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## An Exploration of Resources Available to Deaf Children Attending Public and Deaf Community Schools

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An Exploration of Resources Available to Deaf Children Attending Public and Deaf Community  
School

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## ABSTRACT

The purpose of this paper is to explore current literature surrounding the similarities, differences, advantages and disadvantages that Deaf children experience while attending mainstream schools compared to the experiences of Deaf children attending all-Deaf and signing schools. A literature review was conducted using the terms: “mainstream schools” , “signing schools” , “resources” , and “Deaf children” were used. Areas of specific interest included social skills, academic performance, overall mood, and the availability of classroom and communication resources. A review of the literature in these four specific areas revealed mixed findings about which academic environment is more beneficial for Deaf children. As a result, a survey was designed and sent out for completion by participants who are Deaf and attended either mainstream schools or signing schools. These results are discussed, as well as the implications for the education of Deaf children.

## INTRODUCTION

The education system can be quite challenging for children in regard to academic demands, social pressures, and increasing levels of competition between students each year. To ensure success, many students use resources such as small groups, tutors, and technology provided by schools. Now, imagine trying to overcome these obstacles with the added pressure of a hearing loss. Not only are there traditional difficulties to face during the school day, but communication barriers, social isolation, and lack of possible helpful resources can also affect academic performance. This issue should not go unnoticed, as it is affecting more young students than one may think. In fact, 2 to 3 out of every 1000 children born in the United States are diagnosed with a hearing loss (National Institute on Deafness and Other Communication Disorders [NIDCD], 2016). This is cause for major concern in the area of academic growth and development in children across the country.

Contemplation of these statistics led to the formation of research questions, such as the following: Do children who are hard-of-hearing (HOH) and Deaf generally receive the resources that they so crucially need in order to succeed in an environment created for hearing children? How do these learning differences impact the social life of children who have a hearing loss? How do the experiences of children who are deaf or HOH differ from those who attend public schools and those who attend signing schools?

In this paper, current research and the use of survey feedback are explored and analyzed in order to assess the ability of the education system to successfully and appropriately educate, socialize, and encourage children who are deaf or HOH. Key terms used to conduct a literature review include, “mainstream schools” , “signing schools” , “resources” , and “Deaf children”

with databases such as Google scholar, PubMed, and the academic journal database on Western Michigan University's library website.

### CURRENT RESEARCH

In 2003, Calderon and Greenberg assessed twenty-eight children after their graduation from an educational program that they attended from birth until three years of age. A wide variety of factors were assessed for both positive and negative outcomes, such as "language development, early reading skills, and... social-emotional development." The researchers also took into account information regarding the children's hearing losses, the education level achieved by the mothers, the type and amount of communication the children are receiving, and whether or not additional outside resources are being utilized by the families. Ultimately, the authors wanted to discover if parental involvement in their hearing-impaired child's communication and learning would lead to positive outcomes. Data were collected through researcher-child interaction (via the child's preferred mode of communication), questionnaires administered to parents, video footage of interaction between the child and parents, and finally, information from the children's early education program files. Parental involvement was assessed both inside and outside of the education program. Results determined that communication abilities were significantly and positively correlated with higher rates of parental involvement with the child's education. Furthermore, statistical analysis of these variables proved that they were indeed a good measure and predictor of child outcome (Calderon & Greenberg, 2003). This study highlights the importance of parental involvement in a child's growth and development. Parental encouragement and support are the foundation for their child's success in school.

In 2011, McIlroy and Storbeck investigated the stories and backgrounds of deaf individuals as they aged and came into their identities. They explored the differences between certain identities one could assume: deaf, referring to someone who has established themselves as someone of the hearing community; Deaf, indicating someone who identifies within the sign language community; or DeaF, which is described as someone who considers themselves to be bicultural. The study consisted of nine people who are deaf from South Africa, as well as one of the authors' personal accounts of their childhood. As a first step, the authors had the participants fill out a form regarding personal information, such as a description of their current identity as a deaf person, details about their family background, and if sign language is used as their primary or secondary language. Furthermore, two of the subjects were exposed to Deaf culture through a family member while growing up while seven were raised in the hearing world and taught verbal skills.

Interestingly enough, none of the participants elected to identify themselves as bicultural. The next phase in the research was to conduct the interviews, which broke down into three parts: questions centered around "being deaf... school impact... and deaf identity development." The authors then used the thematic content analysis method and critical discourse analysis while reading through the interviews and drawing generalizations and interpretations. Their results showed that each category of the interview revealed some commonalities among the participants. For "being deaf", discussion centered around inclusion, exclusion, and communication variations. The second section, "school impact", uncovered topics relating to academics, personal pride, and again, exclusion. Lastly, the area of "deaf identity development" brought up topics such as exclusion, acceptance, authenticity, fear, and connection. To conclude, McIlroy and Storbeck (2011) summarize that although the journey to deaf identity is continuous and not

without hardship, the participants all alluded to having a sense of pride in themselves as part of the Deaf community, and a desire to connect with the hearing world.

In 2007, Keilmann, Limberger, and Mann explore and assess the psychological and physical well-being of hearing-impaired children in both mainstream and “special school” settings. There were 131 participants in the study including children ages six to eleven, and fifty-three of these children attended mainstream schools while seventy-eight attended special schools. The researchers carried out this study via questionnaires filled out by either the children themselves or the parents of the children. The questionnaire used was the Frankfurter Kinder—Selbstkonzept Inventar which contains statements that require a “fully correct” , “partially correct” , or “not at all correct” response from each child as to how they identify with every statement. Example statements include “I am strong” and “Many people like me.” These responses were scored, added up, and compared to each other as well as normative data samples. The researchers explained that average children yield positive self-perceptions overall. The final results and conclusions of this study showed that hearing-impaired children in mainstream schools tended to score higher on this self-perception questionnaire than hearing-impaired children attending special schools. The authors inferred that those children attending mainstream schools must have a more positive self-perception and scored higher in areas such as assertiveness, making friends, and overall mood. One interesting factor that they explored was that the older hearing-impaired children that were surveyed in mainstream schools were found to have a lower and more negative self-perception than that of younger children. Discussion followed about whether that change could be attributed to typical preteen and adolescent changes in how one views themselves—something that both hearing and hearing-impaired children could experience. To conclude, the authors noted that the overall difference between normal children

and hearing-impaired children do not differ that drastically in most aspects, the difference is present in isolated situations in which the child would need to assert themselves confidently (Keilmann et al., 2007).

In 2011, Theunissen and colleagues conducted a study in order to assess emotional elements, such as depressive symptoms and coping strategies, present in both average-hearing children and hearing-impaired children, and to then compare the two groups. The authors had a subject pool of 200 children between the ages of nine and fifteen gathered via a variety of schools, hospitals, online advertisements, and speech, language, and hearing organizations. Eighty-three of these children were hearing-impaired with either cochlear implants or hearing aids and the other 117 had average hearing. In order to gather their data, self-reports were administered to every child. There were two versions of the questionnaire available for the children: verbal as well as written and/or signed. The questionnaires in use were the *Child Depressive Inventory* (CDI) and the Self-Report Coping Scale. For the CDI, children were required to listen to or read statements such as “I think that somebody loves me” and “I like myself” and to then provide a response of either “no”, “a bit”, or “yes.” For the Coping Scale, statements such as “I yell or shout to let off steam” and “I ask someone in my family for advice” were evaluated with responses ranging from “almost never” correlating to a score of 1, to “almost always” correlating to a score of 5. The data from these questionnaires were collected and compared between the average-hearing children and hearing-impaired children to assess for similarities and differences between both groups. The researchers concluded that coping strategies did not directly correlate with depression in either group, but the hearing-impaired children did report higher amounts of depressive symptoms than average-hearing children (Theunissen et al., 2011).

### INTERPRETATIONS: CURRENT RESEARCH

McIlroy and Storbeck (2011), Keilmann and colleagues (2007), as well as Theunissen and associates (2011) discussed the emotional impact that children with hearing loss may endure as they navigate through school. I found these articles to be interesting, with the former emphasizing the long journey that deaf individuals go through and the latter two focusing on the emotional and social state that the children were currently in as a result of their environments. In addition, the latter two articles both had similar conclusions. The differences between the levels of negative emotions present in children with hearing loss versus children without hearing loss were quite minimal. Calderon and Greenberg (2003), discussed the academic outcomes for children with hearing loss based on the involvement of their parents. I was intrigued by this article and not at all surprised by the results stating that higher levels of parental involvement in their child's school life and home life regarding communication correlated to positive academic achievements.

Although I was able to find articles that gave answers to my questions regarding the emotional and academic impacts that children who are deaf or HOH may experience, I was still left with unanswered questions. Specifically, how is social life impacted for these individuals and is it different for Deaf people who attended public schools? I was also curious about specific resources available to these children in both mainstream and signing schools and if the academic environment determines the quality and amount of resources available. To further explore these topics, I developed a survey about the educational experiences of Deaf individuals.

### METHODS

A survey was developed with faculty advisor Ashely Boza. In order to explore social dynamics and academic resources available in different school settings, elements such as communication preferences, educational resources, peer interaction, and daily experiences were integrated into the questions. This project was approved by Western Michigan University's Human Subjects Institutional Review Board (#19-02-65). The survey was created on Google forms and electronically sent out to a set of participants who had two weeks to respond.

### SURVEY

The survey link was emailed out to eight individuals of our local Deaf community by Ashely Boza and the recipients of the email were allotted two weeks to complete the fifteen questions. The question explored topics related to high school education experience, availability of academic resources, peer interactions, and overall experiences. The questions that composed the survey are as follows:

1. Schools may be described in a variety of ways. Examples include: residential signing schools or day schools, or mainstream public using spoken English. Please describe the type of high school you attended.
2. What is your main form of communication right now?
3. What was your main form of communication while growing up?
4. If you attended a mainstream school, were you in the classroom every day with hearing peers, in a separate classroom, or both?
5. What resources or assisted listening devices did you use in the classroom? Examples: interpreter, transcriber, FM System.
6. Would you consider your teachers helpful? Why or why not?

7. Do you feel as if you had enough resources to successfully attend and graduate high school?
8. How did other children react to you being Deaf/hard of hearing?
9. Was making Hearing friends a difficult task?
10. Was making Deaf friends a difficult task?
11. Would you label your school years as generally positive or negative?
12. Thinking about your school experiences, what would you say is an advantage of the type of school you attended?
13. Thinking about your school experiences, what would you say is a disadvantage of the type of school you attended?
14. If you attended a mainstream public school: As a child, did you wish you had attended a Deaf/signing school instead? Do you have different feelings now?
15. If you attended a Deaf/signing school: As a child, did you wish you had attended a mainstream public school instead? Do you have different feelings now?

## RESULTS

Three participants completed the survey and are identified as Participant *A*, *B*, and *C*. Participant *A* attended an oral program and then transitioned to a residential signing school for most of their academic career. Primarily, *A* uses ASL to communicate now, but grew up using spoken language with family members and ASL with peers and teachers at school. While attending the oral program, *A* was pulled into a classroom with other children from various grade levels who were deaf or HOH. After transitioning into the residential signing school, *A* indicated that a better variety of resources were available, such as teachers knowledgeable with ASL. As a

result of this new environment, *A* states that other children were friendly and receptive, but challenges arose when it came to making friends with hearing children outside of school. Even now, it is easier for *A* to befriend other people who are deaf than it is with people who are hearing. Overall, *A* rates their school years as generally positive and cites opportunities to participate in extracurriculars, teams, and social events as major advantages to their schooling. To conclude, *A* prefers deaf schools over mainstream schools and oral programs.

Participant *B* attended mainstream school and transferred to a residential signing school late in their academic career. Currently, ASL is their main form of communication but grew up using spoken English and ASL. While in the mainstream school, *B* was a part of the classroom setting as the only deaf child among hearing peers and never pulled out for separate instruction. An interpreter was made available for assistance. Although *B* felt that they had enough resources and helpful teacher relationships to be generally successful in school, they mention that there were not enough resources to aid their family during this time. Socially, *B* made hearing friends in early years of education but later years in the mainstream setting presented issues of bullying and rejection. The transition to a residential signing school allowed more opportunities for *B* to develop social skills and gain friendships with other peers who were deaf or HOH. For overall experience, *B* rated their school years as positive with remarks about higher education quality in mainstream school and higher levels of socialization in the residential signing school. Lastly, *B* preferred the residential signing school and would have transferred earlier if it had been possible.

Participant *C* attended mainstream school among all hearing peers. Spoken English and ASL are—and always have been—the primary forms of communication both at home and at school. *C* was consistently around hearing peers and used their cochlear implant and an interpreter as a foundation for successful learning. Teachers were not as resourceful for *C* due to

a lack of understanding of Deaf identity or how to assist *C* in becoming more culturally aware of other resources or people that could be useful. Loneliness was a prominent feeling throughout high school since some children thought *C* was mentally damaged due to their hearing loss. A few close hearing friends developed over time. Befriending other people with hearing losses is much easier, both then and now. An overall negative outlook is had by *C* regarding their school years, with very few advantages to discuss. Improvement of English grammar skills is mentioned as a positive, but lack of socialization and approval of peers overshadow this benefit.

My initial thoughts and reactions to these responses centered around the variety of information that I received. In fact, variety of experience was one of the research topics that curated my interest to create the survey in the first place. The outcome of the survey showed that Participant *A* spent most of their schooling immersed in Deaf culture, Participant *B* experienced both mainstream school and signing school, and Participant *C* was solely exposed to mainstream school surrounded by hearing peers. As a result, I had collected a good representation of different academic environments to fully answer my research questions.

My next topic of investigation centered around the social experiences had by these individuals as they attended school. Questions such as “*How did other children react to you being Deaf/hard of hearing?*”, “*Was making Hearing friends a difficult task?*” and “*Was making Deaf friends a difficult task?*” dive deeper into the specifics of this topic that I was curious to explore. The first question gathered a wide array of answers with Participant *A* stating that they attended school with only Deaf peers, Participant *B* discussing the challenges that came with their later high school years, and Participant *C* highlighting the lack of education and awareness among their peers, as some thought they were “mentally damaged.” The latter two questions presented uniform responses that ultimately acknowledges the difficulty in these individuals’

ability to make hearing friends and the ease it takes to make friends with other people who are deaf or HOH.

Thirdly, I asked more information about the availability of resources in the different school settings and the impact that this had on each person's overall success in school. The survey included questions like, "*What resources or assisted listening devices did you use in the classroom? Examples: interpreter, transcriber, FM System*", "*Would you consider your teachers helpful? Why or why not?*" and "*Do you feel as if you had enough resources to successfully attend and graduate high school?*" to gain more insight on availability of resources and other academic tools. Participant A shed light on the comfortable amount of resources available to them in stating that they could sign directly with their teachers and peers and gave a direct "Yes" in response to the last question in the list for this section. Participant B acknowledged that some teachers took the time to ensure they were keeping up with their academics and had an interpreter available to them, yet they wish that more resources had been available to their family members. This is key in showcasing the struggles that a family unit can experience together. Lastly, Participant C shared that they used a cochlear implant and interpreter but felt that their teachers did not understand their Deaf identity and felt that there was a lack of education for the individual to learn more about and become involved with the Deaf community. This contrasting feedback highlights that—at least in this case of the participant who attended mainstream school—public schools may not be providing the best resources for children who are deaf as well as their families.

To analyze factors relating to overall experience, I asked questions such as, "*Would you label your school years as generally positive or negative?*", "*Thinking about your school experiences, what would you say is an advantage of the type of school you attended?*" and

*“Thinking about your school experiences, what would you say is a disadvantage of the type of school you attended?”* Both Participant A and B chose to label their school years as “positive” for the first question, but I was intrigued by Participant C’s response being split down the middle—negative for social aspects but positive for educational aspects. The advantages and disadvantages that each participant chose to provide were pretty wide spread as far as the responses I received. For Participant A, advantages included the variety of clubs and extracurriculars they could engage in and they had no disadvantages to speak of. Participant B, who attended both mainstream and signing school, said that mainstream school had a better academic environment while the signing school boosted their socialization skills and opportunities. Lastly, Participant C stated that there were no apparent advantages to attending mainstream school, and the disadvantages include the lack of education and awareness of Deaf culture and socialization. Based on this specific feedback, it appears that the overall experiences of those who attended signing schools were generally more positive and socially stimulating than that of the mainstream school experiences. However, Participant C does highlight that as a result of attending public school with a majority of their peers of average hearing abilities, their English grammar and oral skills were much improved.

## DISCUSSION

Overall, this information was crucial and incredibly insightful into the areas that could use growth in both signing schools and mainstream schools. The current literature pointed towards the conclusion of showing no apparent differences in children as far as emotional and purely academic standings are concerned. However, my own research proved that social experiences—which are highly important in developing children—and overall feelings towards

school experience can be vastly different depending on school setting. For signing schools, socialization opportunities are much higher in number and the environment is more uplifting for students with the support of teachers who can competently communicate with children. Yet, some participants indicated that perhaps the actual education and curriculum in these schools are lesser than what is provided in mainstream schools. For mainstream schools, my research shows that they are lacking in support, both socially and culturally, for children who are Deaf or HOH.

For the future, I would like to see an increase in the social, cultural, and academic support for children who are deaf and attending mainstream schools. It comes as no shock that these individuals are able to go through their entire academic careers successfully; however, social stimulation and inclusion is so highly important in a child's life. Perhaps support groups or peer socialization times would be beneficial for these students. Secondly, I hope to see a sturdier bridge formed between schools. Those who are in charge of faculty and staffing of both mainstream schools and signing schools should be encouraged to reach out to the other environment and ask for tips, advice, or general help in these areas that need better growth. The ultimate goal of both schools is to educate children and develop them into successful adults, so collaborating on this goal could heighten success. In conclusion, school environment does not necessarily have to stand as the determining factor with children's success. Adequate resources and support are the foundational elements to a successful academic career for all children.

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