Balanced cognitive, language, social and emotional development will help children face the world's challenges confidently and ready to develop their full potential.

Early Childhood with Hearing Loss

Early childhood with hearing loss refers to the period of a child's life from birth to around eight years old, during which they experience some degree of hearing loss. This is a critical stage of development when children are rapidly developing language, cognitive, social and emotional skills. Hearing loss during this crucial period can have a significant impact on a child's overall development, but with the right support and intervention, children with hearing loss can thrive and reach their full potential.

Here are some key points to consider in addressing early childhood with hearing loss such as making early identification and intervention very important for children with hearing loss. The sooner a hearing loss is detected and appropriate intervention initiated, the better the child's chances of developing language and communication skills on par with their peers. Hearing loss can affect a child's language acquisition. Early intervention may involve speech therapy, sign language, or a combination of approaches to support language development (Davis & Hoffman, 2019). Providing children with language-rich environments and communication tools is important. A variety of communication options are available for children with hearing loss, including oral communication (speech and lip reading), sign language, and a combination of both (bilingual-bicultural approach). The choice of communication method should be based on the child's needs, preferences and family goals. Hearing aids and cochlear implants are examples of assistive technologies that can help children with hearing loss access sound. These technologies amplify or transmit sound to the child's auditory system, allowing them to hear speech and environmental sounds. Children with hearing loss may face challenges in social interaction and emotional development. Building self-esteem, teaching social skills and establishing a positive self-identity are important components to support their overall well-being.

An inclusive educational environment that provides appropriate accommodations and support can enable children with hearing loss to learn alongside peers without hearing loss. Teachers, parents and professionals can collaborate to create an environment that meets children's educational needs. Parents have an important role in the early childhood development of children with hearing loss.

Providing a supportive home environment that encourages communication and language development is essential. Parents can also participate in parent-child groups and receive guidance from professionals. Regular hearing evaluations and assessments are necessary to track the child's development and make necessary adjustments to interventions. As the child grows and develops, his or her needs may change, so ongoing support and guidance is necessary. Each child with hearing loss is unique, and their needs may vary (Bess, Davis, Camarata, & Hornsby, 2020). Tailoring interventions according to the child's particular strengths and challenges is important to support their holistic development. Early childhood with hearing loss provides both challenges and opportunities. With timely intervention, access to appropriate resources, and a support network of professionals, educators, and caregivers, children with hearing loss can develop the skills and abilities they need to succeed in various aspects of life. It is important to recognize the importance of inclusion, access to communication, and a positive, loving environment to help these children thrive and reach their potential. Literacy plays a very important role in the early development of children with hearing loss (Lieu, Kenna, Anne, & Davidson, 2020).

Hearing loss in the early stages of a child's life can affect various aspects of development, including language, communication, cognitive, social and emotional (Dammeyer, Hansen, Crowe, & Marschark, 2019). Therefore, understanding the importance of literacy for children with hearing loss is a key step in helping them reach their full potential. Literacy helps them develop language and communication skills through spoken language, signs or a combination of both, enabling them to understand content and concepts in various forms of text, including pictures and other media. In addition, literacy also involves critical and analytical thinking skills, which are important in their intellectual development. Through stories and narratives, literacy also plays a role in developing social and emotional skills, helping them understand feelings, emotions and social interactions. By empowering children through literacy, they can feel more confident, gain independence and overcome challenges in education and everyday life. It is important to implement inclusive education that focuses on their strengths, so that they can develop their skills and potential on an equal footing with their peers.

Challenges and Strategies in the Education of Young Children with Hearing Loss

The education of young children with hearing loss is an important issue in the world of inclusive education. In the early developmental stages of life, children experience a sensitive period where the formation of language, cognitive, social and emotional foundations is crucial. However, for children with hearing loss, special challenges arise in accessing information, communicating and interacting with the world around them. This is where the importance of developing effective strategies in early childhood education with hearing loss becomes very clear. Educating young children with hearing loss demands a holistic and inclusive approach. The right strategies can help these children overcome communication and learning barriers and enable them to develop their full potential. However, in the course of implementing these strategies, various challenges also arise. These challenges can involve early diagnosis, adequate professional support and the provision of an inclusive educational environment.

In this context, research on strategies and challenges in early childhood education for children with hearing loss is becoming increasingly important. It provides in-depth insights into effective approaches, successful learning methods and the barriers that must be overcome to provide quality education for children with hearing loss. It further analyzes the strategies identified in the literature and the challenges still faced in implementing them. This information has far-reaching implications, not only for the education of children with hearing impairment, but also in the context of inclusive education more generally.

Challenges

As a practitioner of early childhood education for children with hearing loss, there are challenges. Such challenges include the need for accurate and early diagnosis of hearing loss in early childhood. Delays in identification can hinder the start of effective interventions. Then limited access to information is a challenge that must be overcome. Children with hearing loss may have difficulty accessing information audibly. This can affect language development and content mastery. Apart from that, there is a lack of professional support for any early childhood education provider. In some cases, the lack of trained professionals in the field of education for children with hearing loss can be a challenge. Teachers who do not understand this condition may struggle to provide the necessary support. Psychosocial challenges Children with hearing loss may experience psychosocial challenges, such as social isolation or feelings of lack of confidence. Emotional and social support is important to help them cope. A final challenge that is important to address is that adapting learning materials to suit the needs of children with hearing loss requires additional effort.

Materials must be designed with their communication and comprehension needs in mind. Addressing these challenges requires collaboration across sectors, including educators, families, health professionals and support communities. With a deeper understanding of these challenges, we can develop better strategies to support young children with hearing loss to reach their full potential in inclusive and supportive educational environments.

Strategies

In addressing the educational challenges of young children with hearing loss, several strategies have been identified to ensure their holistic development. First, early intervention is a key foundation. By identifying hearing loss early and providing appropriate interventions, children can receive critical support during sensitive language and cognitive growth periods (Khasanah, Asry, Medan, Latifah, & Malikussaleh, 2023). Next, a multisensory communication approach that incorporates sign language, facial expressions and body movements helps children access information and interact with the world around them more effectively. Then, assistive technologies such as hearing aids and cochlear implants provide access to auditory sounds and information, promoting better learning and communication.

A bilingual-bicultural approach allows children to learn sign language and spoken language simultaneously, while also understanding their cultural identity as individuals with hearing loss. An adapted inclusive education environment is an important step, where supports such as sign language interpreters and adapted learning materials help the child feel involved in the learning process. The role of

parents and families is also very significant; their participation in interventions and support can strengthen the development of children's language, communication and social skills. The use of visual learning materials facilitates children's understanding through the sense of sight, while emotional and social support helps children overcome psychosocial challenges such as social isolation and lack of confidence. Adjustments to the learning environment include the implementation of good lighting, the use of assistive technology, and room arrangements that support the visualization of information. In addition, professional training for teachers and education professionals in supporting children with hearing loss is essential. This includes understanding the unique needs of the child, effective teaching methods and utilization of assistive technology. By implementing these strategies, the education of young children with hearing loss can be adapted to support their holistic development. Through an integrated approach, children can overcome challenges and reach their full potential in an inclusive education environment.

In an effort to provide effective education for young children with hearing loss, a number of strategies have been identified that can be implemented. First, early intervention is key in providing maximum support. Through regular hearing tests and early therapeutic measures, children can receive the support needed for their language and cognitive growth in sensitive periods. Next, multisensory communication approaches such as sign language, facial expressions and body movements allow children to interact with the world more effectively. Assistive technologies such as hearing aids and cochlear implants also play an important role in accessing sound and auditive information. A bilingual-bicultural approach teaches children sign language and spoken language together, while introducing them to their cultural identity. Customized inclusive educational environments are another strategy that supports the learning of children with hearing loss, where supports such as sign language interpreters and appropriate learning materials provide the necessary inclusivity. Involving parents and families in interventions helps children's language and social development at home. Furthermore, visual learning materials help children better access content through their sense of sight. Emotional and social support is important in overcoming psychosocial challenges, while adjustments to the learning environment and professional training for teachers are other key aspects in ensuring effective and inclusive education for children with hearing loss. By implementing these strategies, these children can overcome barriers and develop their full potential in an inclusive and supportive educational environment.

CONCLUSION

This research focuses on the importance of literacy in early childhood education, especially for children with hearing loss. Literacy in early childhood forms an important foundation for their future learning development. Literacy involves the ability to read, write and understand texts and contributes to better communication, a deeper understanding of the world, and critical thinking and creativity. It also strengthens independence in learning, opens doors for lifelong learning outside the classroom and fosters social connections through sharing stories and knowledge. In the context of children with hearing loss, literacy becomes an even greater challenge. Hearing loss can affect children's language, communication, cognitive, social and

emotional development. However, through effective educational strategies, such as inclusive approaches, the use of assistive listening technology and psychosocial support, children with hearing loss can overcome these barriers and develop their full potential. Early identification and appropriate intervention are essential in the early education of children with hearing loss.

However, there are various challenges that need to be overcome. Accurate and early diagnosis of hearing loss, limited access to information, lack of professional support trained in the education of children with hearing loss, psychosocial challenges and social isolation are some of these challenges. Therefore, inclusive education that empowers children with hearing loss, a supportive environment, emotional and social support, and an active role from parents and educators are essential to help these children overcome barriers and develop holistically. This research provides valuable insights into strategies and challenges in early childhood education with hearing loss. It is hoped that this research will provide guidance for educators, parents and other stakeholders in developing effective inclusive education that provides equal opportunities for all children, regardless of hearing ability.

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