

Auditory-Oral Approach for Speech Production: Education Innovation Enhancing the Communication of the Hearing-Impaired Children

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ABSTRACT

People with disability are often a neglected segment of society worldwide. Effective communication is a concern for educators, especially for hearing-impaired (HI) children. Hearing loss, a main barrier to effective communication leads to speech impairment, learning difficulties, feelings of isolation, multiple social problems, and a lifelong of ineffective productivity. The auditory-oral approach (AO) is an innovative tool aimed to educate the HI in the understanding and usage of spoken language. Speech production is enhanced by stimulating hearing residue which many HI possess. The HI is taught to lip-read and speak through speech reading aided by contextual cues, amplification devices, and visual aids. This study assessed the effectiveness of AO with four HI students in grades 4 and 5 at the Special Education Center, MCCS, in Malaybalay City Bukidnon as subjects. Intervention without using sign language consisted of 6 weeks of speech training, vocalization aided by the use of visual aids, a mirror, a video recorder, a pair of hearing aids, and 3 to 4 individualized exercise sessions per week. The post-test to determine word recognition, retention, and level of speech production doubled the pretest scores suggesting potential for speech development even for those with profound hearing loss. AO is recommended for teachers and parents to enhance the communication skills of the HI for successful integration into mainstream society and preparation for lifelong productivity.

Keywords: Auditory-Oral Approach, Hearing-Impaired Children, Speech Production, Education

INTRODUCTION

Speech is a distinction between human and other creatures, yet not all individuals possessed this special gift. According to Jung (2010), hearing is a prerequisite for the development of normal speech. Individuals with undeveloped speech due to hearing loss are commonly labeled as deaf, mute, dumb, hearing impaired, or sometimes hard of hearing. The Individuals with Disabilities Education Act (IDEA) used the term 'hearing impairment' as a generic description of a wide range of hearing losses, including deafness (NICHCY, 2012).

Based on research and observation, hearing impairment can impede the development and well-being of the child. Society believed that profoundly hearing-impaired children were incapacitated from learning to talk. Once hearing loss is detected, ASHA (2014) recommends that the child must undergo audiological habilitation. With this plan, the parents will choose what communication method the child will take, like, American Sign Language (ASL), Total Communication (TC), and listening and spoken language where the

auditory-oral approach belongs (EA, 2009). Many experts accepted the idea that each method is helpful but parents need to understand and choose one compatible to the family and beneficial to the child.

In this study, researchers aimed to educate teachers and parents of hearing-impaired children, about an alternative approach to learning for children with hearing loss. By shedding light on a different learning spectrum, it is the goal of the researchers to empower these children to develop speech skills comparable to their peers and be included in the mainstream with self-confidence.

REVIEW OF THE LITERATURE

Age

Age is one of the variables that affect the speech development of the child. Navarro et al. (2015) reiterated that the age of an individual affects every area of his performance. Another recent study revealed that the children's pragmatic skills showed a significant increase as they grew older. This improvement suggests a natural developmental progression in their ability to understand and use language in social contexts. Much research in the past proved that the gap in academic achievement between normal hearing and those with HI children usually widens as their age increases (ASHA, 2019). As children grow older, the academic disparity between those with normal hearing and those with hearing impairments also widens. This shows that HI children lag in all aspects of life as age increases.

Experts in this field explained that the impact of hearing loss on the child is controllable as long as it is detected. Thus, the Philippine government adopted the Universal Newborn Hearing Screening Program (UNHSP) and mandated hospitals to screen every newborn infant before leaving (Republic Act No. 9709, 2009), as a means of early diagnosis of hearing impairment among infants so that early interventions can be applied. Educational institutions proved that the earlier the problem is identified and intervention have begun, the less serious the ultimate impact on the child.

Family Background

1. Parents' Socioeconomic Status (SES)

The socioeconomic status of parents with HI children is another significant variable in this study. Sirin (2019) defined socioeconomic status (SES) as the economic and social standing of a family within society, encompassing factors such as income, occupation, education, neighborhood, and occasionally political influence. In the study of Nja et al. (2022), it was stated that the social, and economic status of parents is important to a child's optimal development. Parents with high SES may have connections with other people who can help them find ways to assist the needs of their children.

On the contrary, Kainuwa and Yusuf (2013) proved in their study that parents with low socioeconomic status (SES) often struggle to support their children's educational needs, as they may not fully recognize the advantages of formal schooling. This lack of awareness can impact the level of parental involvement in their children's education. Kainuwa and Yusuf, further explained that educated parents can easily get better jobs with reasonable salaries. Parents with better incomes can provide optimal care and better education to their children and has the capacity to live in a good neighborhood. In the Philippine setting, only parents with adequate income can support their HI children undergo interventions done by private practitioners.

Some educated parents may have low incomes, but they strive to create a conducive home environment for learning. The research by Ojimba (2013) suggests that a child's academic performance is linked to the mother's education level, as she often serves as the primary educator. Additionally, Moeller (2000) found that proficient signing skills in educated mothers can significantly enhance language development in deaf

children. Regardless of the communication method used within the family, parents should adapt to meet their child’s needs. Effective parent-child communication is crucial, as highlighted by Quittner et al. (2010) in their article. In essence, the educational background of parents strongly influences the cognitive and social development, as well as the speech and language abilities of hearing-impaired children.

2. Hearing impaired children

“Hearing-impaired” is the generic term used to describe any deviation from normal hearing, whether it is permanent or fluctuating, and ranges from mild to profound (Shemesh, 2010). The Individuals with Disabilities Education Act (IDEA) defines deafness and hearing impairment separately. Deafness is a hearing impairment that is so severe that prevents the child from processing linguistic information through hearing” while hearing impaired is used to describe children with “hearing impairment that adversely affects a child’s educational performance” but can respond to auditory stimuli including speech (NICHCY, 2010). IDEA emphasized that these two categories are included in the curriculum for special education (SpEd) and can be in the least restrictive education (LRE).

World Health Organization (WHO) reported that there are approximately 360 million individuals worldwide who are hearing impaired, with 32 million of them being children. Furthermore, it was also stated that 80% of these children reside in developing countries. Hearing loss is the most prevalent sensory disorder among newborns, affecting their ability to develop speech. Unfortunately, children with hearing impairments are often viewed as unproductive investments, leading to their isolation and exclusion within their own families (WHO, 2012). This isolation detrimentally affects their cognitive, social, and emotional development.

3. Degrees of Hearing Loss

According to ASHA (2023), the degree of hearing loss refers to the severity of the loss. Treatment will depend on how serious the hearing loss is. The table below shows a common way to classify hearing loss.

Degree of hearing loss	Hearing loss range (dB HL)
Normal	-10 to 15
Slight	16 to 25
Mild	26 to 40
Moderate	41 to 55
Moderately severe	56 to 70
Severe	71 to 90
Profound	91+

ASHA 2019

4. Causes and Effects of Hearing Loss

There are many reasons why a child can become hearing impaired. A child having hearing impairment before birth is called congenital hearing loss, and after birth is acquired hearing loss (ASHA, 2019). Hereditary deafness, a form of impairment, can cause congenital hearing loss. This condition occurs when parents transmit defective genes and genetic elements. These genetic mutations typically happen during fetal development. Congenital hearing loss is a form of impairment that can cause hereditary deafness, where parents pass defective genes and genetic elements. This genetic mutation typically happens during fetal development (Better Health Channel, 2019), Hearing loss can also be the cause of prematurity, infection, and complications during pregnancy (DCW, 2019) or other health conditions.

Several factors can lead to a child developing hearing loss after birth. These include being born prematurely, severe jaundice at birth, oxygen deprivation in the brain, and infections such as meningitis. Additionally, the use of ototoxic drugs to treat various ailments in infants can also result in hearing impairment (DCW, 2019). Given these potential causes, expectant mothers must take diligent care of their health during pregnancy.

Children with hearing loss are often at a disadvantage and underserved in schools. Undalok (2015) explained that in the absence of hearing, language symbols of children are not perceived and learned. Infants identified with hearing loss who did not receive assistance for language development lagged behind their peers in language skills, cognitive abilities, social interactions, emotional development, and even family relationships. Esmaeilzadeh et al. (2013), mentioned in their study that untreated hearing loss in a child can cause a significant impact on auditory brain development with serious consequences for speech, language, literacy, and academic development for the child's life term. WHO reported also that untreated hearing loss is often *associated with academic underachievement*, which can lead to reduced employment opportunities later in life. As children grow older, the academic disparity between those with normal hearing and those with hearing impairments also widens. In other words, as age increases, the academic gap between hearing and HI children increases also.

5. Education of the HI Children

If children with hearing loss do not receive treatment, they may struggle to access mainstream education, leading to poorer academic achievements. Smith et al. (2020) studied and proved that the consequences of untreated hearing loss among children affect their academic performance, thus emphasizing the importance of early intervention and treatment to support their educational outcomes.

With the increasing emphasis on mainstreaming, professionals and experts now have an even greater need to acquire or enhance their knowledge of developing the speech skills of hearing-impaired children (Garcia et al., 2019). This transition underscores the significance of providing these children with suitable assistance and direction by adjusting the audio-oral approach to address speech obstacles and optimize their capabilities. By equipping professionals with essential skills, the objective is to empower hearing-impaired children to effectively communicate and flourish in diverse areas of their lives.

6. Parents' Involvement

After the child is identified as Deaf, Smith (2014) suggests that high and active family involvement in learning in school and constant verbal communication at home can produce improved language outcomes for the child and foster healthy family relationships. By embracing an audio-oral approach as a means of communication, families can enhance the child's language development and overall well-being. Therefore, if there is any sign of hearing impairment among children, families should necessitate, for this hearing disability can be managed effectively with the help of trained professionals.

Auditory-Oral Approach

The main problem of hearing-impaired children is communication. HI children need tools to help them learn to produce speech to communicate orally. This study highlights the auditory-oral approach as a beneficial tool for speech development in HI children. The auditory-oral method, a subset of oral education, prioritizes listening skills and focuses on spoken language comprehension and production, ultimately aiming for complete mainstream integration (Moog & Stein, 2008). Infants learn to talk if they hear words from the people around them.

This method AO approach trains deaf children to make use of their residual hearing through proper fitting of

amplifications like hearing aids and/or cochlear implants. It teaches children to develop listening skills and speech by stimulating visual and contextual cues to comprehend and use spoken language as they communicate with people around them (Moog & Stein, 2008; AG Bell, 2011; Hood, 2010; Deaf Linx, 2013). While sign language is not encouraged in the auditory-oral approach, gestures may be used in typical conversations to support communication.

Moog and Stein (2008), and AG Bell posited (2014) the following quality characteristics of AO approach: • The program's goal is for children to learn the spoken language well enough to communicate effectively by talking and to develop age-appropriate reading skills; • Children are immersed in spoken language throughout the day; • Listening is supported through the management of well-fitted hearing aids and/or cochlear implants; • Teachers are knowledgeable about and trained in techniques for accelerating spoken language development in children with hearing loss; • Classes are small; • Programs are both family-centered and child-centered; • Parents are considered a critical support in ensuring their child's success in developing spoken language. Despite numerous institutions promoting the oral method of communication for children with hearing loss and providing evidence that they can develop speech-language skills comparable to their peers, there is currently a lack of recent empirical data on the most effective interventions for these children.

Intervention

If children with hearing loss do not receive treatment, they may face challenges in accessing mainstream education, leading to poorer academic achievements (LeClair & Saunders, 2019). Once hearing loss is detected in the child, it calls for immediate attention. Remember, language and communication skills develop most rapidly, especially before the age of three (ASHA, 2019). In childhood, the brain is most receptive to language acquisition. Many studies proved that early identification and early interventions provide better outcomes in the speech development of HI children (Baker, 2011).

There are two interventions for the HI children to develop oral communication. They are the audiological and educational interventions. Audiological intervention refers to the diagnostic test to test the nature and degree of hearing loss. This will be followed by the fitting of hearing aids to check the brain of the child if it responds to auditory stimulation (Esmailzadeh et al, 2013). Yet, experts in this field advised that the child needs to be trained in using these hearing gadgets before he starts with the educational intervention.

In AO approach, Moog and Stein (2009) emphasized that auditory training requires a high level of concentration. It needs time and effort. In this stage, the authors emphasize that teachers must effectively enhance a child's listening skills to improve auditory discernment. Modern technologies assist HI children in achieving speech capabilities, with sound access leading to improved word perception. Using residual hearing, HI children are trained to enhance speech reading and use contextual cues for understanding and communicating in spoken language. Although the auditory-oral approach doesn't encourage sign language, it does incorporate gestures in regular conversation.

The choice of educational intervention for HI children is a significant decision that can greatly impact their future. Parents need to be well-informed about the available methods and carefully consider which approach will best meet the needs of their child and align with their family's values and preferences. One of the key considerations is whether to adopt a sign language or an oral method. Sign language allows for visual communication through hand gestures, while the oral method focuses on developing listening and spoken language skills. Both approaches have their own advantages and considerations.

For parents who opt for the oral method, the auditory-oral approach is often recommended. This approach prioritizes the development of listening skills and spoken language comprehension and production. It aims to help HI children integrate into mainstream society by equipping them with the necessary communication

skills to interact and learn effectively (Frasu, 2013).

The auditory-oral approach emphasizes the use of residual hearing and encourages the child to rely on auditory cues rather than sign language. It involves training the child to improve speech reading, utilize contextual cues for language comprehension, and effectively use spoken language for communication and learning. While sign language is not encouraged in the auditory-oral approach, gestures may be used in typical conversations to support communication.

Speech Production

Congenital hearing loss disastrously affects the normal development of speech. Traditionally, it was believed that profoundly hearing-impaired children were incapable of learning to talk. However, speech pathologists, audiologists, and educators of the hearing impaired have long been concerned about the speech skills of these children.

Children with any degree of hearing impairment have been shown to exhibit poor language development, leading to lower literacy rates, diminished social skills, and impaired executive function capacity. The proficiency of their speech abilities can significantly influence their social, educational, and career opportunities (ASHA, 2019). Once these areas are addressed, an optimal training sequence can be selected to meet the individual needs of each child. The effectiveness of the training strategies can be assessed through careful and objective monitoring of the child's performance in speech therapy.

Research Problem

The major aim of this study is to assess the effectiveness of AO approach for speech production of the hearing-impaired (HI) children. Specifically, it sought to answer the following questions:

1. What are the demographic characteristics of the hearing-impaired children in terms of age, degree of hearing loss, family background, and their parent's socioeconomic status (SES)?
2. How does the auditory-oral (AO) approach enhance the speech production of the HI children?
3. How do HI males and females differ in their performance in speech production?
4. How do demographic characteristics of the HI children contribute to their performance; and
5. What are the areas to be improved to foster speech production among the HI children?

METHODOLOGY

Research Design, Setting, and Participants

This research study used a mixed method of experimental and qualitative approach. The participants were selected through purposive sampling. Participants were chosen from grades 4, 5, and 6 because they had undergone the audiological test. Four pupils, 2 girls and 2 boys were selected from the 16 population of the combined grades 4, 5, and 6 class of HI children enrolled at Malaybalay City Central, School-Special Education Center (MCCS-SpEd Center), Malaybalay City, Bukidnon, Philippines. All children with hearing loss used American Sign Language (ASL) in school but home signs outside the school.

MCCS-SpEd Center was the first public school to offer a Special Education program in the whole province since 2000. Classes were merged due to the limited number of trained teachers and enrolled HI children. Classes were merged into two, the grades 1, 2, and 3, and the grades 4, 5, and 6 with one well-trained teacher in each class. Informed consent was secured from the teacher and parents' confidentiality and anonymity were assured.

Case #1 was a 14-year-old female who had moderately severe to severe hearing loss possibly due to medication taken by the mother during pregnancy. Two children in the family, an elder brother and the subject were both hearing impaired.

Case #2 was a 14-year-old female who had severe to profound hearing loss due to illness after birth.

Case #3 was a 16-year-old male who had profound hearing loss possibly due to a hereditary reason he had two older siblings and another uncle who were all hearing impaired.

Case #4 was an 18-year-old male who had moderate to moderately severe hearing loss due to medication taken during infancy.

Instrumentation and Data Gathering

The intervention procedure for stimulating speech production was adopted from Marshalla (2009) and the word recognition and articulation screener was from The Little Bee Speech (2011) of Mommy Speech Therapy. The individualized intervention was done in a sound-controlled room. Hearing aids were worn by the participants to support hearing residue. Other tools used in gathering the data were a 2×4 mirror, video recorder, and researcher-structured worksheets for articulation exercises. The qualitative data were obtained from the key informant interview with the teacher and the parents of the four selected HI children

Student information sheets were given to each HI child present in the class of grades 4, 5, and 6. Some information was filled up with the assistance of the teacher. The researcher immersed herself in the classroom for a few days to gain their trust after which, the pretest was conducted on all pupils in a vacant room. The four selected participants were provided with hearing aids and underwent individualized exercise sessions, 3 to 4 times a week. In the sixth week, the post-test was conducted.

The observation in the classroom and during the session was recorded in the Articulation Therapy Log from the Mommy Speech Therapy Company (2011). The data for intervention were taken from the results of the pretest and the posttest which were given to the 4 HI children. The intervention was composed of 3-4 times a week of individualized exercise sessions in a sound-controlled room. In-depth interview with the family members of each participant was done through home visitation and a phone call. Then the key informant interview was conducted with the teacher in charge of the chosen grades.

Data Analysis

The qualitative analysis of this study used triangulation that involved a detailed examination of the four hearing-impaired children and their speech production. The information was expressed descriptively to uncover the significant connections between hearing and speech.

The triangulation analysis method compared and contrasted the profiles of participants and their responses to interview questions. Data analysis was achieved through a detailed presentation of classroom reports and transcribed interviews with family members, as well as the teacher who acted as the key informant. The data was meticulously coded, transferred, and consolidated for thorough analysis. The experimental design was achieved through pretest and posttest. The participants engaged in a six-week intervention, which included wearing hearing aids as part of their auditory training program.

All gathered data were comprehensively described and presented in the result and discussion section to provide information on their speech development and performance. Through explorative analysis, this study unmasked the impact of hearing impairment and revealed that HI children have the chance to develop speech.

RESULTS AND DISCUSSIONS

1. For a quick and clearer view, the summary of the demographic characteristics of the HI children is shown in Table 1.

Table 1: Demographic Characteristics of the participants

Partici- pants	A G E	G R A D E	Degree of Hearing Loss	Family Background				
				No. of Siblings	No. of HI children	Probable Cause of Hearing loss	Mode of Communi- cation	*Parents Involvement
#1 -female	14	5	Moderately Severe to severe	2	2	Medicine Taken during pregnancy	American Sign Language and Home sign	Averagely involved
#2 -female	14	5	Severe to profound	4	1	illness		Averagely involved
#3 male	16	4	profound	8	3	Hereditary		Less involved
#4 male	18	5	Moderate Hearing loss	5	1	Medication taken in infancy		Averagely involved

Parent Involvement in School:

Much Involved :

Averagely Involved:

Less Involved:

(attended meetings and special programs regularly

(came to school only when urgently required by the teacher)

(came to school once a year or never)

Table 1: (continuation)

Participants	Socioeconomic Status of Parents (SES)				
	Educ'l Background		Occupation		Income/month
	Mother	Father	Mother	Father	
#1 -female	College level	College level	Del Monte field worker	Del Monte office Clerk	11,000
#2 -female	High School		Brgy. Health Worker		1,250
#3 male	Elementary level	Elem. level	laborer	Laborer (sugarcane)	2,500 to 3,500
#4 male	High School Level	High School Grad.	Housewife	Home Service of Sharpening Tools	3,500 to 4,500

Table 1 shows that hearing-impaired children have a significant age gap compared to their corresponding grades in school. All of them were older than the pupils of the same grade level in the mainstream. The participants differed in causes and degrees of hearing loss. Parents' involvement in school activities was scored average and less involved. The subjects learned American Sign Language (ASL) at school but used home signs when with family and friends. Results conform with the report of ASHA (2019) that HI children lagged behind and this prevalence increases with age (WHO).

Meanwhile, among the four cases, only the parents of Case #1 had a higher income of Php 11, 000/month. According to the Philippine Statistics Authority (2021), the average income of a family of 4 is at least Php 9,064.00 every month to meet basic needs like food, clothing, housing, and transportation. This shows that the family of Case #1 was just above the boundary of the poverty level and the rest were within the poverty threshold.

2. Auditory-oral approach enhances the speech production of the HI children.








Table 2: Participants' speech performance on animal sounds						
Animal	Sound	Child #1	Child #2	Child #3	Child #4	
	Baa – Baa	/	/	/	/	
	Moo – Moo	/	/	/	/	
	Aw- Aw	/	/	/	/	
	Tweet –Tweet	(iw – iw)	(wee – wee)	(wee – wee)	(weet – weet)	
	Quack – Quack (wak-wak)	(wag – wag)	(wa – wa)	(wa-wa)	(wak-wak)	
	Mee – Mee	/	/	/	/	
	Meow – Meow Mee + a + u	/	(maw – maw)	(maw- maw)	/	

Table 2 records the summary on speech performance on animal sounds of the subjects after the intervention. Results show that participants had difficulties with consonant-consonant-vowel sounds like tweet-tweet and quack-quack. However, once speech cues were stimulated, the HI children were able to develop the ability to produce correct sounds that corresponded to the picture shown.

Hearing-impaired children are often unable to learn the language naturally. Therefore, they have to be taught about the basic formation of the mouth to produce the right sound. Speech reading is used to help HI children develop speech by allowing them to imitate the shape and movement of the mouth (Kyle et al., 2023).

According to Circulado (2016) in speech development, several visual representations are important. Shultz (2014) quoting from Krashen's theory also stated that before children learn to speak they must comprehend the meaning of the word. Thus, the researcher used several visual aids to help the HI children understand the language. By stimulating their speech cues, they learn to articulate the words little by little as well.

3. Differences of HI males and females differ in their performance in speech production

Table 3: Scores of the participants in the pretest and posttest

Participants	Pretest Score	Posttest Score	Difference
Case # 1 (female)	15	30	15
Case #2 (female)	12	29	17
Case #3 (male)	13	33	20
Case #4 (male)	11	32	21

Table 3 reveals positive results after each participant underwent intervention of AO approach for six weeks. All scores doubled in the posttest.

In the case of these four participants who were already in their teenage years, the AO approach was effective especially the speech reading though they produced relatively unintelligible, but still recognizable speech. Halliday (2017) confirmed that HI children are successful with the oral language as long as they undergo training religiously. HI persons could perceive speech by watching the movements of a speaker's mouth and other visible clues including facial expressions and gestures. This confirms Moog and Stein (2006) who stated that speech reading enhances communication even in noisy situations.

The success of a hearing-impaired (HI) child's speech development is significantly influenced by several key factors, including the level of residual hearing, the amount of stimulation received, and the child's motivation. Drawing from Krashen's Theory, specifically the Affective Filter Hypothesis (Shütz, 2014), it is suggested that a child who is motivated and has experienced happiness in the school environment is more likely to perform well academically. This theory highlights the importance of emotional factors in the learning process and underscores the idea that a positive emotional state can enhance learning outcomes.

Furthermore, Vygotsky's Zone of Proximal Development (ZPD), as referenced by Turan (2010), emphasizes the role of social interaction and guidance from more knowledgeable others, such as adults, in a child's learning process. According to Vygotsky, children can achieve higher levels of learning when they receive scaffolding and support from individuals who are more experienced or knowledgeable in a particular area. This collaborative learning approach promotes the child's development by allowing them to work on tasks that are slightly beyond their current level of competence but achievable with assistance.

4. Contribution of Demographic Profile to the Speech Performance of the HI Children

Deafness is prevalent in developing countries. Poverty and deafness are often interlinked and HI children face a lot of challenges. Some of these challenges are included in the demographic profile of the participants. In the four interviews, all parents lack knowledge and awareness in helping their HI children achieve better performance in their language development. Parents are of low socio-economic status. When parents are constrained with fewer resources, children's learning is usually affected. Parents with low SES are likely to afford the cost of speech therapy and better education. Garcia (2023), and ASHA (201), and WHO emphasized that these unfavorable conditions become barriers to speech development.

Based on the National Deaf Children's Society (NDCS, 2019) report from 2022, it is evident that poverty and deafness are frequently interconnected, leading to significant challenges for hearing-impaired children

such as limited educational opportunities and employment prospects. Results underscore the significance of demographic characteristics, including participants' age, causes and severity of hearing loss, family background, and the socioeconomic status (SES) of parents, as key factors that pose obstacles to speech development in children.

5. Areas to be improved to foster speech production among HI children

Teaching HI children to develop speech must be very difficult. Parents and teachers must be committed to supporting the auditory-oral program as suggested by experts (ASHA, 2019; NDCS, 2029; & Moog, 2000). Oralists suggested that awareness, early interventions, good training, constant communication, high level of parental involvement are some of the areas to be observed to foster speech production among hearing-impaired children (Frasu, 2013).

Awareness: There is greater awareness and expectation that deaf children can indeed learn to talk as explained by Moog. Awareness may give the parents to choose the methods best for them, for the HI child, and for the family. Almost twenty years ago, through the mass media, Miss America (Heather Whitestone, diagnosed with profound deafness) made the general public aware that profoundly deaf individuals can learn to talk. Since then, private practitioners and private schools including the Philippine Institute for the Deaf (PID) advanced the idea that deaf individuals can talk.

Early Intervention is the key (Frasu, 2013). Early diagnosis and early fitting of hearing aids are the two basic in intervention a HI child must undergo. Early intervention may help parents learn how hearing impairment can be best managed. Frasu continued that to have successful spoken language among HI children, early intervention must take place at the critical age of 6 and below.

Good training is a must. Many HI children are underachieving in performance because parents hide them away and let them do tasks at home. They considered them as dead investments. Parents who will pursue the auditory option, they must be willing to invest in private schools and speech therapists, since many government schools do not have pure oral programs. Many

Communication that is constant with the child is the most important. Responding to your child and encouraging your child to respond to you, is the key to your child's language development (Hands &Voices, 2015). Children who hear more talk will talk more themselves.

Parent involvement. Research demonstrates that high levels of family engagement are associated with positive language outcomes, while limited family involvement can lead to significant language delays in children by the age of 5, particularly when intervention enrollment occurs late (AG Bell, 2011; Moeller, 2000). By emphasizing early intervention and active family participation, it is possible to support children in reaching their full potential in language acquisition and development.

Motivation is an important factor that promotes learning. HI highly motivated children dare to achieve in school and do better in their speech and language development. Halliday (2017) proved that if they are motivated and praised in every successful attempt at utter speech sound benefit more in their speech production.

In essence, both Krashen's Affective Filter Hypothesis and Vygotsky's Zone of Proximal Development as the theories used in this study, underscore the significance of motivation, emotional well-being, and social interaction in supporting the speech development and overall learning progress of hearing-impaired children. By considering these theories in educational practices and interventions, educators, parents, and caregivers can create supportive environments that optimize the learning potential of HI children.

CONCLUSION

The Auditory-oral approach is an effective tool for the speech production of the HI child once auditory and speech skills are conditioned and reinforced.

Teaching HI children could be difficult. Nonetheless, committed parents and teachers are required in adopting auditory-oral approach of education to foster speech production among hearing-impaired children.

RECOMMENDATIONS

It is suggested that awareness, early intervention, high parental involvement in school, and strong motivation may be strengthened so that HI children may have greater opportunity to develop speech through an auditory-oral approach and live a productive life.

Finally, acknowledging the challenges faced by hearing-impaired children, it is strongly recommended that families and educators collaborate in providing innovative educational support to enhance their speech development, facilitating their integration into mainstream society for life-long-term success.

ETHICAL CONSIDERATIONS

In this study, it is imperative to uphold ethical standards and ensure compliance with obtaining informed consent from all participants. Prior to their involvement, participants were informed about the research objectives, procedures, potential risks, and benefits, while ensuring the anonymity of the participants was maintained. Moreover, they have the freedom to withdraw from the study at any point without facing any repercussions. Respecting their rights and decisions throughout the research process is fundamental to keeping the integrity and ethical conduct of the study. There were no biases in interpretations and findings, and data were used purely for research purposes. Additionally, plagiarism was strictly avoided to maintain academic integrity.

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