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# Sign Language and Early Childhood Development

Ellen C. Donoghue

*University of Arkansas, Fayetteville*

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Running head: SIGN LANGUAGE AND EARLY CHILDHOOD DEVELOPMENT

Sign Language and Early Childhood Development

Ellie Donoghue

Program in Communication Disorders

Honor's Proposal

**Abstract**

The purpose of this study is to determine the degree to which early childhood professionals from various occupations perceive early childhood language development to be impacted by Sign Language. Early childhood specialists, including teachers, and, speech-language pathologists were asked to participate in this study. Of those asked to participate 79 responses were collected. An electronic questionnaire that included demographic information as well as questions about the contribution of sign language to language development was constructed from the literature. A questionnaire was electronically distributed using Survey Monkey. Findings showed that these early childhood specialist agreed sign language can be beneficial to language development in children.

## **American Sign Language in Early Development**

American Sign Language (ASL) has been used as the main method of communication for deaf individuals since the early 19<sup>th</sup> century. Sign language has grown widely since then and now has many different dialects throughout the world. In the recent literature there is a considerable amount of information on the importance of this mode of communication in the Deaf community. The focus of this study is to better understand how widespread the appreciation of sign languages are to early development by teachers and other early childhood professionals.

### **Review of Literature**

#### **Sign Language**

Sign Languages (SL) are complete and complex languages that use signs made by moving the hands combined with postures of the body and facial expressions for communication. SLs are rule-based systems predominantly used for communication between people who are deaf or hard of hearing. Each culture may use a variation of sign language, but in North America and Canada American Sign Language (ASL) is primarily used.

#### **Deafness vs. Hard of Hearing**

Deafness is referred to as no to little ability to hear (Metzger, 2010). Individuals with deafness have little to no verbal, or spoken, language. Hard of hearing is referred to as functional deafness. Hard of hearing people can, “hear only specific frequencies or sounds within a certain volume range and they may rely heavily upon hearing aids and lip reading” (Metzger, 2010, pg.439). Children with hearing loss use accommodations, such as hearing amplification, cochlear

implants, sign language, and interpreters. These accommodations can be beneficial for those who are deaf or hard of hearing.

### **Sign Language with Communication Disorders**

It is important to address how SL can affect children with disorders. For professionals working in the health and education fields such as speech language pathologists, psychologists, teachers, it is important to know that SL can be beneficial for many children. For example, sign language has been used for children with autism, Down's syndrome, etc. (Bonvillian, 1981). Tincani (2004) conducted research that explained how in many cases sign language can greatly increase communication with autistic children, "for participants, sign language training produced a higher percentage of vocalizations during training." (Tincani, 2004, pg.152).

### **Language Development in Children**

Development for babies who are deaf differs greatly from babies born with normal hearing. A baby with normal hearing will learn the sound of their mother and fathers voice, and learn to cry when they are hungry to let their parents know to feed them. Beginning at birth a baby frequently communicates with his or her caretakers, by using sounds to do so. Babies are able to learn and take in their environment while adapting to constant change in their development. During this time babies are able to take in new languages; this time is crucial in their language development because they have to be constantly learning. As children develop they go through different stages of learning words and beginning to talk. Around 4-6 months babies start to become more responsive usually starting to understand the word "no" they also begin to start babbling.

Babbling, or baby talk, is referred to as when the infant begins experimenting with uttering sounds. It can be described as, "a speech-based phenomenon that reflects the maturation of the

articulatory apparatus responsible for spoken language production” (Petitto, 2006, pg.1493).

Babbling is usually in repetition for example *ba ba ba*, *mo mo mo*, or *da da da*. At about 7-12 months their development has strongly increased since birth. At this age they know familiar faces and their babbling changes into using first words. At one-two years of age the child may start to use short sentences such as, “where’s milk” and they also can start to follow simple commands. During this time the child will like to listen to stories and will enjoy them repeated several times. Between the ages of two-three, a child will start being able to understand more complex commands and their vocabulary should be expanding during this age.

Throughout this period of development it is common that parents might start noticing some speech errors while the child is communicating. During this age it is normal for speech errors to occur as the child’s language starts to develop. From ages three to four children start attending preschool. Their sentences should be much longer than years past and they should be able to understand questions. From ages four to five years old a stranger should be able to understand about 90% of what the child is saying. A child at this age should be able to speak fluently and should be clear in what they are saying. Although not all children will develop along these exact times, it is important for a child to be around these ages in their development (Owens, 2012). If the child is not developing along this developmental time frame it could be cause for concern for language disorders.

### **Baby Signing**

In contrast to the normal development patterns of children with typical hearing, deaf children usually do not speak at the normal developmental time period. Children who are born deaf have no way of knowing what an auditory language sounds like and do not know how to imitate

words. When a child is born deaf it is important for parents or caregivers to begin teaching their child SL and getting the help the child needs to develop their communication. While SL is important for deaf and hard of hearing children, it can also be helpful for hearing children to be used as expressive communication prior to their first word. Baby signing is a great way to get a head start on a child's communication. Baby signing is a type of sign language infants can use in order to communicate with their caregivers. Even though baby signing could be confused with ASL it is considered a simpler form of ASL. The reason that babies do not use the complete form of ASL is because they do not have the fine motor skills yet and caregivers may not be fluent in ASL, thus not exposed to the full and complex language structure. Baby signing is used because it teaches simple words that are functional for a child to use in their environment (milk, more, tired, etc.). Baby signing is a great way of communication for baby and caregiver because the infant can express their needs before they start using words. This makes the infant less frustrated and it helps the parent have a better understanding of their child's wants. Parents have found that baby signing can be extremely helpful during these early times in development (Pizer, 2007).

### **Debate on baby signing**

In her article *The Great Baby Signing Debate*, Gwyneth Doherty-Sneddon (2008) discusses different viewpoints on baby signing. Although baby signing seems to have notable benefits, there are some issues of concern. Doherty-Sneddon brings up a few good points on why baby signing could be an issue. First, "there isn't sufficient research evidence to support baby sign," and second "does the hearing population have the right to 'hijack' sign language?" (Doherty-Sneddon, 2008, p1) The author addresses the concern to which deaf people have on hearing children learning sign language. Some say that it is an "unnecessary luxury," meaning that they are focused more on teaching deaf children their main way of communication while for hearing

children it isn't necessary because they will eventually communicate verbally. A key point in Doherty-Sneddon's article is that it is important to have research that provides sufficient evidence that baby signing provides benefits for children. One excellent point that Doherty-Sneddon brings up in support of baby signing that communication plays a crucial role in child development. In conclusion, no matter if a child is hearing or non-hearing, he/she has the right to the best form of communication possible. If that is baby signing or not it is up to the caregiver in the end.

### **Evidence of Baby Signing**

Although little research has been done on baby signing, the research that has been conducted is very positive (Goodwyn & Acredolo, 2000). It has been shown that baby signing can be beneficial for cognitive and emotional behaviors in infants (Goodwyn & Acredolo, 2000). Goodwyn and Acredolo's study (2000) consisted of 103, 11 month old babies that were split into groups, sign training group and the non-intervention group (control group). Results showed that the signing group reached developmental milestones earlier and found that this continued even when they were tested at age 5 compared to other groups. Goodwyn and Acredolo claim from their extensive research over the past 20 years that a child's IQ can go to "12 points higher" by using sign language in early development (Goodwyn & Acredolo, 2012). In a research study conducted by Pizer (2007) it was found that baby signing reduced "frustration on the part of the child, accelerated spoken language development, improved parent-child bonding, and increased IQ" (Pizer, 2007, pg. 390) With the research that is available baby signing has shown very positive outcomes to language development in children.

### **Summary and questions of the study:**

From this review of the literature it is clear that SL can benefit development of young children whether they are hearing or hard of hearing. What is not clear is how widespread this perspective is across early childhood professionals. Therefore, the goal of this study is to investigate these perspectives across a range of professionals who work with young, developing hearing children. The specific questions of this study are as follows:

1. To what degree do early childhood specialists believe that signing can positively impact the early development of children regardless of hearing status?
2. Do early childhood specialists who have worked with children who are deaf or hard of hearing perceive the contribution of sign language to early development differently than those that do not work with these populations?
3. Do early childhood specialists from different professions have different perspectives on the role of sign language to early language development?

## **Methodology**

### **Participants**

Early childhood specialist, including teachers, and speech language pathologists were the focus to participate in this study. There will be no regulation for occupational specialty, length of time employed in the field, or familiarity with ASL on early development.

### **Materials**

An electronic questionnaire was developed from the literature. This questionnaire included a brief demographic section followed by questions about development over the use of sign language.

## **Procedures**

The questionnaire was electronically distributed using Survey Monkey. The implied consent form approved by IRB with a link to the survey was distributed via educational and professional list serves.

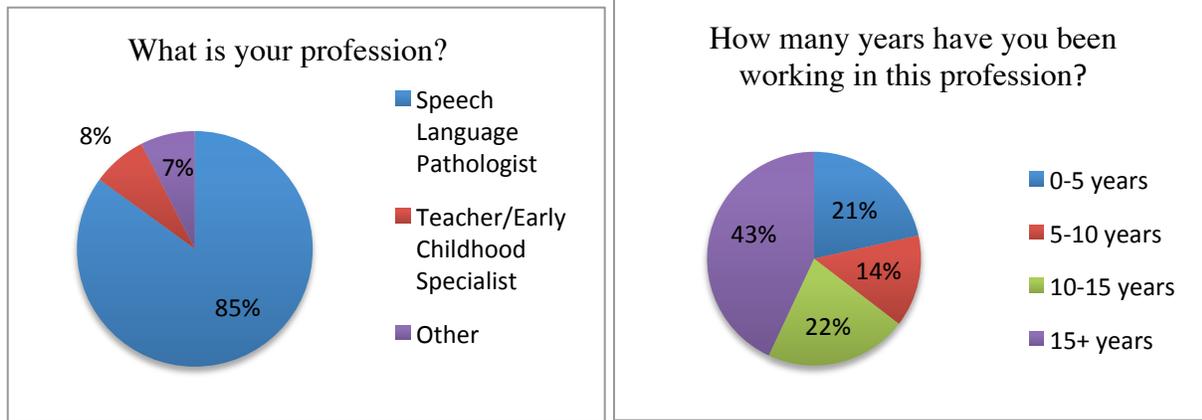
## **Analysis**

Data from the participants was grouped, e.g., profession, experience, educational background, using the demographic information provided by the questionnaire to answer the questions of the study. The analyses that followed are descriptive among the groups.

## **Results**

### **Demographics**

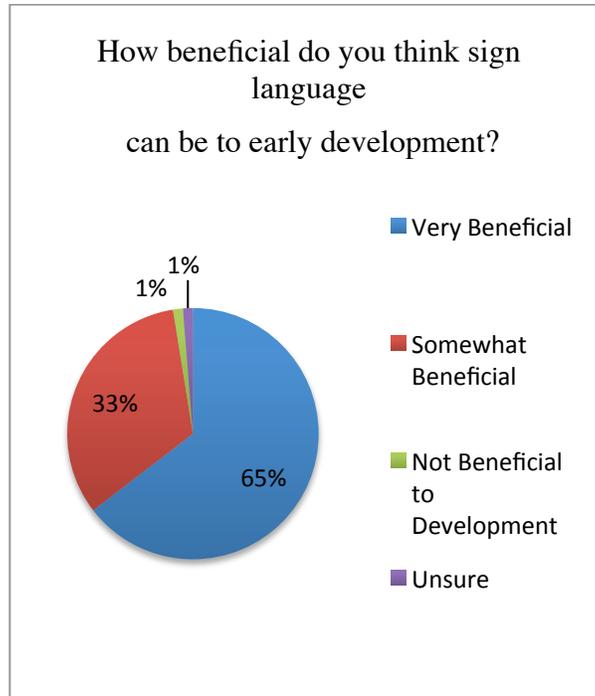
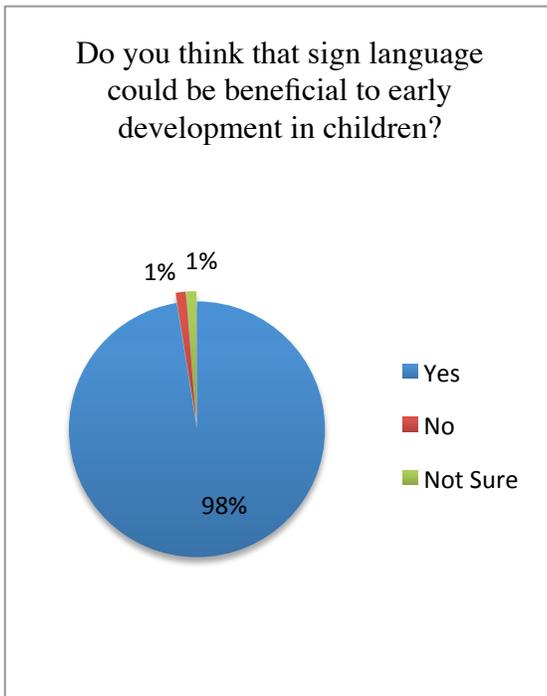
Early childhood specialists including teachers and speech language pathologists (SLPs) were the focus of interest for the questionnaire responses. This survey included 79 participants. Of the responses, speech language pathologists made up the bulk to the data with 85% total, early childhood specialists made up 8%, and other professions not listed made up 7%. The respondents ranged in years of experience in their field. From the data, 21% had 0-5 years' experience, 14% 5-10 years' experience, 22% 10-15 years' experience, and finally 43% had 15 or more years' experience. When asked if these professionals had worked with a child/children with hearing loss 5% never had, 19% had worked with one child, 66% had worked with several children, and 10% had a case load of mostly children with hearing loss. When collecting data the majority of the outreach was to the ASHA (American Speech-Language-Hearing Association) database. Emails were sent out to SLPs to participate in the study. From their responses it is clear that many of the professionals have worked with children with a hearing loss as well as worked with sign language during their profession.



### Research Question One

The research in question one wanted to find out whether early childhood specialists believe that signing can positively impact the early development of children regardless of hearing status.

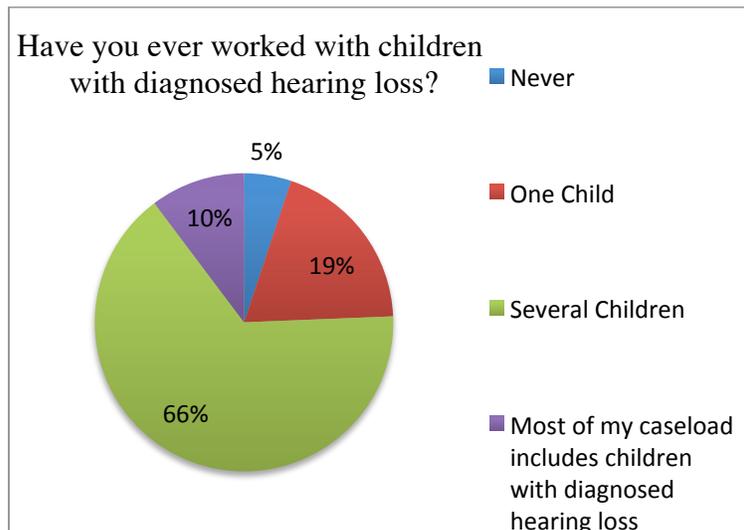
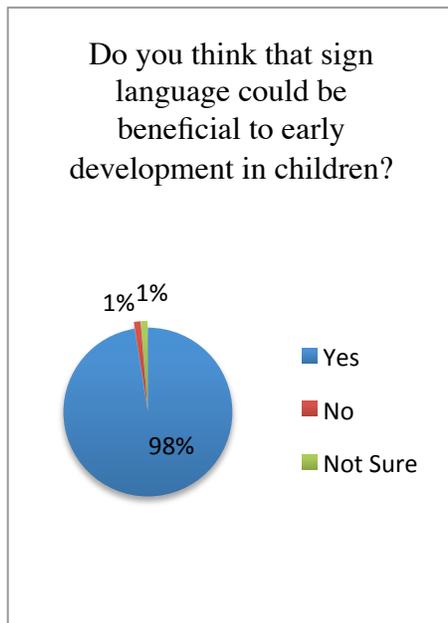
Items 6 and 10 from the survey questionnaire were used to answer this research question. Item 6 found that of the 79 professionals that responded to the survey, 97% answered that they believed sign language could benefit early development. From the data received the results show that these professionals agree that signing can impact early development positively. Item 10 asked the professionals whether they thought sign language was beneficial to early language development, and over half (65%) answered very beneficial. Only one respondent said no, and one was not sure. The other 33% answered somewhat beneficial.



### Research Question Two

Research question two question asked if those early childhood specialists who have worked with children who are deaf or hard of hearing may perceive the contribution of sign language to early language development differently than those that do not work with these populations. Two items of the survey were in response of this question. The first, item 3 asked if respondents had ever worked with a child diagnosed with hearing loss, 95% of the professionals had worked with at least one child with some form of hearing loss. Item 6 asked the professionals if they believed sign language could be beneficial to early language development. Of the 79 respondents, 77 (97%) replied yes. From those surveyed, only 2 (3%) professionals had never worked with a

child with hearing loss; it is unclear whether these respondents view sign language differently. From the data of the other 95% of respondents it is apparent that those who have worked with deaf and hard of hearing individuals do perceive sign language as beneficial to language development.



### Research Question Three

This question asks whether these professionals perceive the role of sign language to early language development differently depending on their profession. To answer this question the items on the survey were looked over in detail for their similarities and differences. Most of the respondents were speech language pathologist and early childhood specialists. The professionals that responded to the survey stated that sign language can greatly benefit early development.

## **Discussion**

The purpose of this study was to find out the views of early childhood specialists' including teachers and speech pathologists' on sign language and its effect to language development. A questionnaire was created to see if the data showed whether or not these professionals felt that sign language had any effects on early development. After reviewing the results of 79 responses, taken from the questionnaire it is clear that those who chose to respond believe that yes in fact, sign language can benefit language development. The questions created asked for profession, experience, and the opinion of sign language and development.

After analyzing the results, it was surprising to see the responses the teachers had. As teachers one would think they would just be focused only on teaching their students typical curriculum, but it was exciting to see that they were interested in seeing how a child can greatly improve their development through sign language. Another unexpected result from the data was the responses from the respondents that were professions other than SLPs and teachers. It is clear that no matter what the profession, those who chose to participate in the study believed that sign language could benefit early development. Originally the survey wanted the response of occupational therapists. After the survey was distributed, this created a challenge when the survey did not reach the professionals in occupational therapy. It was pleasing to see the number of responses from SLPs. One SLP had supportive feedback by sharing a first hand experience she stated, "I found that sign language provided the initial vehicle for communication, significantly reduced frustration and facilitated development." (Baldt, 2014) The data shows that the SLPs involved in the questionnaire had a positive outlook on how sign language could benefit language development.

During this process some limitations did arise. Most of the respondents were SLPs, which is a limitation, due to the fact that majority of the data is based off this professions results. An increase of early childhood specialists' responses would have facilitated the research to be stronger. The professionals that responded did so voluntarily which could mean that they may have had an interest in the topic or had more experience with this topic when presented to take the survey. This research is based of the opinions of the professionals that volunteered the take this survey.

When thinking of future directions for this research it would be interesting to see the parent perspective on this topic. A parent survey could be conducted using a greater number of parents and a wider demographic. Future directions of the study could include collecting more data, but in a different way. Getting the survey out through social media outlets to get a greater number of responses. The next step could be to present this information to parents and school boards. Providing this data will show that those who have worked with sign language have seen a benefit in language development.

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Appendix A –

Questionnaire

1. What is your profession?
  - A) Speech language pathologist
  - B) Teacher/early childhood specialist
  - C) Occupational therapist
  - D) Other
  
2. How many year have you been working in this profession?
  - A) 0-5 years
  - B) 5-10 years
  - C) 10-15 years
  - D) 15+ years
  
3. Have you ever worked with children with a diagnosed hearing loss?
  - A.) Never
  - B.) One child
  - C.) Several children
  - D.) Most of my caseload includes children with a diagnosed hearing loss
  
4. Have you ever worked with a child with one of the following special needs and used sign language?
  - A.) Autism spectrum disorder
  - B.) Down's syndrome
  - C.) Speech impairments
  - D.) All of the above
  - E.) None of the above
  
5. What is your experience with sign language?
  - A) None
  - B) Very little
  - C) Basic
  - D) Expert
  
6. Do you think that sign language could be beneficial to early development in children?
  - A) Yes
  - B) No
  - C) Not sure
  
7. Have you personally used sign language with children?
  - A) Yes
  - B) No
  - C) Not sure

8. If yes on question 4, do you believe that this has helped the child's early development?

- A) Yes
- B) No
- C) Not sure
- D) No on question 4

9. Would you like sign language to be used more in early development in school settings?

- A) Yes
- B) No
- C) Not sure

10. How beneficial do you think sign language can be to early development?

- A) Very beneficial
- B) Somewhat beneficial
- C) Not beneficial to development
- D) Unsure