Teaching Deaf Students American Sign Language:

A Qualitative Phenomenological Study

by

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Abstract

The purpose of the qualitative hermeneutic phenomenological study was to discuss issues of American Sign Language (ASL) literacy related to curriculum and instruction in deaf education classrooms. Deaf educators have little to no ASL curriculum to use and little is known of effective instructional strategies regarding developing ASL literacy skills in deaf children. Goals included improving ASL literacy of deaf students and advancing deaf students' general knowledge acquisition. After the literature overview of modest, recent developments in ASL teaching materials and instruction within deaf education, a qualitative hermeneutic phenomenological study analyzed the ways ASL was taught in deaf education classrooms, along with strategies for improving ASL instruction. An inquiry was made regarding what materials were used to teach ASL and what should be included in an effective ASL curriculum for deaf children. Data collection was conducted through surveys, in-depth, focus groups, and interviews of deaf education teachers. Analysis of the data followed a coding and categorizing process to ensure diligent inquiry in alignment with the research questions. The research paradigm of the specific study follows.

Keywords: American Sign Language (ASL), curriculum, instruction, deaf education, ASL literacy, strategies, bilingualism, cultural, community, acquisition, and language deprivation.

Dedication

To deaf education and ASL teachers, for sharing your heart with your students and making it my

heart as well. Thank you for your service and passion.

Acknowledgements

I would like to express my gratitude to the many who saw me through this dissertation; to all those who provided support, offered comments, allowed me to include their ideas, and assisted me in editing and proofreading. Thank you to my many deaf students for inspiring my dissertation topic. You have given me a passion that will never waver. Thank you to my professional colleagues for sharing your expertise in deaf education and ASL instruction. You have provided meaningful feedback and helped me solicit research participation. I am deeply indebted to all the participants that took part in the study. My success would not have been possible without the guidance of my committee Dr. Richard Herring and Dr. Patricia Krumnow. I am also grateful to Dr. Jazzar for convincing me not to do a mixed methods approach. Many thanks to my husband and children for their patience and encouragement, allowing me the time to write. Special thanks to my mother for her profound belief in my work and I gratefully acknowledge the assistance of Nicolas Coppola for never letting me down.

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Chapter One: Introduction

Deaf children lack the necessary language skills to access knowledge in reading and writing. Since most deaf children are born into hearing families who are not fluent in American Sign Language (ASL) (Mitchell & Karchmer, 2004), the foundation of language fails to take hold, and deaf children often start school with little to no language skills. Research indicates establishing language development early on is a crucial first step in literacy (Lange, Lane-Outlaw, Lange, & Sherwood, 2013). Fluency in ASL is linked to literacy and cognitive and cultural development. Teachers of deaf children are faced with the challenge of developing ASL literacy among deaf students without adequate ASL training or curriculum resources.

The purpose of the qualitative hermeneutic phenomenological research study was to collect information on ASL programs of study and teaching approaches used among deaf educators in the United States. While there is broad agreement ASL is critical in establishing language in deaf children, questions remained regarding effective implementation of ASL instruction and how to construct a successful ASL curriculum among deaf students. Information provided in the research study was intended to provide answers to these questions utilizing surveys, interviews, and focus groups of deaf educators across the United States. Data acquired were used to improve ASL curriculum and instruction for deaf students, and, consequently, literacy among deaf children.

Background of the Study/Problem

Deaf children do not have adequate access to American Sign Language literacy instruction, which is the foundation for all other subjects (Lange et al., 2013). While deaf children lack ASL literacy skills, deaf educators lack the ASL pedagogy to fix the problem, creating limitations on academic success. Language deprivation and lack of educator preparation

necessitated the need for a proper gathering of data regarding ASL curriculum and instructional strategies used among deaf educators in the United States.

Research on the instruction of ASL in deaf education classrooms focused on the description of ASL literacy, the value of community and cultural connection including the home and school, language deprivation among deaf children, challenges in deaf education, diversity within deaf student population, paucity of research, the need for assessment tools and resources, and the efficacy of early ASL exposure to deaf children (Lange et al., 2013). Literature identified the benefits of bilingual (ASL and English) instruction among deaf children at an early age, the need for ASL instructional resources, and the need for ASL instructional strategies to assist deaf education teachers in providing evidence-based practices in developing ASL literacy in deaf children (Swanwick, 2016). Studies revealed ASL is beneficial to deaf children for acquiring literacy. There are not sufficient ASL curriculum resources, standards, or assessment tools to provide adequate ASL instruction and deaf education teachers require data to drive instruction (Wang & Williams, 2014). Case studies in Carolina, Jordan, and Netherlands were reviewed to evaluate the effectiveness of developing L1 ASL curriculum (Al-Zboon, 2016; Connor, Easterbrooks, Lederberg, & Miller, 2014; Dolman & Rook, 2017).

Literature supports the constructivist theory of ASL as a building block to acquiring new knowledge (Gallagher, 2004; Vygotsky, 1980). Some say English, not ASL literacy, should be the primary concern among deaf education discipline (Sugar & Goldberg, 2015). Deaf children need American Sign Language to acquire English literacy. Gaps in literature remain regarding resources and successful approaches. Without understanding the methods and means of impact by which deaf children acquire literacy, developing effective instructional processes is difficult (Connor et al., 2014). Previous research helped to generalize these findings and provided a

means for understanding the research problem and predicting future deaf education ASL instructional trends with greater clarity.

Deaf education has experienced tremendous strides in research and development over the last few decades. The increase in research and development is primarily due to the manifestation of the decline of oral practices and the rise of bilingual practices in deaf education classrooms. Research shows early exposure to a natural signed language lays the groundwork for successful literacy acquisition (Lange et al., 2013). Highly ASL-proficient deaf students achieve higher academic achievement than less fluent peers (Hrastinski & Wilbur, 2016).

With limited availability of specialized ASL curriculum, deaf education teachers are forced to fill the gap. Questions remain regarding the characteristics of successful ASL programs of study, deaf education teaching practices, and curriculum. Such unknowns hinder the development of ASL literacy among deaf children, calling for strategic interventions. The information provided in chapter one was intended to explain the problem statement, the purpose of investigating the problem, the significance of the study, the research questions, theoretical framework, definition of terms, assumptions, scope and delimitations, and limitations.

Problem Statement

Deaf children do not have adequate access to ASL literacy instruction, which is the means of learning all other subjects (Lange et al., 2013). Comparatively, there is inadequate research in ASL curriculum and instructional strategies to support deaf educators in developing ASL skills among deaf students. The background of the problem maintains little emphasis on promoting ASL instruction in schools (Crume, 2013). All students, both hearing and deaf, take English classes every year until graduation. English classes emphasize being able to analyze and explore complex ideas through reading and writing, and as a result, students' vocabulary and

grammar improve. Deaf students cannot rely on spoken English and need to translate English into ASL, requiring mastery of ASL first before English can be understood.

Since deaf student do not take ASL classes, the extent of the problem is widespread, impacting every state in the United States. Deaf students are relying on a minimal knowledge base of ASL to master English and all other subjects. The problem is deaf students need to receive regular training in ASL as received in English. Babies who are born with hearing loss (1.7%) each year, represent approximately 65,156 new deaf children who require deaf education services, in addition to the existing deaf student population (National Centers for Disease Control, 2018). Those impacted by the problem are deaf students, parents, teachers, administration, and community members.

Purpose of the Study

The purpose of the hermeneutic phenomenological research study was to gather data regarding ASL curriculum and instructional strategies used among deaf educators in the United States. The report sought to identify deaf teacher's perceptions, processes, and practices in teaching ASL. Deaf educators are the experts in deaf students' knowledge acquisition within the classroom (Andrews, Hamilton, Dunn, & Clark, 2016). By gathering information from deaf educators' real-life experiences, deaf educators are critical in creating language competent deaf students. Upon gathering a compendium of instructional practices and curriculum suggestions, sound interventions can be recommended. No other studies have been carried out on ASL literacy pedagogy among deaf educators, and no studies have been conducted to identify recommendations for creating an ASL curriculum for deaf students.

For the research, a phenomenological approach was chosen due to an interest in understanding how the participants extracted meaning from shared experiences. Focus groups

allowed educators to use interactions to steer the narrative towards commonalities, providing a broader range of information and an opportunity to add a human aspect to the questionnaire data. Likewise, the interviews verified and clarified the results of the questionnaire, adding detailed information about the perceptions of ASL literacy among deaf students. The experiential approach discovered shared views on ASL instructional practice and curriculum standards among the participants, not revealed in the literature review.

Significance of the Study

Without an analysis of ASL instructional pedagogy, educators cannot address the academic gap between deaf and hearing students. Education business may continue as usual, and deaf education strides may remain to stagnate if the study is not conducted. The study is necessary to develop effective intervention programs for deaf children and improve deaf literacy. Deaf children may continue to fall behind hearing peers in literacy if research in authentic language acquisition, ASL, is not conducted.

The proposed study contributed to the knowledge base by advancing ASL curriculum development for deaf education teachers in the United States. Deaf children have a right to fully accessible education, focused on improving language proficiency in ASL. As a result of the study, an awareness of strategies to improve ASL instruction among deaf children was acquired and shared with deaf educators across the United States. A mailing list was created to interested research participants, allowing access to the results of the questionnaire, including the final research study, allowing deaf educators to use the results to improve the deficit in language competent deaf students.

Research Questions

A qualitative hermeneutic phenomenological study was conducted to identify and improve ASL instructional and curriculum practices within deaf education classrooms. The following questions were used to guide the study:

Research Question One: How is American Sign Language literacy being taught in deaf education classrooms?

Research Question Two: What should be included in an effective American Sign Language curriculum for deaf children?

Theoretical Framework

The study was based on the constructivism theory, which states learning occurs when ideas are constructed through collaboration and social interaction (Vygotsky, 1980). Students should understand identity and others before academic learning takes place (Powell & Kalina, 2009). The outcome is for students to self-reflect and then apply learning to real-world situations.

ASL, by nature, is a constructivist language based on active learning. Hands move and facial expressions shift to align with the implied meaning of the hands. The size and location of similar signs can modify the meaning. Students cannot merely acquire ASL; fluency in ASL is a contextualized process, requiring interaction with other community members, and supporting the theoretical framework of constructivism. Similarly, deaf education is consistent with constructivism as deaf members seek to confront marginalization, advocating for the use of ASL and the right to speak through such language. Deaf representation was a vital part of the study and characterized Deaf autonomy and authority in defining and directing the future of ASL literacy among deaf children. Constructivism was at the core of the research, proving knowledge is socially and culturally constructed (Gallagher, 2004).

Data were collected primarily through ASL by tracking the experiences of those who were most influential in the field-deaf educators. The goal of the approach was to reflect on lived meaning and document the interpretations of these experiences (Merleau-Ponty, 2015). Participant feedback was vital throughout the research to best represent what was intended by the participants (Kafle, 2013). A hermeneutic perspective holds the experiences should be interpreted through a lens of the historicity of culture. Interpretation of the study was based on the social construct of Deafhood and the perspective of the Deaf world. A hermeneutical phenomenological approach allowed the study to be based on the holistic experiences of deaf education teachers while gaining crucial information regarding methods of ASL instruction in primary deaf education classrooms.

Definition of Terms

The following terms introduce commonly used terminology in the field of ASL and deaf education. By providing background regarding distinctive terms commonly used in the field of ASL and deaf education, the reader better understands the context of the terms. Having a foundation of base knowledge in the field helps to comprehend the research. These terms are used intermittently and distinctively throughout the study.

Acquisition: is the development of a skill or the process of comprehending a language (Hall, 2017).

American Sign Language: is a natural, visual language used by the Deaf community in the United States and Canada. ASL has grammatical rules for phonology, morphology, syntax, and pragmatics (Leigh, Andrews, & Harris, 2018).

Bilingualism: is the use of two languages-English and ASL. Bilingualism in education for deaf children has been called bicultural/bilingual (bi/bi) to encompass the Deaf cultural

community as well as the linguistic methods. Bi/bi programs have teachers who know ASL and ASL is the primary language of instruction. ASL and English literacy are taught alongside each other, bridging the two languages (Leigh et al., 2018).

Capital "D" Deaf: represents a group of deaf individuals who use ASL as a primary language, participate in community events, identify as a group, and often separate from the hearing world (Leigh et al., 2018). Deaf proudly identify with deafness, associating with the positive attributes of belonging to the Deaf culture and community, often referred to as the Deaf world.

Cochlear implants: are devices requiring surgery which transmit external sounds directly to the auditory nerve (Amraei, Amirsalari, & Ajallouiyan, 2017).

CODA: child of a Deaf adult (Mounty, Pucci, & Harmon, 2013)

Deafhood: indicates a positive viewpoint of deafness, rather than a medical view of a disability needing to be fixed or cured (Leigh et al., 2018).

The Deaf world: indicates the Deaf people as a whole, sharing common characteristics and communicating in ASL (Leigh et al., 2018).

Deprivation: means lacking an essential need, creating a hardship (Henner, Hoffmeister, Fish, Rosenburg, & DiDonna, 2015).

Early exposure: refers to the critical period of a child's life, newborn to five years old when language learning is most optimal (Hall, 2017).

Fingerspelling: the process of spelling out words by using ASL hand shapes corresponding to written letters (Allen, Letteri, Choi, & Dang, 2014)

Hard of hearing (hoh): represents individuals who have damaged hearing and are not entirely deaf (Phillips, 2016). Hard of hearing individuals may speak or sign and can connect

with the Deaf world and the hearing world (Leigh et al., 2018).

Immersion: is instruction based on extensive exposure to native conditions and surroundings, allowing the student to be actively involved in the language (Leigh et al., 2018).

L1 or Language **1:** represents one's first language, a language a child has been exposed to since birth, not taught directly, but naturally acquired (National Standards in Foreign Education Project, 2015).

*L2 or Language 2***:** represents one's second language, a language acquired through instruction and study (National Standards in Foreign Education Project, 2015).

*Language models***:** are fluent native-like signers, preferably Deaf, who serve as examples to deaf students learning ASL (Mitchell & Karchmer, 2004; Musyoka, 2018).

*Lowercase "d" deaf***:** represents individuals having little to no hearing; the perspective is based on a medical one, not cultural. Most young children who cannot hear are described as deaf since there is no connection to being culturally Deaf until self-reflection and an identity is formed (Leigh et al., 2018).

*Mainstreaming***:** refers to deaf children educated in a public school for one or more classes or can refer to total inclusion in a hearing environment with access to interpreters or hearing aides (Leigh et al., 2018).

Translanguaging: involves the presentation of the content in one language and expecting a product in another language, such as presenting the lesson in ASL and expecting a product in written English (Garate, 2012).

Assumptions

Assumptions within the study included the essential value of ASL to improving literacy among deaf children. ASL was the implicit solution in learning all other subjects. While

significant research has been completed on the positive impact of cochlear implants on literacy among deaf students, the assumption remained implanted deaf children are still deaf and benefit from ASL literacy. Another assumption was all deaf educators within the study are knowledgeable of ASL and practice in a deaf education learning environment. While ASL is a new field, 100% of deaf educators were knowledgeable of some level of ASL.

An additional assumption was the need for a considerable number of research participants, at least 60, to represent the deaf education prekindergarten to fifth grade group as a whole. Saturation of date required a large group to pull from, especially to report an accurate representation of current ASL teaching practices. Receiving participants from different states, varying school backgrounds, philosophies, levels of hearing and experience, assumes the participants represent multiple viewpoints. Deaf educators are catalysts for ASL literacy success utilizing access to effective ASL curriculum and instructional practices.

Because most of the questioning was in ASL, the assumption is the interviewer and transcriber were skilled in ASL. The interviewer was a native ASL user, receiving an Advanced Plus on the Sign Language Proficiency Interview and the transcriber was a certified interpreter. Other assumptions include the participants answered truthfully and in a candid manner and the participants had a sincere interest in participating in the study without any form of coercion or influence.

Scope and Delimitations

The study intended to improve teaching standards of ASL within deaf education classrooms in the United States, limiting the scope of research participants to deaf educators who were certified to teach in prekindergarten to fifth-grade classrooms. Boundaries of the study limited the specific data used, purposely not including data regarding the varying levels of

deafness or the use of cochlear implants. ASL instruction within mainstream classrooms with deaf students was not considered, nor does the study address deaf children of Deaf parents compared to deaf children of hearing parents.

Data address ASL instruction in general deaf education classes grades prekindergarten to fifth grade as a whole. The language used throughout the data collection process was primarily ASL and limited spoken English. By using ASL predominantly, research participants, both hearing and Deaf, have an equal voice and a more authentic representation of the experiences was achieved.

Limitations

Living in Alaska was a limitation, requiring much of the data collection to take place remotely. Half of the focus groups and most of the interviews were conducted remotely, requiring transcript approval from the participants. The research design was based on the collection of stories from deaf educators and created a limitation on the level of control. While the flow of information was managed through specific questioning, the participants drove the narrative and sometimes the conversation was driven off-topic.

Conducting the data collection in American Sign Language (ASL) provided limitations on time and the added responsibility of transcribing the information accurately. Conferences were attended during the summer to gather data face-to-face, creating a line of questioning, which kept the participants focused on the topic, and all interviews and focus groups were video recorded. All transcriptions from the focus groups and interviews were shared and approved by the participants.

Another limitation was the bias against certain teaching philosophies, especially within the focus groups. Oral philosophies were frowned upon and may have discouraged deaf

educators who practiced an oral approach from sharing openly. Educational philosophy bias was less likely during the one-on-one interviews.

Chapter Summary

An overview of the proposed research study was described as a qualitative hermeneutic phenomenological analysis on American Sign Language (ASL) curriculum and instructional practices within deaf education classrooms. Background of the study and statement of the problem was shared, along with the purpose of the study. The study's significance and potential impact were detailed, including the contribution to the expanse of studies in the field of ASL curriculum and instruction for deaf students and providing strategies for improvement for deaf education teachers and ASL literacy among deaf students.

Research questions were listed along with the theoretical base, which was a constructivist approach where ideas were constructed through collaboration and social interaction. Terminology was defined within the context of the application to the research. Assumptions and scope of delimitations were explained to provide context to the study.

Limitations were communicated including the location of the researcher requiring remote data collection, the nature of the research design using a collection of stories allowing participants to drive the narrative, and the reliance on ASL to collect data, which added to the responsibility of proper ASL use and transcription. Description of how limitations were managed served as proof of controlled variables. A literature review is presented in chapter two to reveal previous studies on ASL curriculum and instruction among deaf educators in deaf education classrooms.

Chapter Two: Literature Review

Deaf educators, families, schools, and communities understand the importance of American Sign Language (ASL) literacy in the classroom and the impact on linguistic progress. Studies have been conducted on the need for strategies to be implemented to improve deaf students' ASL mastery. Chapter two review of literature on ASL, seen through a hermeneutic phenomenological approach, shares a comprehensive look at research regarding ASL curriculum and instruction. Topics covered include ASL literacy, community and cultural connections, language deprivation, challenges in deaf education past and present, diversity in deaf student population, paucity of research, need for assessment tools, need for ASL resources, early ASL exposure, benefits of bilingual practices, effective ASL instructional strategies, quality ASL curriculum written for deaf students, and case studies. Every year, 10,000 babies are born in America with deafness and experts agree, the benefits of sign language learning outweigh the risks (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). No research exists showing instruction of ASL is harmful to deaf students. Parents and educators should prepare to provide the most effectual learning environment for deaf children and experts agree early and systematic exposure to ASL is the answer (Henner, Caldwell-Harris, Novogrodsky, & Hoffmeister, 2016).

Little is known regarding American Sign Language (ASL) literacy practices in deaf children, allowing myths and misunderstandings to be presented as fact (Henner et al., 2016). Research does indicate ASL is the most accessible and complete language, which plays to the strength of deaf children (King, 2016). Knowing the limitations of research and misconceptions of ASL practices, the study built upon research to ask deaf educators how ASL literacy was being taught in deaf education classrooms and what precisely should be included in an effective

ASL curriculum for deaf children. The purpose was to improve deaf students' ASL literacy, and, as a result, improve the general acquisition of knowledge. By using a qualitative hermeneutic phenomenological approach, the study served to analyze the ways ASL literacy was taught in deaf education classrooms and determine what should be included or omitted in an effective ASL curriculum for deaf children.

The review of research literature begins with background information to trace the meaning of important terminology relevant to the study. ASL literacy is described, along with an explanation of the connection between ASL and language development in deaf children. Community and cultural connection were fundamental themes explored, as seen through a constructivist lens. A synthesis regarding the importance of deaf children's social connection at home, school, and the community was investigated, along with the influence of culture. Challenges such as language deprivation, limitations in deaf education, and delays in language exposure were revealed. Opportunities are described including bilingual practices, effective instructional strategies, and quality ASL curriculum written for deaf students.

A counterargument response was provided against the need for auditory stimulation and the lack of evidence regarding the benefits of ASL. The methodology approach was defined and defended. Gaps in literature regarding similar research were shared. Chapter two fully identified areas of prior scholarship, while providing a connection to the proposed research study.

Literature Search Strategy

Research was conducted by performing a search based on the concepts of American Sign Language (ASL) curriculum and instruction focused on deaf and hard of hearing students. A second important strategy was to search through respected Deaf journals such as Journal of Deaf Studies and Deaf Education and Journal of Deaf Studies and Deaf Education. In the

unexpurgated search for relevant information, specific terms such as cochlear implants and hearing students were consequently avoided. There was a plethora of research regarding cochlear implants and the consequential impact on English literacy within the deaf education system and the effects on deaf students. While hearing students' fascination with ASL has elicited studies regarding the impact of ASL on hearing students, these studies serve a different population.

During the research process, several new sources of information presented as a matter of course, naturally. ACE's library and Google Scholar were the primary databases utilized for literature sources and key search terms included: American Sign Language, ASL literacy, deaf education, ASL curriculum, ASL instruction, ASL acquisition, and bilingualism. While ASL is a known acronym for American Sign Language, search parameters included the acronym and full phrase to ensure a complete search. A combination of search terms included ASL curriculum and instruction, Deaf community, early exposure to ASL, deaf language deprivation, challenges, challenges and strategies in deaf education, ASL acquisition, language models, and bicultural-bilingual instruction.

Specific search terms such as play development and language models were explored concerning both hearing and deaf children to provide a comparative analysis of the impact on both groups (Musyoka, 2018). Known counterargument terminology such as auditory stimulation and the negative impacts of ASL on deaf children were accessed to provide a comprehensive understanding of the phenomenon. Searches using variations of keywords and phrases were utilized until repetition of such actions yielded no new literature, achieving a depth of information, allowing acquisition of new information.

Theoretical Framework

The study was based on the constructivism theory (Vygotsky, 1980), which states

learning occurs when ideas are constructed through collaboration and social interaction. Students have to understand self-reflection and others before academic learning can take place (Powell & Kalina, 2009). Communication is paramount in striving for linguistic and academic success, resulting in students learning about identity, and, respectively, can apply learning to academics. Eventually, the learning transfers into real world situations. Linguistic comprehensions are created through interactions with others (Creswell, 2013a), and language becomes a guide for these relational interactions. Language-cultural relationship is critical in supporting the development of a child's identity and social involvement. The shared use of ASL in the Deaf community is fundamental to Deaf culture and is what promotes solidarity within the group (Huang, 2017).

For example, a deaf child born into a hearing family may have limited access to ASL and Deaf culture, restricting meaning-making opportunities. Learning is more than the assimilation by students of new knowledge; learning is the process of integrating students into a knowledge community. A constructivist approach maintains a deaf child is limited to acquiring new knowledge until integrated into a knowledge community. From this viewpoint, learning and identity formation require engagement within a shared group (Kristoffersen & Simonsen, 2016).

If deaf children become full members of a deaf bilingual preschool community, engagement naturally generates communication, information sharing, and relationships, helping children learn from peers. Deaf children in preschools participate in numerous interactions such as: playing, learning, eating, coloring, and, ultimately, are constructing identities allowing learning through a community of practice (Kristoffersen & Simonsen, 2016; Musyoka, 2018). Instinctive exchanges through play are key for deaf children to develop language.

Using a hermeneutic phenomenological approach, the constructivism theory was applied

in the study by asking the research participants to openly describe opinions and experiences regarding ASL literacy in classrooms and surrounding cultural exchanges. In phenomenological research, data collection and meaning making are carried out simultaneously, creating more insightful conclusions for understudying social structures. Emphasis was on a more detailed understanding of phenomena embedded in the opinions and perspectives of the research participants (Crowther, Ironside, Spence, & Smythe, 2016). The study highlighted the research participants as the focus of the study, rather than hiding the participants and describing generalized folk wisdom.

Hermeneutic research uncovers viewpoints of phenomena rarely noticed, described, or taken in account. The aim was to illuminate the essential dimensions of human experience, which are often forgotten (Crowther et al., 2016). Deaf students often fall under the forgotten category. Only recently has deafness received due diligence in regard to improved education, access to instruction, public support, and research (Dammeyer & Marschark, 2016).

Additionally, hermeneutic phenomenology allows for in-depth conversations with the research participants, reflecting profoundly on what the participants have to say, revealing what lies between the conversations and beyond the words while staying true to the phenomenon of interest (Crowther et al., 2016). Crafting the conversations into authentic stories creates a provocative way to compel attention and provoke action (Manen, 2016). Interpretation of the participant's experiences collectively provided new insight into the phenomenon of ASL curriculum and instruction and a constructivist approach shaped the conversation to be more analytical rather than descriptive, providing a bigger picture of the phenomenon.

Research Literature Review

Literature identifies research categories regarding ASL curriculum and instruction among deaf students with a hermeneutic phenomenological approach, relying on the objective interpretation of the studies (Kafle, 2013). Categories are clarified and provide a means for constructing valuable ASL literacy educational trends. An analysis of existing literature gives new insights into how to develop ASL literacy.

American Sign Language Literacy

Among the most prevailing assumptions in education is the belief reading and writing are necessary for developing literacy. American Sign Language (ASL) literacy relies on neither of these, requiring a more complex definition. Christie and Wilkins described ASL literacy as having three components: functional, which involves necessary language skills, enabling a person to use ASL to communicate effectively; cultural, which requires shared experiences within a social group (explained further in the next section); and critical, which relates to the use of ASL literature (1997). Czubek adamantly asserted ASL literacy is a closer form of literacy than the written word, since writing is two degrees removed from thought, meaning a written word represents a spoken word, which stands for a specific meaning (2006). ASL, similar to the spoken word, simply stands for something; ASL is only one degree removed from the original thought (Czubek, 2006).

Another definition of ASL literacy is visual sign phonology, which is the human brain's capacity to segment, categorize, and discern silent segmental linguistic patterning (Petitto, Langdon, Stone, Andriola, Kartheiser, & Cochran, 2016). For example, a deaf child with early exposure to sign language develops visual sign phonology, facilitating early decoding of written English in young deaf readers (Petitto, Langdon, Stone, Andriola, Kartheiser, & Cochran, 2016).

Fingerspelling is another form of ASL literacy, which allows transference from actual sign to print. Together, fingerspelling and ASL phonological understanding can improve phonological-orthographic mapping, thereby allowing skilled reading to be developed in deaf children using sign language (Petitto, Langdon, Stone, Andriola, Kartheiser, & Cochran, 2016). The knowledge of ASL literacy provides a new understanding of how to improve and quantify literacy in deaf and hard of hearing children.

Community and Cultural Connection

While curriculum and instruction are easy identifiers in improving American Sign Language (ASL) literacy among deaf and hard of hearing children, such overlooked influences are the importance of community and cultural interactions. A community can mean a deaf child's family, school environment, or social surroundings. Each of these community components can fulfill the vital role of guiding social interactions and help to establish a deaf child's healthy identity.

A deaf child needs to be part of a language and cognitive ecosystem in which unambiguous linguistic input and rich interaction with print prepare the child for both the acquisition of basic interpersonal communication skills and for academic language development (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015, p. 173).

Community in the Home. Most children are socialized into literacy from an early age through everyday interactions, conversations, and experiences with family and social surroundings, establishing a sense of community. On the whole, deaf children have limited access to these interactions (Kristoffersen & Simonsen, 2016). The majority of deaf children are born into hearing families (90%), many of whom do not use sign language in the home. Only 10% of deaf children who do have a Deaf parent, and an even smaller percentage (2.76%) have

two Deaf parents, which is the environment most likely to use sign language communication in the home (Mitchell & Karchmer, 2004).

In homes where there is only one Deaf parent, speech is more commonly used than sign language use. Sign language use in the home is more common with two hearing parents, compared to homes with one Deaf parent and one hearing parent (Mitchell & Karchmer, 2004). The data shows deaf children are likely to be born into a limited social environment, lacking a sense of community. Deaf children generally experience isolation from a young age and are likely deprived of connections, which leads to literacy development and fluency.

Deaf adults report constant lack of accessible communication is a common reason for childhood trauma (Anderson, Wolf Craig, Hall, & Ziedonis, 2016). Wyatte Hall calls such a phenomenon of the deaf being unable to understand family discussions the dinner table syndrome (2017). Dinner table syndrome is a term created from the frequent occurrence of deaf children seated at the dinner table, surrounded by family members having small conversations without including the deaf child. Most hearing families do not sign these seemingly unimportant communication exchanges unless the deaf child is directly involved in the information. Signed conversations are often limited to direct conversations with the deaf child. When family members do not practice inclusion of family interactions, the deaf child misses valuable language development.

In one study, statistics reported Deaf parents were 80% more likely to include a deaf child in indirect family communications when compared to hearing parents (Hall, Smith, Sutter, DeWindt, & Dye, 2018). For contextual learning possibilities, exposure to indirect family contact is critical (Hall et al., 2018). The context of language deprivation influences future learning

opportunities for students and is even associated with a deaf child's future quality of life (Hall et al., 2018).

Many hearing families worry about becoming experts in signing. Studies show the signing standard of the family is much less important than the connection between the family and the child (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). Deaf children who sign with family members exhibit early language expressiveness and an overall positive attitude towards being Deaf, which is an essential part of establishing a healthy Deaf identity (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). Family community alone is not sufficient to meet the community and cultural needs of deaf children. As the child grows, more time is spent away from home and social interactions with others become increasingly important. Deaf children with sign language can adapt to various social situations and communities without difficulty and are not confined to communicating with only family and friends (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). Literacy does not begin in a classroom; literacy evolves from social interactions, both direct and indirect (Kristoffersen & Simonsen, 2016).

Community in School. Given the common shortcomings of hearing families not signing in the home, most deaf children's first systematic experience with American Sign Language (ASL) is in the classroom. The responsibility for language development in deaf children substantially lies upon deaf educators who should help deaf children to discover language utilizing academic and social interactions with peers. Kristoffersen and Simonsen advocate placing deaf preschool children in a non-mixed hearing and deaf group, since there is considerable risk of deaf children being excluded from conversations if placed in a mainstream classroom (2016).

Many deaf children already experience isolation at home, necessitating the importance of the school community environment as a hot spot of interaction. Deaf children need to be around other deaf children, fostering interactions with one another and creating as many authentic conversations as possible, while participating in Deaf community interactions. Developing a shared exploration of communication links language to value and instills the groundwork for complete literacy.

Social community. Hearing parents and deaf peers, regardless of ASL fluency, are hardly expert ASL models. Proper language production in all its complexities includes the use in a culture (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). There are many signing behaviors Deaf adults exhibit which cannot be taught outside of a natural signing environment; for example: eye gaze, attention-getting, rate and size of signing, and modifying sign locations to become more visually accessible (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). Interacting comfortably with the Deaf out in the community, establishes positive language opportunities, developing cognitive-linguistic skills, translating to successful learning.

Cultural community. Along with home, school, and social community connections, cultural identity plays a vital role in developing language. Communication is a gateway to social interaction, a store of cultural information, and mark of cultural self (Huang, 2017). In a recent comparison case study of the use of ASL, English, and Chinese in two families with deaf children, the deaf children were interviewed as adolescents to assess how language use in the home impacted various cultural identities (Huang, 2017). Within both cases, the deaf identified a secure cultural connection to both families- the Cantonese heritage and the Deaf community (Huang, 2017). The common shared languages among the family members helped build a

trusting and supportive relationship. Language establishes cultural identification within a community and the more positive relationship deaf children have to language/s, the higher social participation at home and out in the world.

Another example of the importance of community and cultural connection occurred in the 1800s at Martha's Vineyard, an island off the coast of Massachusetts. A large population of deafness was present due to the deaf gene being passed down generation after generation (Groce, 1985). Sign language was commonly used, and deaf community members were well-integrated with the hearing. Island society adapted to the Deaf, learning sign language, breaking down barriers between the Deaf and hearing population.

Rather than requiring the Deaf to adapt to the hearing, the hearing evolved to meet the needs of the Deaf within the community, resulting in an inclusive society (Groce, 1985). Deaf and hearing members alike were equals on Martha Vineyard, unique for the early 19th century, clearly indicating how language and culture are tightly woven within a community to help create identity, maximizing cognitive, linguistic, social, and emotional development (Huang, 2017). Children require language learning from friends, teachers, and the community (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015).

Language Deprivation

Deprivation of language occurs when deaf children receive inadequate exposure to American Sign Language (ASL) from birth and cannot access spoken language (Henner et al., 2016). Loving families who work diligently to communicate with a deaf child can still deprive the child of language unknowingly. An example is exaggerated spoken language in an attempt to include the deaf child in family interactions. Often, these actions stigmatize deaf children causing withdrawal and self-isolation. Deaf children do not want to be spoken to in a

condescending way and prefer isolation to patronage. Most frequently, language deprivation is the result of parents moderating the communication choices for the child. According to Gallaudet Research Institute, less than 8% of deaf children receive consistent and fluent use of ASL (2011).

Language deprivation, not hearing loss, as is commonly believed, is the cause of cognitive delay. In a comparison study of deaf and hearing children with and without language, deaf children who were native signers produced academic scores similar to hearing peers with language (Bortfeld, Hall, Lillo-Martin, & Eigsti, 2017). Comparatively, deaf children without language scored similarly to hearing peers without language, concluding success in the classroom depends on language and cognitive skills, not on the ability to hear.

Challenges in Deaf Education Past and Present

While deaf education has overcome several barriers in providing a productive ASL environment to deaf children, challenges remain. Historical prejudice against ASL was the first challenge. The Milan Conference passed a resolution in the 1880s prohibiting the use of ASL in the education of deaf students, creating a language war, as experts clashed in a dispute about whether signed or spoken language should be used as the primary language of instruction and communication with the deaf and hard of hearing (Maiorana-Bases, 2018). The controversy set a precedent for centuries to come, encouraging discrimination against Deaf educators and establishing a preference for a speech-only educational method (Moores, 2018).

The 1960s marked a significant evolution in the perception of the education of the deaf, including the value of ASL. Developments revealed the benefits of ASL in deaf education. As a result, the use of signs increased rapidly (Moores, 2018), though lacking the authentic signing culture of the Deaf community. Two decades later, ASL would take hold as the most effective means for developing language and, ultimately, general knowledge in deaf children.

A 2017 study surveyed 495 teachers of students who were deaf or hard of hearing and inquired about job satisfaction and the challenges faced within deaf education (Luckner & Dorn). Among the most significant challenges listed were required state assessments for deaf students, lack of Deaf adult role models, deficiency in deaf education professional development, amount of required paperwork, shortage of time to collaborate with staff and families, and absence of family involvement (Luckner & Dorn, 2017). These negative trends identified by deaf educators added to the complexities of having a positive impact on deaf students' achievement.

Diversity in Deaf Student Population

A challenge deaf educators face lies in the diversity of the deaf population and varying language approaches. Maiorana-Bases asserts, perhaps no amount of research can assess the validity or wrongness of any particular method as individuals who are deaf and hard of hearing individuals are far too complex to have education classified in such absolutes (2018). Many deaf children have multiple disabilities and providing instruction to suit children with different abilities is a formidable task. Data showed approximately 40% of deaf and hard of hearing students have an additional disability (Gallaudet Research Institute, 2013). Since many deaf students face additional disabilities, deaf educators are dealing with other hardships, compounding the issues faced. There is no single option for educational placement for deaf students and, as a result, students attend a range of educational settings including deaf education, traditional, mainstream, special education, and specially designed programs (Musyoka, Gentry, & Meek, 2017). As a result, Deaf educators should adapt to meet the unique needs of diverse students.

Paucity of Research

The aggregate of Deaf education research is not adequate. ASL is notably the fastest-

growing foreign language taught in secondary institutions; nearly 7.6% of college students are learning ASL (Looney & Lusin, 2018), making ASL the third most common foreign language learned. Considering the surge in ASL popularity, the limited research in ASL curriculum and instruction among deaf students across the board is disparaging.

With little information regarding deaf classroom ASL teaching practices, the effectiveness of ASL on literacy within deaf student populations is difficult to judge. As a result, teachers are forced to construct reading instruction for deaf children on a limited and fragile basis of evidence (Knoors, 2007). Professionals agree pedagogy should be research-based and with a weak evidence base in the field of deaf education, designing curriculum and instruction is a guessing game. Replication of these types of research in varying contexts is needed (Knoors, 2007).

Future research should focus on intervention and curriculum strategies for deaf children's literacy acquisition (Harris, Terlektsi, & Kyle, 2017a). Studies have already consistently shown deaf children are not making age-appropriate gains in reading and comprehension (Harris, et al., 2017a). There is no data available to guide instructional decisions regarding students' American Sign Language (ASL) competencies and recommended progress (Beal-Alvarez, 2016). The next step is finding solutions. High-quality research is not yet sufficiently available to determine evidence-based practices. Instructional approaches and strategies are urgently needed to best promote the development of deaf and hard of hearing students and provide evidence-based practice for future deaf educators (Wang & Williams, 2014).

Need for Assessment Tools

Deaf educators lack accurate assessments to measure deaf children's language skills (Knoors, 2007), making setting goals for deaf students tricky. There is a need to develop a tool to

measure and evaluate learning outcomes. While the need for formative ASL assessments is essential, there is no evidence deaf educators are equipped to utilize the resulting data (Strassman, Marashian, & Memon, 2019). ASL assessment and training to interpret and utilize the data should coincide.

Need for American Sign Language Resources

Simply stated, there is a lack of ASL resources for deaf children. Deaf educators do not have access to artifacts to use as visuals to aid in literacy instruction (Kristoffersen & Simonsen, 2016). While experts agree bilingual practices are useful, there are limited data, frameworks, and standards to guide actual implementation (Beal-Alvarez, 2016). Designing effective ASL curriculum and resources for deaf students is a necessary step in achieving literacy among our deaf and hard of hearing students. Deaf education teachers spend a majority of the time figuring out how to create instructional materials from general education curriculum resources to meet the unique needs of deaf students, while, aligning curriculum with state and national standards (Andrews, Hamilton, Dunn, & Clark, 2016; Musyoka et al., 2017). There is an absence of curriculum specifically designed for deaf and hard of hearing students.

Recent ASL curriculum development has been directed to learners who are not deaf (Snoddon, 2018), focusing specifically on the needs of hearing students. Creating adequate ASL curriculum resources for the deaf necessitates the need for specialized knowledge about a small and limited group of learners. Considering the small financial return on selling deaf education curriculum, a reliance on education publishers to develop these resources cannot be relied upon. Curriculum resources for deaf children have been based on adaptive teaching and introspective judgments (De Klerk, Fortgens, & Van der Eijk, 2015). The field of American Sign Language

and deaf education should fulfill the task of creating ASL curriculum for deaf through research, cooperation, and implementation, bridging the gap between research and practice.

The American Sign Language Teacher's Association (ASLTA) presented ASL goals for kindergarten to college hearing students (Ashton, Cagle, Kurz, Newell, Peterson, & Zinza, 2011). American Council of Teaching Foreign Languages (ACTFL) included words such as "signed" and "viewed" in the list of Can-Do statements to account for the inclusion of American Sign Language (National Standards in Foreign Education Project, 2015). Most recently, the K-12 ASL Content Standards were published (Laurent Clerc National Deaf Education Center, 2018). These are small steps in consideration of such a substantial gap in ASL resources. Such lack of access to ASL literacy standards calls for considerable development of resources (Kristoffersen & Simonsen, 2016).

Early Exposure to American Sign Language

There is a wealth of research supporting American Sign Language (ASL) early exposure provides the best outcome for deaf children, indicating the first five years of life are the most critical years of language development (Allen, Letteri, Choi, & Dang, 2014; Allen, 2015; Hall, 2017; Jasińska & Petitto, 2018). During these critical years, there is a high degree of brain plasticity and gray matter appears to decrease in certain parts of the brain as language is acquired (Hall, 2017). A brain imaging study showed the dramatic differences between language exposure during the critical age of acquisition (birth to five years old) and the adult years. The result was staggering. Early exposure demonstrated more activation in the anterior language brain region; adult learners stored new language in the posterior visual brain region, which is a far less efficient means of language processing (Hall, 2017). When language is exposed early, the brain

stores the information in the anterior region, a more coveted space, allowing children to move back and forth between languages quickly.

Deaf children's early exposure to ASL has profound implications for the course of life, including the development of literacy (Allen, 2015). Deaf children who are exposed to a visual language early on have many cognitive language and social benefits when starting at school relative to those who have poor language experience (Allen, Letteri, Choi, & Dang, 2014). Early exposure to ASL advances the development of English skills in deaf children (Allen, 2015). Jasińska and Petitto report on the literary advantages early bilingualism brings; the window of linguistic opportunity is small, and timing is crucial (2018). The language and literacy advantage of bilingualism is available to children who receive bilingual exposure at the beginning of formal education in the new language (Jasińska & Petitto, 2018). Early exposed bilinguals outperform monolinguals in reading acquisition (Jasińska & Petitto, 2018). In addition to the neurobiological and cognitive advantages, early language exposure improves deaf children's socioemotional readiness to learn (Allen et al., 2014), forming an approach to learning.

Studies have connected the early exposure of language within deaf children as a means to combat negative behaviors commonly exhibited in deaf children. Impulsivity, a trait known to be frequently reported in deaf children, was found to be mitigated by early language experience (Allen et al., 2014). With no time to wait, specialist believe by five years of age, children need to be introduced to an accessible language on a daily and consistent basis in order to acquire full language skills (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). Research has repeatedly shown exposure to an ASL-rich language environment during the early years contributes considerably to later literacy and academic achievement.

Benefits of Bilingual Practices

Bilingual education develops social and academic skills both in ASL and English. The goal is simultaneous access to both languages, developing fluency in both. Studies support hearing loss increases the risk of language delay, causing difficulties among deaf and hard of hearing children learning to read and write (Andrews et al., 2016; Connor, Easterbrooks, Lederberg, & Miller, 2014; Dammeyer & Marschark, 2016; Harris, Terlektsi, & Kyle, 2017b).

There is no empirical evidence supporting ASL exposure causes cognitive harm to literacy; in fact, growing research indicates quite the opposite is true. A study of cochlear implanted children found the use of sign language significantly benefits cognitive outcomes (Amraei, Amirsalari, & Ajallouiyan, 2017). In a case study comparing the academic growth of deaf students instructed through various models support the efficacy of an ASL/English bilingual program (Hrastinski & Wilbur, 2016; Lange, Lane-Outlaw, Lange, & Sherwood, 2013). Since ASL and English bilingual programs are relatively new in the academic world, research is essential to give an account of the success and failures of bilingual education for deaf students (Lange et al., 2013).

Young deaf children who are exposed to American Sign Language and English can reach significant language milestones in both languages, showing advantages in reading compared to those without early exposure to ASL (Petitto, Langdon, Stone, Andriola, Kartheiser, & Cochran, 2016). Deaf students with Deaf parents score higher than same-age peers with hearing parents (Beal-Alvarez, 2016). While deaf children generally have hearing parents, most hearing parents are not adequate ASL language models (Mitchell & Karchmer, 2004). Most deaf students have limited exposure to ASL, often only receiving ASL interaction at school.

Exposure to ASL instruction is imperative, maximizing daily ASL classroom instruction (Crume, 2013). Because 95% of deaf children lack daily exposure to language before starting school, spoke or signed, (Bortfeld et al., 2017), academic deficits among deaf children are unfortunately prevalent. If deaf children's poor academic success is linked to language deprivation, then these deficits can be prevented utilizing early intervention and formal education of American Sign Language (Hall et al., 2018; Jasińska & Petitto, 2018).

A bilingual approach effectively ensures the child can develop linguistic competence (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). Children have a great ability to learn multiple languages quickly and the more languages children learn, the better children can communicate. Deaf children's learning of English seems to benefit from having even a moderate level of ASL fluency (Rudner, Andin, Rönnberg, Heimann, Hermansson, Nelson, & Tjus, 2015). In deaf children, ASL and spoken English work together (Humphries, Kushalnagar, Mathur, Napoli, Padden, Rathmann, & Smith, 2017). Increased evidence suggests learning to sign does not undermine the ability of deaf children to learn English. Sign language involvement in deaf children's development opens the path to language and cognitive growth that enhances even spoken language (Humphries, Kushalnagar, Mathur, Napoli, Padden, Rathmann, & Smith, 2017). Print literacy skills are positively impacted by ASL fluency (Clark, Hauser, Miller, Kargin, Rathmann, Guldenoglu, & …Israel, 2014).

Bilinguals have two labels for the same thing, affording access to two vocabularies and two cultures, instead of one. For example, a deaf child learns the sign for "teacher" and the English word "teacher;" both are different labels, one visual sign and one English word. Deaf children apply both labels to the word, and when accessing the concept later, deaf children can pull from two places, using ASL or English vocabulary. In a comparison study of early

bilinguals (French and English), late bilinguals, and monolinguals (English only), early

bilinguals outperformed both monolinguals and late bilinguals in phonology, passage

comprehension, synonym generation, and antonym generation (Jasińska & Petitto, 2018). Such

studies dispel notions of the negative impact of bilingualism and, subsequently, the impact of

ASL on the development of English literacy and cognitive skills.

Effective American Sign Language Instructional Strategies

Researchers agree ASL resources are not yet sufficiently and widely available (Harris et

al., 2017a; Rudner, Andin, Rönnberg, Heimann, Hermansson, Nelson, & Tjus, 2015) and, as a

result, deaf education teachers are limited in the ability to determine evidence-based instructional

practices. Deaf education teachers are forced to rely on methods proven to work among hearing

students and adapt to fit the needs of the deaf and hard of hearing students. The creation of

successful educational methods is challenging without adequate understanding of the underlying

processes and sources through which deaf children develop literacy (Webb, Lederberg, Branum-

Martin, & McDonald Connor, 2015). Often trial and error is the most efficient strategy and only

tool available. Two case studies show evidence of how specific ASL interventions among deaf

preschoolers can make a considerable impact on learning to read (Connor et al., 2014; Dolman &

Rook, 2017) and both studies call for a continued investigation on linking pedagogy to

linguistics (Lange et al., 2013).

Another critical instructional strategy is the use of time. Compared to hearing children,

deaf children take longer to learn to read, often three to four years longer (Andrews et al., 2016).

Innovative teachers employ time management techniques to make maximum use of time-on-task.

Deaf educators should be flexible, know students well, and employ interactive practices, truly

engaging deaf in knowledge acquisition. Since deaf children are learning two languages, not one,

teachers should persevere and recognize learning content in two languages takes longer, and such development should be considered a difference, not a deficit (Andrews et al., 2016).

Deaf students can benefit from the separation of American Sign Language (ASL) and English and transferring across these languages is constructive. Experts agree linking and unlinking languages is a powerful strategy to promote bilingual identities (Palmer, Martínez, Mateus, & Henderson, 2014). Exercising language separation is good practice for deaf students, focusing on ASL and English as stand-alone languages (Garate, 2012). One strategy to separate the instruction is to create small-group stations for English, practicing writing and word-associations, and ASL, watching and recording signed stories. The separation allows students to understand and practice use and meaning in the two languages, independent from one another (Garate, 2012).

Concurrent use of language is another strategy which "requires purposeful and planned switches between [the two languages-English and ASL] in order to provide students with more immediate support for both" (Garate, 2012, p. 4). An example of successful concurrent use is translanguaging, which is presenting the lesson in ASL and expecting a product in written English, or the class may read a text in English and discuss the content together in ASL. The use of both separation and concurrent teaching strategies requires planning, preventing confusion from switching languages. One consideration is the adherence to strict language separation teaching practices does not allow for the natural progression of bilingualism (Palmer et al., 2014).

Because school is generally a place where deaf children receive the most access to ASL, daily ASL classes are crucial (Crume, 2013). Exposure to ASL should be maximized, providing routine ASL coaching and modeling. Deaf educators and ASL specialists play a crucial role in

providing a productive ASL language environment at school. Fluent ASL models are the most effective mediation for imparting successful transfer between ASL and English. Stress is put on the importance of language models, maintaining proper accessible language modeling can even overcome impoverished language deprivation deaf children may have received at home (Henner et al., 2015; Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). Skilled ASL language models allow language acquisition to develop naturally.

Teachers should develop strategies to instill vocabulary knowledge, an essential skill for reading comprehension within deaf children. When predicting reading success, a deaf child's knowledge of English vocabulary is more important than a hearing child's (Harris et al., 2017a). Hearing children can rely on language skills such as context clues to support the development of reading; deaf children have no such advantage. A specific way to nurture vocabulary knowledge within deaf children is through the use of captioned videos. Video use is a robust way for a student to broaden and deepen vocabulary while providing background knowledge, helping deaf children understand topics (Strassman et al., 2019). Visual media is a meaningful way to nurture the use of academic language and in vocabulary knowledge, because the combination of visuals and text contributes to the understanding of information (Beal-Alvarez, J. & Cannon, J., 2014; Strassman et al., 2019). The use of captions to access vocabulary is a beneficial learning tool.

Wang and Williams completed a meta-analysis on 50 research studies focused on instructional approaches to improve reading advancement within a variety of learners (2014). The extensive study concluded the most crucial instructional strategy to improve reading in children is any strategy maximizing students' participation and engagement while strengthening code-based skills and reading comprehension (van Kleeck, 2014; Wang & Williams, 2014). Predictors of success lie more in the effectiveness of the teacher's positive influence on the

student, rather than the specific approach used. Curriculum, technology, and instructional language alone are not sufficient to improve deaf children's literacy

Quality ASL Curriculum Written for Deaf Students

When exploring how deaf children develop literacy, deaf educators and professionals should link pedagogy and linguistics in order to move practice forward (Swanwick, 2016). Quality ASL curriculum can provide deaf educators with the tools needed to implement effective instructional strategies without having to rely on curriculum made for hearing students, requiring intense modifications. Curriculum writers should be intentional about creating ASL materials for deaf students, not hearing students.

Fingerspelling.

One link between pedagogy and linguistics is the function of fingerspelling as a dimension of literacy. Fingerspelled words account for 30% of the total ASL vocabulary (Emmorey & Petrich, 2011). Growing evidence confirms fingerspelling serves as a critical link between word learning and reading as deaf children recognize letter shapes, write the ABC's, and make the connection between handshapes of fingerspelling to the corresponding letter (Allen et al., 2014; Allen, 2015; Crume, 2013). ASL fingerspelling skills correlate to English phonological segmentation and have substantial potential implications for producing an effective ASL curriculum for deaf students.

Technology.

Access to technology in deaf education classrooms is essential. ASL is a visual language and students need to watch videos of native Deaf signers interactively. Such practice promotes engagement, which is linked to comprehension and allows students to evaluate narratives, discuss the structure of story, and review content in the most available language (Garate, 2012).

Technological tools such as multimedia presentations of learned information can increase reading comprehension by reinforcing language in an accessible and concrete way. Because deaf children learn in a variety of ways, technology can provide the multiplicity deaf students require (Beal-Alvarez & Cannon, 2014).

Focus on areas of weakness.

Deaf and hard of hearing students have specialized areas of weaknesses in the area of literacy. Complex sentences, for example, are difficult for deaf children to grasp. ASL uses shoulder-shifting, the listing technique, and head nods to create complex sentences. Facial expressions, motions, and pauses are used to create connectives, while English relies on conjunctions and punctuation, which are difficult concepts for deaf students. Deaf students are more likely to write short and structurally simple sentences and struggle to understand passive-voice, relative clauses, and questions (Yan & Li, 2019). Highlighting specific grammatical structures in ASL curriculum helps deaf students understand the differences between English and ASL and bridge the gap between the two.

Case Studies

Case studies such as the Fairview learning program, Jordanian curriculum study, and Leap Forward help researchers review the effectiveness of developing L1 ASL curriculum. Since L1 ASL curriculum is new, evaluation of the curriculum in practice should be analyzed and used for future research. Fairview learning program, specifically, was the most mentioned L1 ASL curriculum within the study and served as a springboard for future L1 ASL curriculum development.

Fairview learning program.

The Eastern Carolina School for the Deaf piloted the Fairview Learning Program, featuring materials addressing the language needs of the deaf (Dolman & Rook, 2017). Fairview materials introduce 220 common words, which translate into 510 ASL translations, memorization of 265 idiomatic phrases, which have 600 ASL translations, and translation from signs to print (Dolman & Rook, 2017). By successfully linking English and ASL, the Fairview Learning program is a positive example of ASL curriculum, meeting the needs of deaf children. As further evidence, upon completion of piloting the Fairview Learning program, 100% of the deaf educators wanted to continue with the program (Dolman & Rook, 2017).

Jordanian curriculum study.

A curriculum study soliciting input from 20 deaf education kindergarten teachers in Jordan yielded the following responses. Curriculum should have a variety of components with a diversified arrangement of content. Child textbooks should not be crowded with information, and should have bright colors and big, clear pictures, feature sign language, and be divided by functional unit subjects such as "my home," "my city," "my body," and "my kindergarten" (Al-Zboon, 2016). Content should include learning games to enhance language, writing and spelling exercises, and interactive practices such as coloring, drawing, cutting, and pasting materials (Al-Zboon, 2016). Teacher textbooks should provide instruction guidelines and a general framework and fit-for-purpose timetable, allowing teachers to check off skills learned (Al-Zboon, 2016). Supplemental learning resources should include letter flashcards, picture cards, alphabetic and number learning boards, multimedia CDs, sign-language books, word and sign language flashcards, and stories (Al-Zboon, 2016).

Leap forward in English.

An example of successful collaboration to create a sign language curriculum is in the Netherlands-Sprong Vooruit, meaning Leap Forward in English (De Klerk et al., 2015). Leap Forward was created through the cooperation of linguists, educational psychologists, sign language teachers, speech and language therapists, and supervisors from deaf schools (De Klerk et al., 2015). Collaborative approaches to curriculum development, such as Leap Forward, clearly allow for a more structured and substantiated approach to tackling important ASL curriculum components. Deaf children face enormous language barriers, and while there is no magic curriculum or learning program to improve language proficiencies in deaf children automatically, recent studies show encouraging plans and promise for future success.

Counterargument

Sharpe's 1985 study compared twelve deaf and twelve hearing adolescents' cognitive ability to solve analogies. Sharpe reported auditory stimulation was necessary in order to develop analogical reasoning skills, and the oral-aural mode of human communication provides a sensory experience, facilitating advanced cognitive development. Decades later, some scientists continue to support hearing as serving an integral role in cognition, spawning a new field of research called cognition hearing science.

Some audiologists attribute a lack of auditory cognition among deaf and hard of hearing to listening effort and cognitive capacity (Phillips, 2016). Both of these medical perspectives view intellectual success among deaf as limited by the ability to hear, willingness to try to listen, and the capacity of mental ability (Phillips, 2016). Studies such as these seek to improve intellectual success among deaf through improving the deaf's audibility of sounds and providing

the means and motivation to access these sounds, building on the importance of auditory-cognitive connections (Phillips, 2016).

In a recent systematic review of sign language and spoken language interventions, authors concluded there is inadequate evidence to verify if the use of ASL alongside spoken English is more effective than an English-only approach (Fitzpatrick, Hamel, Stevens, Pratt, Moher, Doucet, Neuss, Bernstein, & Na, 2016). President of the Alexander Graham Bell Association, Meredith Sugar, and implant specialist, Donald Goldberg, advocated for a strict listening and spoken language approach, including a prevention of sign language exposure based on a study of 23 implanted deaf children who received an English-only approach and demonstrated language test scores equal to hearing peers (2015). Such opposition to sign language is not based on empirical evidence supporting the harm of sign language exposure; in fact, there is no evidence proving learning American Sign Language is cognitively harmful to children (Humphries, Kushalnagar, Mathur, Napoli, Padden, Napoli, Padden, Rathmann, & Smith, 2017).

Methodology

Reviewing the literature leads back to the research questions. How is American Sign Language literacy being taught in deaf education classrooms? What should be included in an effective American Sign Language curriculum for deaf children? Analyzing these questions are essential to improving language development in deaf children. The qualitative phenomenological methodology is the most appropriate approach for understanding the answers to the research questions. Literature on related topics suggests such a method can generate authentic answers from the most qualified people in the field-deaf educators based on life experiences (Al-Zboon,

2016; Crume, 2013; Dolman & Rook, 2017; Kristoffersen, & Simonsen, 2016; Musyoka et al., 2017; and Snoddon, 2018).

Quantitative studies regarding relevant deaf education statistics helped provide background information concerning deaf children's literacy (Emmorey & Petrich, 2011; Erickson, Lee, & von Schrader, 2017; Gallaudet Research Institute, 2011; Gallaudet Research Institute, 2013; National Centers for Disease Control, 2018). Aggregate information from previous relevant studies provided the means to continue research and positively affect educational practices. A phenomenological study allowed for the opportunity to investigate ASL literacy among deaf children through the personal experiences of those who guide the instruction. Answers to the research questions are possible through qualitative analysis of deaf educators' subjective experiences and insights (Kafle, 2013).

Gaps in Literature

The gaps in the literature regarding ASL curriculum and instruction within the deaf education classroom are extensive and exhaustive. Future research should focus on ASL instructional strategies (Harris et al., 2017a), developing new and effective ASL curriculum, and ASL literacy. There is a need to learn more about the specific conditions in which deaf children engage and interact in critical literacy activities (Kristoffersen & Simonsen, 2016). Repetitive studies in a variety of school settings are needed to achieve saturation of data and reliability of results.

There is a need for more research specific to deaf student groups such as mainstream, deaf of Deaf parents, and deaf of hearing parents. Research within various learning philosophies and practices is needed. Specific studies regarding interventions for deaf beginning readers is needed (Rudner, Andin, Rönnberg, Heimann, Hermansson, Nelson, & Tjus, 2015). The timing

and trajectory of language development in deaf children is not well known, especially considering the narrow window of learning opportunity (Allen et al., 2014).

Since most deaf children have hearing parents, a longitudinal study comparing deaf students with a connection to the Deaf community would be useful data. There is a lack of consensus in existing studies due to the paucity of research. In deaf education, language and communication remain a hot topic, with highly emotional arguments made to support each perspective, but little empirical information is collected (Lange et al., 2013). The time is now to move beyond a starting point for understanding the implications of ASL literacy among deaf children. These studies helped to identify the preconditions for ASL literacy development in deaf children (Kristoffersen & Simonsen, 2016).

Chapter Summary

Developments in practice and research, along with increasing awareness of ASL and the Deaf community, have raised responsiveness to the relevance in education and research (Swanwick, 2016). Literature identifies the benefits of bilingual (ASL and English) instruction among deaf and hard of hearing children at an early age, the need for additional ASL instructional resources, and the need for ASL additional instructional strategies to assist deaf education teachers in providing evidence-based practices in developing ASL literacy in deaf children. Research reveals ASL is beneficial to deaf and hard of hearing children in acquiring literacy. There are not sufficient ASL curriculum resources to provide adequate ASL instruction, and deaf education teachers understand the need for data to drive instruction. The literature review supports the constructivist theory of ASL as a building block to acquiring new knowledge.

Some say, English, not ASL literacy, should be the primary concern among deaf children. ASL is often considered a supplemental area of study, rather than a primary field of discipline. Deaf children cannot entirely rely on English to acquire literacy without the help of a visual language, such as ASL. While significant progress has been made in the research of the effectiveness of ASL bilingual practices, gaps in the literature remain regarding resources and successful approaches. The phenomenological qualitative research proposal seeks to gather a collection of data on ASL curriculum, instruction, and educational strategies from deaf educators in America, identifying specific preconditions for successful ASL literacy learning.

Chapter three describes the purpose of the study with an overview of the problem. Research questions are defined. The research design and rationale are given, along with the population and sample selection. Details regarding instrumentation, data collection, analysis, and presentation are provided. Reliability and ethical considerations are examined.

Chapter Three: Methodology

In the last few decades, deaf education has experienced tremendous strides in research and development. The increase in research and development is primarily due to the manifestation of the rise of bilingual practices in the Deaf education classroom (Allen, 2015; Petitto, Langdon, Stone, Andriola, Kartheiser, & Cochran, 2016). Research shows early exposure to a natural signed language lays the groundwork for successful literacy acquisition (Lange, Lane-Outlaw, Lange, & Sherwood, 2013). Deaf students who are highly proficient ASL-users achieve higher academic achievement and social achievement than less fluent peers (Hrastinski & Wilbur, 2016). With limited availability of specialized ASL curriculum, deaf education teachers are forced to narrow the gap to meet the academic needs of students.

Questions continue to remain regarding characteristics of successful bilingual programs, deaf education teaching practices, and ASL curriculum. Deaf children do not have adequate access to ASL literacy instruction, which is the means of learning all other subjects (Lange et al., 2013). Comparatively, there is inadequate research in ASL curriculum and congruent instructional strategies to support deaf educators in developing needed ASL skills among deaf students. Such frustrating reality leads to questions regarding the characteristics and structure of successful bilingual programs, deaf education teaching practices, and ASL curriculum.

The purpose of the proposed hermeneutic phenomenological research study was to gather data regarding American Sign Language (ASL) curriculum and instructional strategies used among deaf educators in America. Goals included identification of deaf teacher's perceptions, processes, experiences, and practices in teaching ASL. Without an analysis of ASL instructional pedagogy, educators cannot address the academic gap between deaf and hearing students.

Education business may continue as usual, and deaf education strides may remain to stagnate if the study was not conducted.

Research is necessary to develop effective intervention programs for deaf and hard of hearing children and improve deaf literacy. Future research is needed to develop intervention strategies, allowing deaf children to make appropriate gains in reading in primary school (Harris, Terlektsi, & Kyle, 2017b). In the meantime, deaf children may continue to fall behind hearing peers in literacy if research in authentic language acquisition, ASL, is not conducted. The proposed study contributed to the knowledge base by advancing ASL curriculum development for deaf education teachers in the United States. As a result of the study, an awareness of strategies to improve ASL instruction among deaf children was acquired and shared with deaf educators across America.

<div align="center">**Research Questions**</div>

The following questions guided the study:

Research Question One: How is American Sign Language literacy being taught in deaf education classrooms?

Research Question Two: What should be included in an effective American Sign Language curriculum for deaf children?

These research questions guided the stage of inquiry, analysis, and reporting. By researching these questions, the goal was to gather facts about ASL instruction within the classroom and how to improve upon the specific phenomenon of ASL literacy among deaf students. Educational approaches and strategies best supporting the growth of deaf student's reading abilities are urgently required (Wang & Williams, 2014). Chapter three described the research design and rationale, including a justification for the research design and methodology.

The role of the researcher is discussed, revealing contributions to the field and potential bias. Population and sample selection are explained, as well as the instrumentation, data collection, and preparation, six-stage data analysis process, steps to ensure reliability and validity, and ethical procedures related to the research are outlined.

Research Design and Rationale

The purpose of the proposed hermeneutic phenomenological research study was to gather data regarding ASL curriculum and instructional strategies used among deaf educators in the United States. There is limited research regarding ASL instructional practices in the deaf education classroom. Data should be collected by tracking the experiences of those who are most influential in the field of deaf education, meaning certified deaf education teachers who have experience working with deaf students and use ASL.

The goal was to reflect upon the lived meaning (Merleau-Ponty, 2015) of deaf educator's experiences. Concurrently, research was done predominantly in ASL, as to replicate the language initially used by participants to describe experiences. Participant feedback was vital throughout the research in order to best represent what was intended by the participants (Kafle, 2013).

A hermeneutical phenomenological approach was consistent with research designs in other respected studies commonly used to advance knowledge in deaf-education fields. Deaf education experience requires unique methods to track progress and accurately reflect on the learning process of deaf students. The research approach allows the study to be based on the holistic experiences of deaf education teachers. Hermeneutic phenomenology values expertise "in gaining a deeper level of insight about the personal knowledge of the research participants" (Qutoshi, 2018, p.220). Since the data does not commonly fall into neat categories, hermeneutic phenomenology analysis can be messy. As a result, the responses and discussions should be

linked to meaningful forms (Qutoshi, 2018). Since the author of the study has experience in teaching ASL and developing ASL curriculum for deaf education classrooms, there is a real understanding of the lived experiences of the participants, and the methodology suits the study.

There has been little emphasis on promoting ASL instruction in schools for the deaf (Crume, 2013). All students, both hearing and deaf, are required to take English classes every year until graduation. Deaf students do not study ASL, even though ASL is the basis of learning all other subjects. The extent of the problem is widespread, impacting every state in the United States. Approximately 1.7% of babies are born with hearing loss each year, which is approximately 65,156 new deaf children who may require deaf education services, in addition to the existing deaf student population (National Centers for Disease Control, 2018). Those impacted by the problem are deaf students, parents, teachers, administration, and community members. To find someone unaffected by a deaf child, would be difficult.

With limitations in ASL literacy pedagogy among deaf educators, there are little ASL curriculum materials available, and, as a result, deaf education teachers are forced to modify existing materials meant for hearing students. The nature of ASL literacy within deaf education "defies the opportunity for concise operationalization necessary for quantification" (Patterson & Williams, 2002, p.2). Participants' responses should be thoughtfully negotiated, and a multivariate understanding is required. Using a qualitative phenomenological study provides a key role in understanding ASL literacy and the impact on deaf education from the perspective of the participants, deaf education teachers.

Role of the Researcher

The nature of phenomenology was to interpret the experiences, not to merely describe the experiences. Primarily, the role was to accurately decode these lived experiences, examining

how ASL curriculum impacts the quality of learning. The researcher is a Child of a Deaf Adult (CODA), acquiring fluency in ASL, and with over twenty years of experience as an ASL/deaf education teacher and an ASL curriculum writer, the researcher is qualified to conduct the study. Well-known in the ASL field, the researcher serves as the national competitions coordinator for the American Sign Language Honor Society (ASLHS). Direct access to experts in the field of teaching ASL was available, and a diverse participant pool from several different states was acquired in order to achieve saturation of information. Participants may be familiar with the researcher's work, requiring careful consideration of any potential bias or influence on the participants (Creswell, 2013b).

In order to control possible bias, specific actions were taken to maintain objectivity. Participants reviewed the results and peers reviewed the findings. Alternative explanations were examined, ruling out alternatives and triangulation of data occurred. Collecting, analyzing, and reporting the findings of the study were vital.

Population and Sample Selection

The population from which the sample was pulled was deaf education teachers of grades prekindergarten to fifth grade, aiming to lend insight into the world of ASL instruction of deaf elementary students and an overview of effective ASL curriculum and instructional strategies. Research participants were chosen by looking for deaf education teachers who had experience teaching ASL to deaf elementary children, and then using the snowball method to expand the number of participants, asking one participant to recommend others for participation (Groenewald, 2004). Sample selection for the study was to be approximately 60 deaf education teachers for the questionnaire, twelve certified deaf education teachers who had at least five

years' experience teaching deaf children for the interviews, and a sample of deaf education teachers, including some of the same twelve interview participants for the focus groups.

Potential research participants would be contacted through a message board on deaf education organization website and social media, including: Hands and Voices, Council on Education of the Deaf, National Association of the Deaf, Child of Deaf Adult, and through Gallaudet and NTID's University pages. Several deaf education conferences were attended in the summer of 2019, making contacts with administrators and teachers who could contribute to the study, using a network of deaf education professionals to solicit participants. The goal was to receive at least 50% input from deaf educators who were Deaf. Such deaf/Deaf demographic was outlined in the research.

The participants were informed of the study details including informed consent and the intent of the study. At the end of the study, the results of the research were shared. All communications to the participants were in the form of written English and a video ASL translation. Signed communications were recorded, stored on a private flash drive, and placed in a safe.

Instrumentation and Data Collection

Instrumentation and data collection process included at least 60 deaf education surveys, which were administered and analyzed. Since deaf education programs were scattered throughout the nation, a culmination of data from various states was accumulated. Data collection took three months. The study was about gathering information from deaf education teachers, grades prekindergarten to fifth-grade, and seeking out perceptions of ASL instruction in the classroom, the process in which curriculum is gathered, and the instructional practices implemented.

Surveys are an efficient way of gathering massive amounts of data, which can be used as background information for the interviews and focus groups. In order to achieve a high response rate, adequate planning of the questionnaire was conducted. Questions in the inquiry form were provided in English and ASL, email notifications and reminders were sent to a prepared distribution list, and a progress bar communicated length of questionnaire to the participants.

Another instrument used was twelve in-depth interviews conducted three times, one month apart. Zoom was used to videotape and conduct interviews, which were primarily in ASL, calling for a transcription of each interview, which was sent to the participants for approval. The interviews began with set questions to initiate conversation while allowing the participant to guide the direction of questioning. Participants received questions ahead of time. Questions were focused on what the teachers thought and felt about ASL curriculum and instruction in order to describe lived experience in a language free from instructional jargon. In-depth interviews allowed the questioner to ask more complex questions, seeking clarity, and allowing for follow-up questioning.

Participants were to receive workbooks to record any event, which may have contributed to future relevant conversations. These workbooks would serve as an extension of the interviewing, allowing the participants to document examples and reflections of the deaf education experience. Adequacy of the interviews was achieved through proper interview questions, clarity of the language used during the interview process, positive subject-interviewer interaction, minimized technical interviewing errors, and sufficient topic coverage.

Six focus groups with deaf-education teachers across the nation were conducted via face-to-face and signed videoconferencing to gather data as an interchange of views between people with a mutual interest in ASL literacy. Each focus group concentrated on a different set of

themed discussion questions including: ASL literacy, ASL instruction, development of ASL curriculum, benefits of early ASL acquisition/experiences, ASL concepts, and deaf educator ASL instruction narratives. . Groups included between two and eight participants to achieve diversity, while at the same time allowing each participant the opportunity to share thoughts and stories (Fusch & Ness, 2015).

Focus groups were conducted in two ways: zoom videoconferencing and in person. Attendance at several deaf-education conferences in the summer of 2019 allowed for the opportunity to hold face-to-face focus groups. Zoom conferences were held. Collective questioning within the focus groups allowed participants to discuss experiences, share opinions, and debate on the issues. Adequacy of the focus groups was achieved by proper representation within the focus groups. The use of focus groups was particularly useful when conducting interviews, achieving both a group and an individual perspective about the phenomenon (Fusch & Ness, 2015). Deaf education stories were central and revealed the authentic experiences of deaf students' language development.

Data Preparation

Interview and focus-group questions were prepared ahead of time. In line with phenomenology, participants were allowed to guide the questioning. The goal was an in-depth understanding of ASL curriculum and instruction within deaf education seen through the lens of the research participants (Qutoshi, 2018). Survey monkey was used for the dissemination and management of surveys. The inquiry form questions, though more straightforward questions, required a more significant number of participants. For the interviews and focus groups, a zoom account was created for videoconferencing, and a note-taker was assigned for the focus-group

meetings. Transcription of the interviews and focus group discussions was created and approved by the participants, and the video interviews were pseudo-named and timestamped.

Data Analysis and Presentation

Following the research questions and methodology, data analysis methods were developed from a hermeneutic phenomenological approach. Data analysis was decoded via thematic coding through inquiry methodologies. There were six stages in the analysis. Throughout the analysis, remaining open to questions emerging from the study of American Sign Language (ASL) literacy within deaf education classrooms was vital.

Step one was to transcribe the interactions and organize the data into texts. Intention of the research participants was represented through stories and the meaning as perceived by the participants was narrated (Kafle, 2013), preparing the text interpretation to facilitate coding. The basis for subsequent analysis was provided, followed by a preparation of the software, SurveyMonkey, to receive the information. SurveyMonkey Advantage plan allowed the organization of the data from the surveys, interviews, and focus groups, and embedded text analysis and cross-tabulation were completed. In order to allow the coding to be built into the questionnaire, questions were created to correspond to each interview/focus group question, along with the various answers (Vaughn & Turner, 2016), ensuring all relevant information was represented through the questionnaire.

The third step was to review each question and identify emergent patterns answering the research questions and allowing the study to establish an emerging narrative. Possible emergent codes included: types of ASL materials used, strategies of teaching ASL, immersion vs. non-immersion teaching environments, bilingual, bicultural, deaf role models, teacher qualifications, mainstreaming, deaf/hearing teachers, and years of experience. SurveyMonkey's text analysis

feature was a helpful tool, analyzing the frequency with which terms appeared and applying linguistic rules to the responses. Frequent words and phrases served as codes, enabling large text segments and portions of information to be interpreted in new ways (Belotto, 2018).

The fourth step was to complete a more in-depth review of identified themes, providing a code dictionary with identified themes and meanings. A thematic map was generated as the narratives were compared, linking the stories to find commonalities. Step five interpreted and reconstructed correlations into a narrative, which collectively answered the research questions, and a unified story of the data emerged from the themes.

The final step was to validate the codes and subsequent interpretation through an external audit. Results were displayed using bar graphs for types of instructional materials used and a pie chart for the percentage of teachers who taught ASL in an immersive vs. direct instruction environment. Background information was organized using case classifications. A checklist matrix was created for reporting interview data, along with a metaphorical visual display for themes found and a list of relevant quotes for specific narrative excerpts. Data analysis using thematic coding analysis sought to understand ASL instruction in deaf education classrooms, the necessary components for a useful and relevant ASL curriculum, and the means to improve ASL literacy among deaf students.

Reliability and Validity

Reliability relies on accurate transcripts of signed conversations, clear writing, and systematic decoding process. Consistency was evaluated throughout the study to ensure reliability. Triangulation of data was used, including surveys, interviews, and focus-groups, revealing coexisting, converging data, revealing coexisting and converging data, and providing validity to the study (Creswell, 2013b). Data was gathered by different teachers from around the

United States in order to increase the validity of the study. The study included interview

participants one would not normally consider in order to enhance data saturation (Fusch & Ness,

2015) and a consistent coding process was used.

Validity began with an expert panel approving the instruments prepared for the research

participants. A panel of five was asked to field test the data collection instrument, reviewing the

questionnaire, interview, and focus group questions for content, predictive, and construct

validity. The panel reviewed and made suggestions for instrument improvement. The inquiry

form asked questions appropriate to the research and measured what the questions were

supposed to measure. Interview and focus group questions, though flexible, remained consistent

and focused on the research questions in the study. An audit trail based on the participants'

findings was conducted and clearly explained the research process, including examples of the

coding process, descriptions of the categories, and rationale for grouping the codes into specific

categories. Validation of coding, categorizing, and interpretation of the data was achieved

through an external audit of the results.

Threats to internal validity included the selection bias, mortality/differential attrition, and

instrument change, and ensuring selection of the participants was as diverse and reflective of the

whole deaf education classroom as possible. Consistency was important in the process,

attempting to include all thirteen interview participants within the surveys and focus-groups.

Transitioning from interviews to focus groups was handled with care as to duly change the

teachers' perspective. Avoiding these threats ensured ruling out an alternative explanation for the

findings.

Data saturation was achieved through the explicit study design as the author of the study

gathered enough information to replicate the research, the ability to obtain new information had

been achieved, and all possible coding themes were applied, reaching a point of finding no new data (Fusch & Ness, 2015). A considerable collection of data from all over the United States contributed to the reliability of the information. The use of triangulation in data collection, consistent questioning, accurate transcripts of signed conversations, proper coding and categorizing of data, an explanation of the research process, and an external audit of the stages of data analysis helped to balance internal validity and served to prepare a conclusive study.

Ethical Procedures

All research participants were fully informed of the research process, participated freely, and had the opportunity to withdraw at any time. Research participant permission was obtained utilizing informed consent, acknowledging involvement in the research study. Institutional Review Board (IRB) approval was attained before soliciting research participants. Transcripts of interviews were approved by participants to adhere to ethical standards.

In order to protect the confidentiality of research participants, pseudonyms were used on data documents, identifiable data was encrypted, access to identifiable information was limited, and documents were stored in a locked location. The plan is for data to be physically destroyed in the summer of 2029. Participants' views and collective stories were fairly represented. Information may have been shared between participants. An effort was made to create an environment of trust, while at the same time, not being intrusive.

The research was conducted in a phenomenological qualitative methodology, which permitted a compelling analysis of the research questions and resulted in an aligned design of the study (Rallis & Lawrence, 2017). Data were analyzed in a manner of avoiding misstatements, misinterpretations, or fraudulent analysis. Ethical consideration governed the research process, providing results which were reported honestly and without distortion. Research integrity was

achieved through the usefulness of the results, allowing others to act on the information (Rallis & Lawrence, 2017).

The quality of research can be validated as the resulting themes related to the research questions. Four emerging themes were current practices of ASL instruction, recommended practices of ASL instruction, current ASL curriculum used, and recommendations for ASL curriculum. Resulting data showed consistency as similarities in the answers were present. Few differences were noted beyond the expected norm. Trends within the data included lack of sufficient ASL curriculum and the need for direct ASL instruction.

Chapter Summary

A qualitative hermeneutic phenomenological research study allowed the author of the study to gather data regarding components of an effective ASL curriculum for deaf students and report on the ASL instructional strategies used among deaf educators in the United States. Hermeneutic phenomenology allowed the study to be based on the holistic experiences of deaf education teachers, which is rarely noticed and accounted for in the field. The role of the researcher was explained as the researcher's experience teaching ASL to deaf students allowed the unique perspective to step back and reflect on the narratives given through the data collected, considering the research participants' understanding of the experience and uncovering the truth (Crowther, Ironside, Spence, & Smythe, 2016).

Population and sample selection for the study was to be approximately 60 deaf education teachers who were certified and had experience teaching deaf children for the questionnaire, twelve deaf education teachers for the interviews, and a sample of deaf education teachers for the six focus groups. Participants were solicited from all 50 states in the United States and every

state Deaf institute. Potential research participants were chosen through ASL-relevant message boards and networking through professional contacts and conference attendance.

A triangulation of data collection took place including surveys, interviews, and focus groups. Data were prepared through signed translations of all questions and planned questions to use for guiding discussions during the interviews and focus groups. Validity was maintained by accurate translations of the signed interviews and focus groups, which were sent to the participants for review and approval. Analysis of the data followed a thematic six-stage coding process to ensure diligent inquiry in alignment with the research questions. Research results were reported using visuals and detailed explanations of the research process.

Throughout the study, responsible and ethical practices were followed, and continued participant feedback was considered while ensuring the protection of human participants by following ethical procedures. The result of the study revealed dimensions of human experience, specifically deaf educators as related to ASL curriculum and instruction, compelling consideration, and triggering action for improvement in ASL literacy among deaf students (Crowther, et al., 2016). Chapter four details the results of the research findings and data analysis results.

Chapter Four: Research Findings and Data Analysis Results

Chapter four reviews the qualitative techniques used for data collection of two hundred and nine deaf educators from 33 states, including the data analysis and research findings from surveys, focus groups, and in-depth interviews completed in the participants' preferred language, American Sign Language (ASL) or spoken English. The study analyzed the relationship between prekindergarten to fifth-grade deaf students and ASL curriculum and instruction, seeking out perceptions of the process in which ASL curriculum is gathered, and the instructional practices implemented. A phenomenological approach was chosen to carefully study the participants' compelling experiences with ASL curriculum and instructional methods in the deaf education classroom.

Data Collection

Analysis was based on the data collection of 209 surveys, six focus groups, and thirty-nine interviews. The study was planned for 60 participant surveys, six focus groups, and twelve interviews. Due to limited research regarding Language 1 (L1) ASL curriculum and instruction, deaf educators were eager to participate and contribute to the study. Initially, 251 responses were received and narrowed down to qualified responses. Qualified responses were determined by a valid deaf education teaching certificate and experience teaching in a deaf education classroom.

Focus group sizes ranged from two to seven participants and there were thirteen interview participants. Questionnaire participants agreed to answer 15 questions and were informed all names would be kept confidential. All focus group and interview participants were asked to read and sign a consent form (see Appendix B).

Background of Participants

The target population was 50% Deaf drawn from schools across the nation and restricted to people who were certified to teach deaf education with at least one-year experience teaching prekindergarten to fifth grade. Potential participants were screened through an initial questionnaire ensuring these conditions were met. Questionnaire participants were defined as 21% Deaf, 10% hard of hearing, and 68.9% hearing. Every participant held a certificate to teach deaf education and 19.14% held bachelor's degrees, 73.21% held master's degrees, and 7.66% held doctoral degrees. Data were represented from a wide range of deaf education teaching experience (Figure 1).

Figure 1

Research Participant's Years of Deaf Education Classroom Experience

How many years have you been teaching in a deaf education classroom?

Answered: 208   Skipped: 1

Experience	Percentage
This is my first year	2.88%
1-2 years	12.50%
3-5 years	13.94%
6-10 years	20.19%
11-15 years	16.35%
16-20 years	15.87%
More than 20 years	18.27%
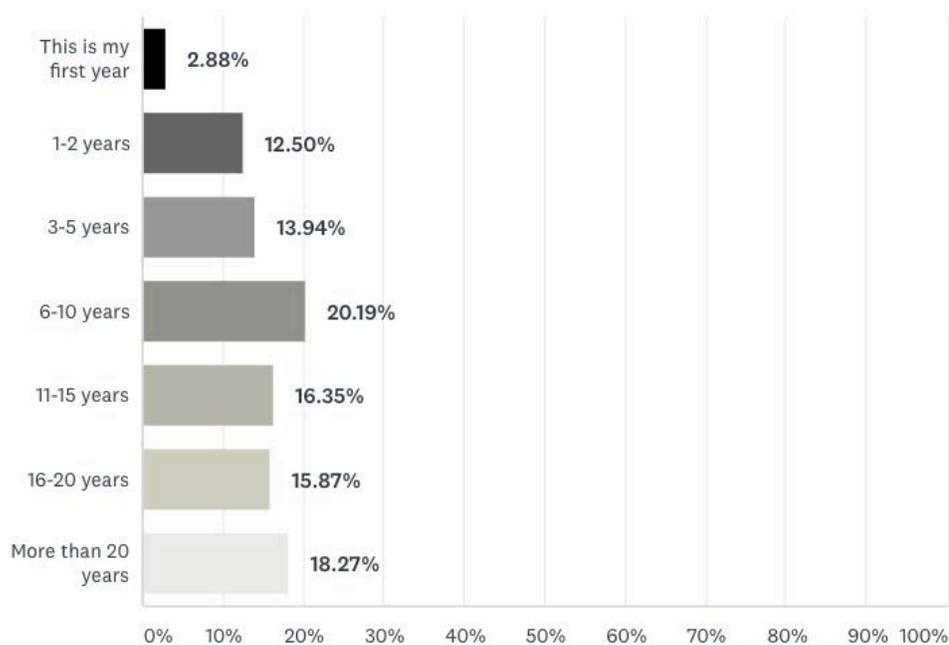
Another critical aspect of the participant pool was proficiency in ASL. Deaf educator participants described personal ASL skills as follows: 68% advanced or native-like, 28% intermediate, and 4% beginner. Participants taught in a variety of schools: 24% taught in day schools, 18% taught in residential schools, and 44% taught in hearing schools where deaf students were mainstreamed. The philosophies within these schools predominately relied on total communication-59%, bilingual/bicultural-32%, and oral communication-4% (see Figure 2).

Figure 2

Philosophies Represented Within the Research Participants' Schools

Which of the following deaf education philosophies best describes your current school?

Answered: 209   Skipped: 0

Philosophy	Percentage
Total Communication	59.33%
Bilingual/Bicultural	31.58%
Other	5.26%
Oral Communication	3.83%
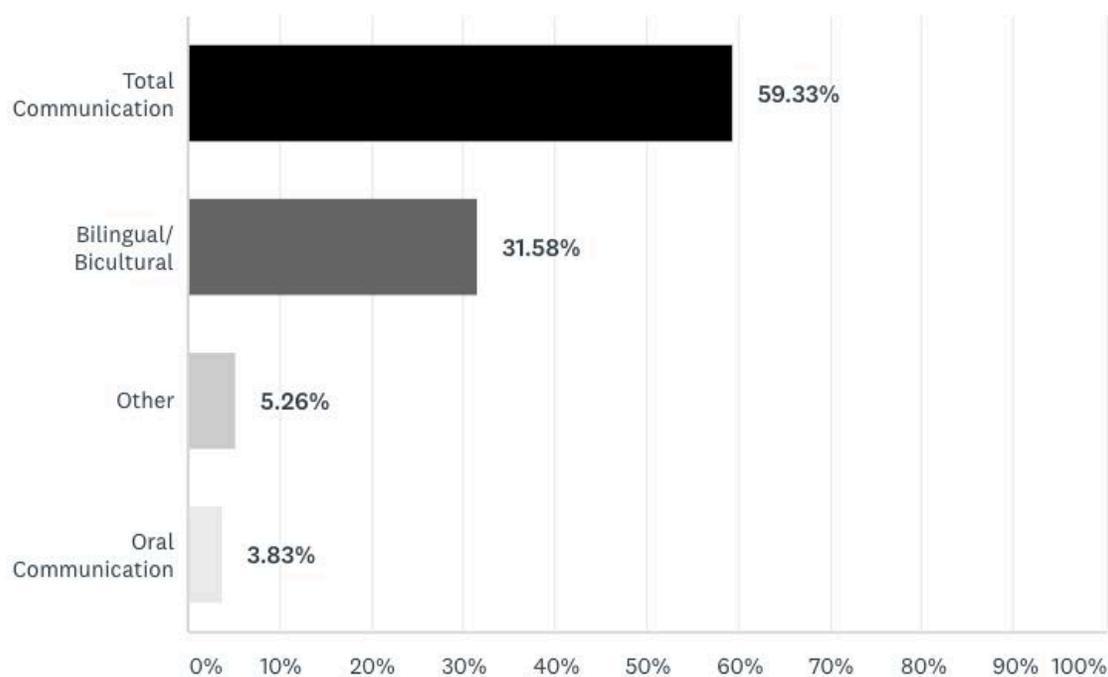
Preparation and Dissemination of Instruments

Data were collected through a fifteen-question questionnaire (Appendix E) presented in both English and ASL. The inquiry received feedback from an expert panel to assess the ethical

validity of the questions, including the accuracy of the ASL version and was initially disseminated through the network of deaf educators. The questionnaire was posted on several social media sites, including Facebook discussion boards and national deaf education organization websites. A database was compiled, and the questionnaire was emailed to over 120 prekindergarten to fifth-grade deaf educators from the compiled list of 60 deaf schools within every state in the United States. As a result, the questionnaire spread quickly, and a mailing list was created asking participants to share the study amongst colleagues. Additionally, attendance at two national deaf education conferences allowed the collection of qualified research participants. Response was much higher than anticipated, nearly tripling the expected number of contributors and many of the participants, 57%, were willing to be involved in future questioning, contributing to a large pool for the focus groups and in-depth interviews.

The questionnaire was created using SurveyMonkey and included eleven multiple-choice questions, one short-answer, one Likert-scale, one ranking, and one fill-in-the-blank (Appendix E). Multiple-choice questions were designed to define the research participants and provide background information, while the other inquiries solicited phenomenological data on ASL curriculum and instruction practices. Inquiry form questions were written in English with an embedded video translation of the questions asked in ASL. Participants averaged a little over four minutes to complete the questionnaire and the most substantial response volume was solicited during the National Deaf Education conference.

Another instrument used was focus groups, including three face-to-face focus groups during the National Deaf Education conference in Austin, Texas and the American Sign Language Teacher's Association (ASLTA) in San Diego, California and three more focus groups via signed videoconferencing using zoom software. The purpose was to gather data as an

interchange of perspectives between educators with shared experiences in teaching ASL literacy. Each focus group concentrated on a themed set of discussion questions including: ASL literacy, ASL instruction, development of ASL curriculum, benefits of early ASL acquisition/experiences, ASL concepts, and deaf educator ASL instruction narratives. Focus groups comprised of two to eight participants, with a mixture of Deaf, hard of hearing, and hearing educators of deaf students. These discussions encouraged participants to reveal experiences, share opinions, and debate on the issues collectively. The use of focus groups is particularly useful in gathering both a collective and individual viewpoint about the phenomenon. Deaf education stories are critical to finding solutions for the deprivation of language among deaf students.

The final type of data collection was thirteen in-depth interviews, conducted three times, for a total of 39 conversations. Interview subjects were selectively chosen to represent a variety of teaching experience with at least a master's degree and a mix of both Deaf and hearing educators. Deaf and hard of hearing representation within the interviews were 38% and 15 of the 39 consultations were conducted in ASL. Conversations were conducted via zoom and videotaped.

Questions were sent in advance, giving the contributors approximately one week to review the requested inquiries. The interviewer began with the set questions, then followed the direction of thinking from the subject based on the participants' deaf education teaching experiences. In-depth interviews were executed through positive subject-interviewer interplay, allowing the contributor to choose the language mode, and giving the contributor a voice to share experiences. Average time for each interview was about 29 minutes. Most interviews (24) were conducted in spoken English, while 18 interviews were conducted in ASL.

Deaf Representation

For the study, data were intentionally recruited from the Deaf community, knowing the strongest leadership characteristic within the Deaf community is self-advocacy and empowerment through the use of native signers (Kamm-Larew & Lamkin, 2008). The questionnaire was administered to 209 participants, 21.05% of whom were Deaf, 10.05% were hard of hearing, and 68.9% were hearing (Figure 3). Within the 22 focus group participants, 45% were Deaf, 45% were hearing, and 10% were hard of hearing. Interviews consisted of 61.5% hearing, 30.7% Deaf, and 7.6% hard of hearing participants (Figure 4).

Figure 3

Deaf Representation Within the Data Collected
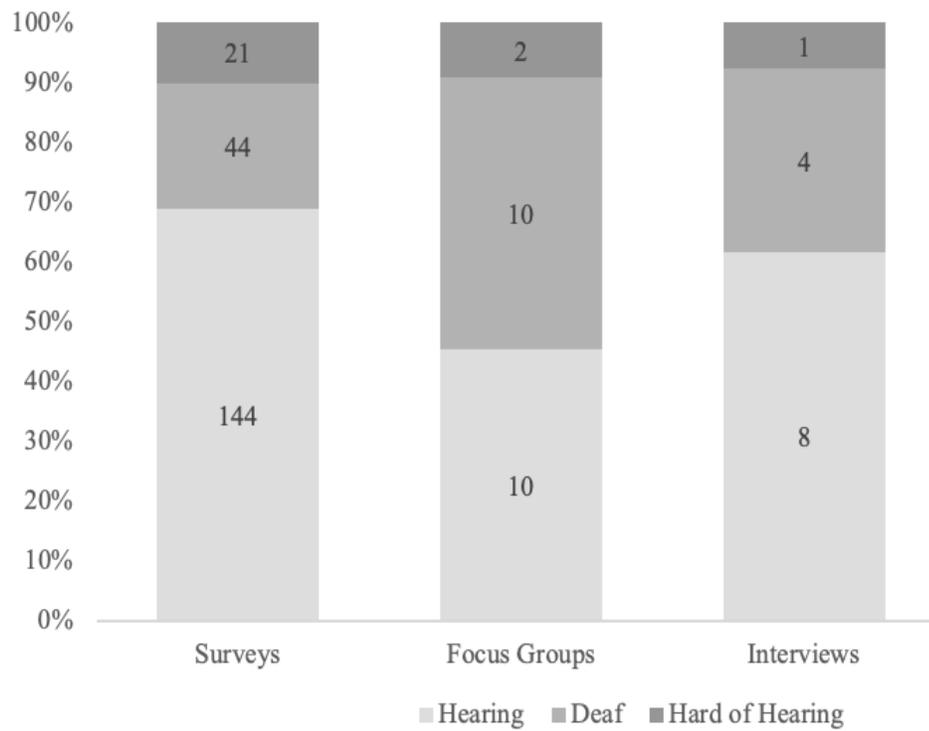
Figure 4

Interview Participant Demographics

Participant	Hearing/Deaf/Hoh	Gender	Teaching Experience	Education Level
1	Hearing	Female	15	Master's
2	Hearing	Female	7	Master's
3	Hearing	Female	30	Master's
4	Hearing	Female	5	Master's
5	Hearing	Female	15	Master's
6	Hearing	Female	35	Master's
7	Deaf	Female	20	Master's
8	Deaf	Female	4	Master's
9	Hearing	Female	2	Master's
10	Hearing	Female	12	Master's
11	Deaf	Male	30	Doctorate
12	Hard of hearing	Female	17	Master's
13	Deaf	Female	2	Master's

Although 50% of Deaf representation was not achieved, Deaf participants embodied a significant portion of the overall data collected, 32% altogether. An account of the Deaf community within the study validates the data and values perspective of Deaf leadership. Adequacy of the data collection was achieved by proper Deaf representation, a prerequisite within the Deaf community and academic field of ASL, rejecting the deficiency assumptions generated by the socially constructed view of Deafness as a barrier (Kamm-Larew & Lamkin, 2008). The value of Deaf input, as well as authentic use of ASL within the study, was essential to

accurate data collection and significant correlations between ASL curriculum and instruction and literacy.

Timeline of Data Collection

Data collection occurred over three months, June, July, and August of 2019. The collection of data during the summer months provided advantages and challenges. Teachers were more willing to participate in the study, given the time off from teaching and time to attend professional development conferences. Because teachers were removed from classrooms, data based on previous school years' experience presented a disadvantage. Since schools were not in session, schools were slow to respond to emails requesting the dissemination of surveys to staff. Surveys were implemented first to build a database of participants to choose from, then the focus groups and interviews happened intermittently after the surveys (Appendix E).

Disclosure of Deviations

One deviation from the data collection plan included not distributing the workbooks to the interview participants. Since teachers were off during the summer, there was no opportunity for teachers to reflect on classroom experience and student interactions. The workbooks were to serve as an extension of the interviewing. Due to no small amount of participant response and adequate reflection of deaf-education experience achieved through the in-depth interviews, workbooks were not necessary.

A second deviation was the lapse of one month in-between each interview. Many of the interview participants had limited time and needed to complete the conversations during the summer before school started. The interviews occurred over three months, relying on the time availability of the participants. Some of the subjects requested all three interviews to be completed at once. At times, the contributors had to pause in between an interview and call back

a week later to finish. No significant impact to the study's reliability was obtained due to these deviations.

<center>**Transcription Process of Data**</center>

Unique circumstances encountered during the data collection process was difficulty in transcribing the signed conversations. Because 60.5% of the focus groups and interviews were conducted in ASL, the transcription process, especially within the focus groups, proved challenging. Accurate translation of data was paramount and required multiple eyes to verify exactitude. A certified ASL interpreter and Deaf native ASL-user reviewed all English transcriptions of ASL conversations. Upon translation, each participant was able to review and approve the transcription. Through the practice of using humility and care in completing translation and interpretation, a world focused on acculturation and inspired accommodation is revealed (Noodin, Craig, & Osawamick-Sagassige, 2019).

The assistance of a hearing certified ASL interpreter and a Deaf assistant ensured accuracy in the transcription of all signed conversations. Two cameras were utilized in recording the focus groups and interviews. The speed of ASL users was often challenging to capture, even from multiple angles. Repetitive viewing and assistance from ASL native users resulted in successful transcriptions, which were all approved by the research participants.

Nonequivalence of certain concepts in ASL and English was another challenge in translating the signed focus groups and interviews. For example, there is no English translation for the signed sentence SIT NOTHING (lean back with hands flopped over) to convey the concept of students not engaged in learning. Although the notion is translatable, the English translation was a challenge and native knowledge of ASL was required. Another example is the ASL translation for the English inquiry form question asking if ASL-immersion was effective.

Since there is no ASL sign for EFFECTIVE, careful consideration was required to provide accurate and consistent results among hearing and Deaf participants. The signs SUCCESS SATISFY were chosen for the English word EFFECTIVE. ASL native-users provided the review necessary to ensure accurate ASL and English equivalence throughout the research process.

Data Analysis and Results

The text was analyzed using thematic analysis and a hermeneutic phenomenological approach (Kafle, 2013). The investigation obtained themes directly from the questionnaire data and transcriptions. Topics mentioned most often were the focus of the described results and coding allowed patterns to emerge, providing relationships within the data, and rendering the data meaningful.

Coding Data and Participant Responses

All data documents, including questionnaire results and focus group/interview transcriptions, were pseudo-named, timestamped, and stored on a password-protected, secure device. Data from the 209 surveys were automatically organized through the SurveyMonkey tool. The focus group and interview data required categorizing.

Step one was preparing the focus group and interview data, organizing the signed and voiced data into text, authentically representing the intention and expression of the research participants (Kafle, 2013). Foundation of the coding process relied on accurate arrangement of the data collected. The second step was to examine the text and create inquiry form questions which corresponded with the interview and focus group questions. Since the questions asked within the focus groups and interviews were not precisely the same, reliance on reviewing information gathered as related to the research questions was required (Vaughn & Turner, 2016).

Questions created were as follows: How is ASL taught? How should ASL be taught? What types of ASL curriculum is used? What does an effective ASL curriculum need? Content analysis was undertaken to determine how the research participants' experiences answered these questions.

Step three was color-coding specific text as related to the four questions and inputting the data into the related answer sections within SurveyMonkey. All relevant information shared by the participants was represented within the four questions. A fourth step was a more in-depth analysis, identifying repetitive themes, word clouds, and seeking out meaning within the participants' narratives (Belotto, 2018). Then, finding commonalities within the answers as related to the research questions and forming solutions to the issues which include: How is American Sign Language literacy being taught in deaf education? What should be included in an effective American Sign Language curriculum for deaf children? The final step was to validate the coding process by providing a visual representation of the data through figures, as well as creating solutions to improve ASL literacy among deaf students.

Participant Response

All 209 participants responded to the two research questions: How is American Sign Language being taught in deaf education classrooms? and What should be included in an effective American Sign Language curriculum for deaf children? Participants in the focus groups and interviews were able to elaborate responses to the research questions by giving personal experiential examples. The reactions provided were analyzed and organized into four themes: current practices of ASL instruction, recommended practices of ASL instruction, current ASL curriculum used, and recommendations for ASL curriculum. Direct quotes were used to support viewpoints.

Theme One: Current Practices of ASL Instruction

Surveys reported 53.3% of deaf students relied on immersion to learn ASL, 15.8% received direct ASL instruction in the classroom, 12.9% experienced pull-out sessions with an ASL specialist, 12.5% received no ASL instruction at all, and 5.2% obtained ASL through other means such as online classes or home visits (Figure 5). Questionnaire participants were able to select "other" as an answer choice. Participants (27%) who chose "other" were able to provide more detailed answers, most of which fit into the other four categories: immersion, direct ASL instruction, pull-out, or no instruction.

Figure 5

How ASL is Taught
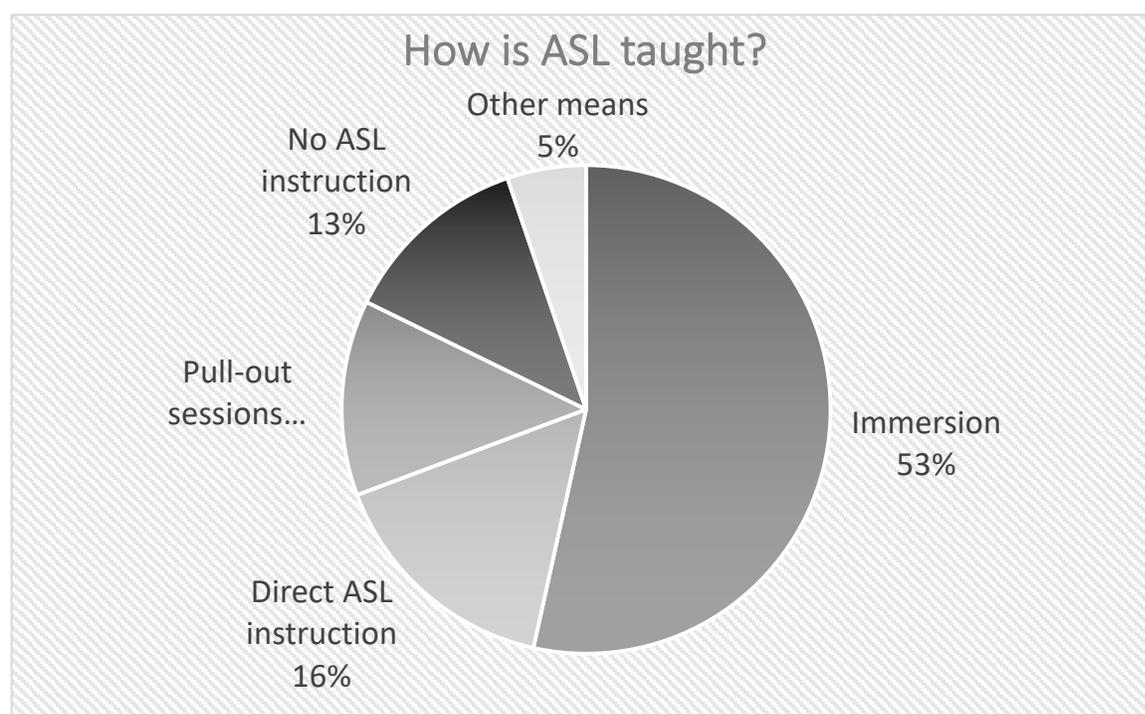
ASL Instructional Methods. Participants whose school's deaf education philosophy modeled oral communication, zero offered ASL instruction. The participants' school philosophy provided useful background information as to why individual teachers taught using specific

methods. Often deaf educators were required to instruct in direct violation of personal belief systems. Among the 209 deaf educators represented, 60% taught in schools supporting total communication, 32.5% taught in schools supporting bilingual/bicultural, and 4.7% taught in schools supporting oral. Schools with a bilingual/bicultural educational philosophy were three times more likely to offer direct ASL instruction.

Interviewees two and nine held regular ASL instruction time, usually about 30 minutes each day, providing mini-lessons on Deaf culture and working on writing in English and talking about the components of ASL and how to sign grammatically correct. Some interviewees (three, seven, and eight) taught a once a week sign language intensive focusing on grammatical structures and ASL poetry. One interviewee (three) had students participate in and even win the Marie Jean Phillips poetry competition and interviewee seven tried to set up a separate block time to teach ASL every day, finding the time among the other teaching requirements difficult. Interviewee eight shared frustrations of the limited time spent on ASL instruction and mainstreaming.

> I was addicted to the process of creating lessons for intensive ASL learning, creating practice rotations that Deaf and hard of hearing adults would do. One time we did faces, when you become the bowling ball, or baseball. We had a Deaf artist who taught the kids those skills. We filmed each one on a green screen. We played it on the huge screen at XX high school. I could have levitated! To see the kids excel in ASL and everyone had to go to their own level of excellence, so for each child it was a celebration! (Interviewee three).

> I have to teach all the other subjects and it's hard to squeeze in time to teach ASL. I do try to do an ASL center where the kids can sign, but it's not really straight ASL, it's connected to English (Interviewee seven).

> Understand, once a week is not enough! Most deaf children are implanted and are often mainstreamed. Students develop headaches often. They lessen that by removing their CI's and watch the interpreter, but some of our students are fluent in ASL and can understand the interpreter, but others can't and their learning declines. When they come back to my deaf classroom, they are frustrated because they don't know what was

happening in the mainstream classroom. They don't understand certain signs. There is a noticeable decline of ASL skills in the mainstream classroom (Interviewee eight).

Reliance on sign language camps in the summer, frustrated interviewee five. ASL camps were fun, but no real ASL instruction was offered throughout the school year. A commonly shared frustration of the interviewees was the district's expectations of teaching deaf children in the same manner as hearing children, often placing deaf students in mainstream special education classrooms. Interviewees six and 11 shared such challenges of having to work with multiple levels. Deaf and hard of hearing interviewees (11 and 12) shared frustrations of being forced to use voicing in the classroom, due to the school's oral philosophy. Some interviewees, (10 and 11), having a combined 42 years of deaf education experience, do not remember any direct ASL instruction occurring. Interviewee 13 is thankful for the recent availability of ASL teachers, but everything is still all new.

> A one-room schoolhouse situation, which is not effective. 3rd, 4th, and 5th graders were placed in one classroom, having to teach so many grade levels and signing abilities at one time. It does not work (Interviewee six).

> There's a pressure always to be voicing here. There are not enough resources; I can't just take a student one-on-one to teach them sign. I have to take this deaf kid who signs, this hard of hearing kid who sort of signs, and this deaf who should be signing but isn't, and then pull them all together. How do I do it all at the same time? (Interviewee 12).

> I think the assumption was-they are in a signing classroom with a teacher who signs, and they'll pick it up through osmosis or something (Interviewee 10).

> I don't know many schools that teach direct ASL instruction lessons (Interviewee 11).

> Deaf institutions are just now starting ASL classes for deaf students; that never happened before. We have ASL classes for hearing kids, but really L2s already have a language, English (Interviewee 13).

Theme Two: Recommended Practices of ASL Instruction

The questionnaire asked, "Do you believe direct ASL instruction is necessary or is ASL-immersion effective?", 71% responded ASL is necessary (See Figure 6, p.71). Throughout the

interviews and focus groups, phrases such as, "modeling whole language in ASL," "direct instruction," "deliberately teaching," "deliberate about ASL rules," "intensive sign language instruction," "intensive ASL learning", "explicit instruction," "really hit hard the ASL instruction," and "formal ASL instruction" were used repeatedly. When asked to rate the need for improved ASL instruction and curriculum according to a sliding scale one to 100, the response was 88, indicating a high need.

Figure 6

Direct ASL Instruction vs. ASL-Immersion

Direct ASL instruction is necessary. Direct ASL instruction is necessary was the most common response throughout all the focus group conversations and interviews. The practice of mainstreaming was frequently mentioned as common practice among schools. Deaf educators agree there is a strong need for a focused block of time for teaching ASL.

> I think it's ideal to actually deliberately teach ASL as opposed to just hoping they pick it up (Interviewee one).

I believe direct ASL instruction is necessary. Because a student's metalinguistic knowledge of a language is essential for a higher level of attainment. When students can talk about language, they will become more grounded in it and more sophisticated language users. The metacognition of their ASL language will also transfer to their ability to the English language (Interviewee three).

A separate block time [for ASL instruction] would be good. Throughout the day, I have math, reading, writing…ASL should be considered as equally important. ASL instruction should be one of the core subjects in the classroom (Interviewee eight).

No, I don't think immersion is enough. Our kids need direct instruction in ASL. It becomes harder and harder to pick up a language the older you get, and I think that the overall expectation is that they'll learn from the interpreter, but that's not enough! Without ASL instruction, I'm not sure how successful the deaf are going to be in their core classes (Interviewee nine).

One full class, every day, 45 minutes to teach ASL. Not just for one year, every year, we should teach ASL in a separate class, so we can practice and learn to sign freely and be continually exposed to ASL (Interviewee 11).

Need for native ASL users in the classroom. The second most prevalent response was the need for native ASL users in the classroom. During focus group five, teachers shared the difficulties in finding native ASL signers, especially among schools located in small towns. While there has been an increase in the number of Deaf professionals in the field of deaf education recently, research participants want even more native users, especially Deaf of Deaf and children of Deaf adults (CODAs).

Native hands would be wonderful (Interviewee two).

As much Deaf staff as possible! (Interviewee five).

ASL curriculum design and delivery should be given by a Deaf, native signer (Interviewee 10).

I want an aide who signs fluently and is involved in the discussions. Right now, the aides tend to back off. I want them to be in the center of all the communication. I want the ASL teachers to work together (Interviewee 13).

We need Deaf role models! (Subject B from focus group five).

We're not finding Deaf adults that are willing to come out here to talk to them (Subject A from focus group five).

Grouping deaf students by similar levels. When asked, "How should ASL be taught?", a shared answer was having deaf students grouped by similar levels, cognitively and linguistically. Due to deafness being a low-incident disability, many deaf students of varying grade/academic levels are often placed in one classroom. Deaf children displaying different levels of signing ability depending on the family background are placed in one teaching space. Inclusive education for deaf students with such diverse needs make educators job of accommodating a challenging one. Teachers of the deaf endeavor to deliver instructional, communication, and environmental modifications the best way possible.

> I want students to have the same language skills and be at the same level. Then they are all starting at the same place, so they can develop together (Subject B from focus group three).

> I would have kids that are close to the same age and at the same level. It's hard to have younger and older ones together (Subject A from focus group four).

> In a perfect world, we would categorize the students by their signing ability, but we can't do that right now (Interviewee eight).

> Another problem is PreK, 1st, and 2nd graders are together. I prefer PreK to be separated. They could separate them into levels if we had enough kids to do that. They're all bunched together. Preschool especially needs to be smaller, like 4-5. We have a very small deaf school and I feel worn out (Interviewee seven).

> We're failing our deaf kids. We are. I like to leave deaf education better than when I arrived, but my issue has to do with leveling our deaf kids. If they are cognitively different, we place them in classrooms with multiple levels when they can obtain academic standards. These are smart kids; you can't throw them all in one classroom! That is seriously setting low expectations. We're failing them because we're throwing them in one pile, meaning so many grade levels at one time. A regular education teacher is responsible for four sets of standards: English, math, social studies, and science; I am responsible for 12 sets of standards. That's absurd! (Interviewee six).

Teach ASL grammar, deaf culture, and deaf history. When teaching ASL, 50% of the focus groups and interviewees spoke to the importance of teaching ASL grammar, Deaf culture,

and Deaf history alongside language. Surveys reported deaf educators to believe vocabulary

(57%) to be the most crucial area of ASL instruction, followed by grammar (17%), culture

(13.3%), and history (12.6%) (See Figure 7, p. 75). The American Council on Teaching of

Foreign Languages (ACTFL) advises the importance of including grammar, culture, and history

in meaningful communicative contexts when teaching languages (National Standards in Foreign

Education Project, 2015).

> Some people say ASL literacy should be about signing only, but I don't hold to that. You can't learn ASL from a book. Hearing curriculum has a lot of culture in it. Where is the culture for our Deaf kids? It's not equivalent. The Deaf are confused about their culture (Interviewee seven).

> We are not teaching them about their Deaf culture, Deaf history, Deaf identity, what it means to be a Deaf person. They should be proud. We have failed our deaf students because we have not given them a Deaf identity (Interviewee 11).

> And if you understand yourself, you have your own identity, and you understand your culture. And you understand ASL discourse: shoulder-shifting, eye-gaze, expressions, and you understand grammar more easily (Interviewee 13).

> If we're doing explicit instruction, it needs to be in grammar because vocabulary is something you get best in context anyways. So, if you are using language at all, your vocabulary is going to build. All the grammatical aspects need to be deliberately taught (Interviewee one).

Academic language. The importance of teaching deaf students in academic language

was another major issue discussed. Academic language includes instructional vocabulary and

discipline-specific terminology. Teachers believed in developing students' capacity for using

academic terminology, furthering deaf students' ability to contribute and grow intellectually.

> We're teaching [deaf students] how to talk, but they have nothing to say. They have no actual language. They can't think on their own. Critical thinking, executive functioning skills are deficient in our students and that scares me (Interviewee nine).

> We need to teach higher-level thinking words like: analyze, evaluate, and predict. They don't know that the word "compose" is the same thing as "write" (Interviewee 12).

They need to understand ASL discourse better. [Deaf students] don't understand the difference between academic and conversational ASL (Interviewee 13).

Figure 7

Ranking Categories of ASL Components

Q14 Rank the following in order of importance when teaching ASL to Deaf students.

Category		
Vocabulary	57.00%	1
	21.00%	2
	10.50%	3
	11.50%	4
Grammar	17.09%	1
	46.73%	2
	23.12%	3
	13.07%	4
Culture	13.30%	1
	26.11%	2
	50.74%	3
	9.85%	4
History	12.68%	1
	6.34%	2
	15.12%	3
	65.85%	4

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

■ 1 ■ 2 ■ 3 □ 4
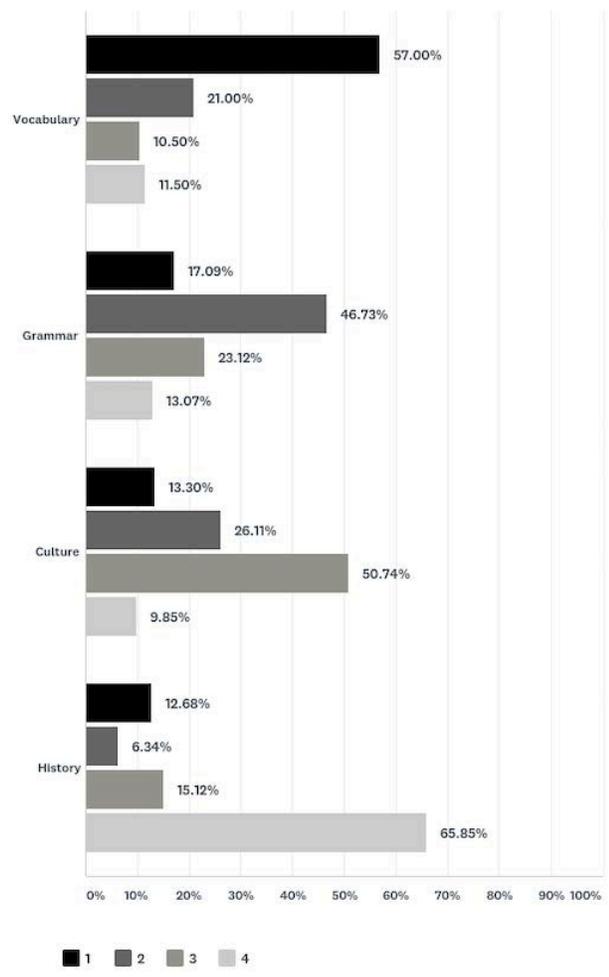
Collaboration with staff. Collaborating with and helping other staff (administrators, mainstream teachers, aides, and interpreters) receive training in working with deaf students was another point of discussion. Deaf educators are trained to understand how deaf children learn and process information differently than hearing children. "Inadequate professional development related to deaf education" and "limited time to collaborate with staff" were listed among the top

five reasons for negatively impacting ability to deaf educator job performance (Luckner & Dorn,

2017).

> Mainstream teachers need specialized training before they work with deaf students. Deaf educators know better than the general teacher population that there's a lot that goes into instruction for deaf kids to make them comprehend what is being taught. The principals and mainstream teachers have a strong opinion about how to teach kids we are trained to teach. We, as deaf educators, have to get together and start advocating as a group on behalf of our deaf students (Interviewee six).

> We need to figure out how to grab the mainstream people and involve them in a round table discussion, instead of being so isolated (Interviewee 13).

> There is no professional development for deaf educators. We have to do professional development on our own. The hearing school has PLCs (professional learning communities), but we have nothing (Interviewee seven).

> **Other ASL instructional suggestions.** Other ASL teaching suggestions included:

starting ASL instruction as early as possible, making ASL learning fun through games and

activities, and hiring an ASL specialist. Interviewee two shared the ideal situation of having an

ASL specialist, explaining administration supports getting an ASL specialist. Still, there is no

funding for an ASL specialist position because such positions are not licensed and widely-

accepted like speech pathologists. Money cannot be spent on a position, not in formal existence.

> The perfect program would start very young, infancy with full access to language, meaning ASL. Language, language, language, language, language from the beginning. All the sign language (Interviewee two).

> My perfect scenario would be some kind of outreach to parents early on and then really in our preschool programs hit the ASL instruction hard. Some kind of really good ASL instruction in the very early stages, ages 3, 4, and 5 years old (Interviewee six).

> I remember making a huge board game about nouns and verbs because my kids could not tell the difference between nouns and verbs in ASL. It was a board game with pieces and you had squares. You would pick a card and identify whether it was a noun or verb and then sign it in ASL. We played with how to say things in ASL and then in English (Interviewee one).

> A perfect classroom obviously would have an ASL specialist (Interviewee nine).

Theme Three: Current ASL Curriculum Used

Surveys reported a variety of answers on the types of ASL curriculum used. Teachers

said the most commonly used ASL curriculum was online signing videos (24.6%), teacher-made

materials (20.6%), Language 2 (L2) ASL curriculum (17.4%), generic images/visuals (16.6%),

Language 1 (L1) ASL curriculum (11.9%), and modified hearing curriculum (3.9%) (See Figure

8, p.78). L1 ASL curriculum is a curriculum meant for learners, typically Deaf, who consciously

acquire ASL naturally, not through instruction. L2 ASL curriculum is intended for second

language learners who learn a language through study and practice.

No ASL curriculum available. Repeatedly deaf educators shared frustrations on the

limited ASL curriculum available for deaf students. Most available ASL curriculum in existence

was created to teach L2 hearing students, listing Signing Naturally and Master ASL as the

curriculum most used. L1 ASL curriculum, similar to English Language Learner (ELL)

curriculum for hearing students, differs in approach by preserving and using the native language,

allowing deaf students to excel academically innately.

> We don't have anything! We do not have any curriculum for deaf and hard of hearing for
> core classes. Period. We do not. We need a curriculum (Interviewee 9).

> We are pressured to use research-based curriculum and there's not enough research-based
> ASL curriculum for deaf and hard of hearing. There's just not a lot out there. That's the
> problem. That! I know I could teach ASL to the deaf, but tell me how to do it. Where do I
> start? (Interviewee 12).

Signing videos. The most used curriculum was signing videos, which alone is not a

curriculum. Isolated signed stories and online videos are meant to subsidize academic content;

nevertheless, deaf educators rely on videos to provide lessons on ASL instruction. Deaf

educators agree signed videos are a vital component of effective ASL curriculum, 53% of

interviewees and focus groups mentioned the importance of including stories, alongside

meaningful lessons and practice activities. Using materials, such as videos, in isolation, does not

allow deaf students to make meaningful connections.

> It's very limited. I use some YouTube videos. Rocky Mountain School for the Deaf in
> Colorado has some very good signed videos that are free to use. I use those stories to
> check for ASL understanding (Interviewee eight).

> I use a lot of vocabulary videos on YouTube. I use Fremont's materials. I'm always
> searching online (Interviewee seven).

Figure 8

Materials Used to Teach ASL

MATERIALS USED TO TEACH ASL

- Other 3%
- Modified hearing curriculum 4%
- Visuals 17%
- Teacher-made 21%
- L1 ASL curriculum 12%
- L2 ASL curriculum 17%
- Signing Videos 25%
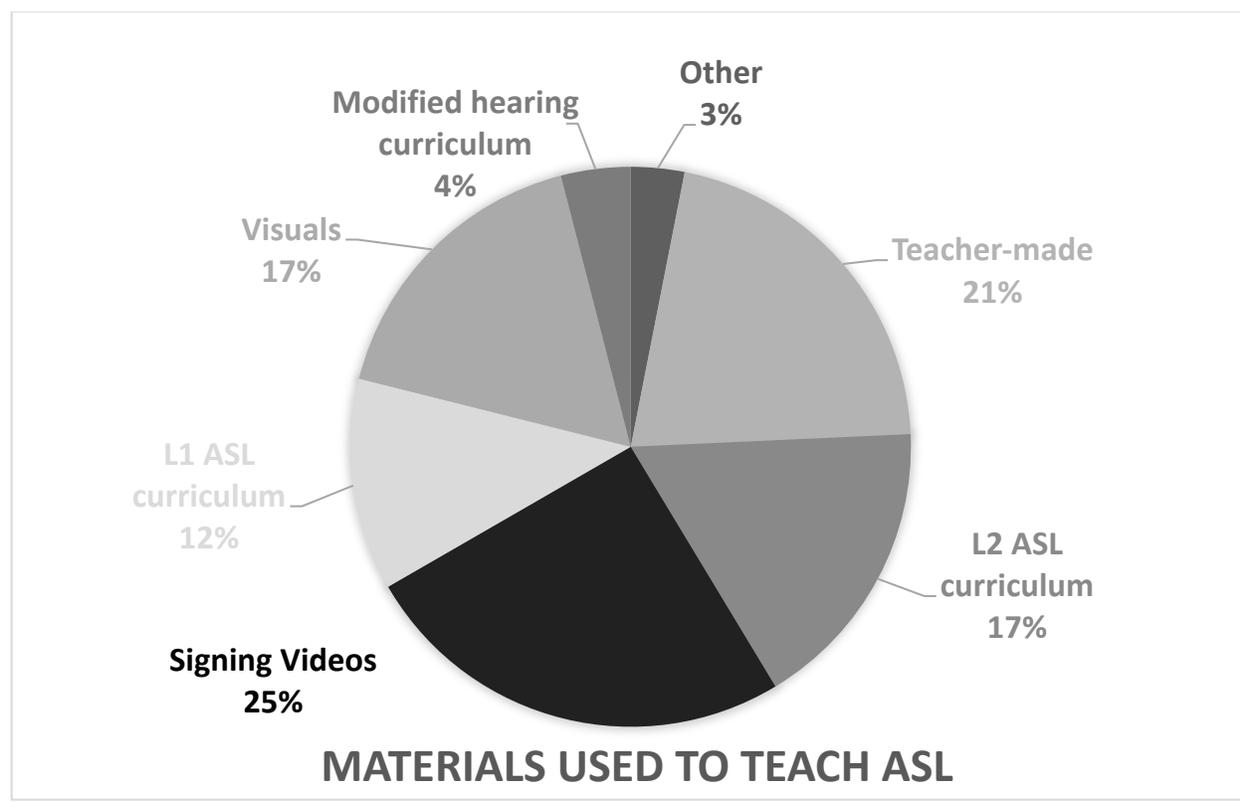
Teacher-made materials. Due to the limited availability of ASL curriculum for the deaf,

teachers create materials or adapt curriculum designed for hearing students. Deaf educators agree

too much time is spent creating materials, leaving little time to provide for differentiation.

Modifying and adapting hearing curriculum have become standard practice within deaf education classrooms.

> I feel like at this point, I have given up. I used to spend a lot of time, googling, or on Pinterest or Teachers Pay Teachers, going through the curriculum provided by the district, but so much of that is text-heavy. I felt that it was inaccessible and I spent tons of time modifying what I've found. Or I ended up having to make my own anyway because my kids couldn't access all the words. They needed scaffolds in place to access the materials. So, I'm at a point where I just do it myself. I don't even waste time looking (Interviewee two).

> Hearing teachers have a lot of resources, but I do not. I prefer to have things that I create, that are my own, my videos. But I don't have a lot of time (Interviewee seven).

> I've never used, well, I won't say never, but I don't use any structured ASL program. I basically use the knowledge I have and create it myself. I have found that is the best way for me. I take what I've learned in general education, adapt it, and see what works with my kids. I created my own curriculum because I haven't found anything that would be comprehensive enough (Interviewee six).

> Having an ASL curriculum. That would be wonderful! Wow! I can't even imagine what that would be like. I spend so much time trying to figure out lessons, but if I had a curriculum with these lessons already formatted for me, imagine how our kids could develop! (Interviewee seven).

Language 2 (L2) American Sign Language curriculum. The most known and used ASL curriculum is created for hearing students to learn ASL as a second language, having already mastered English as a first language. The most prevalent were Signing Naturally (5.5%) and Master ASL (3.9%). Other L2 ASL curriculums mentioned include: Dawn Sign Press, Lifeprint, We Sign, ASL University, Signing Time, and ASL Start.

> We always had the Signing Naturally curriculum just in our cupboards. For other curriculum, we just kind of decided what we wanted to do. My very first year of teaching, I remember walking in and asking about the curriculum, and there was no curriculum. I had to piece stuff together; I literally went and did a bunch of research and pulled it together for myself (Interviewee one).

> If you use ASL curriculums that exist, they are very scarce. Signing Naturally, Master ASL-these are meant to teach ASL to second language learners (Interviewee 10).

Language 1 (L1) American Sign Language curriculum. While few L1 ASL curricula exist, some deaf educators cited relying on developing L1 ASL curriculum including Bedrock (3.9%) and Fairview (3.9%). Bedrock and Fairview are being created in phases rather than as complete curriculums and are in the field testing and editing process. Other L1 ASL curriculums mentioned include: VCSL2, ASL Concepts, Clerc Center, Fremont, Molly O'Hara, and Deaf institute website resources.

> There's more options now. It might just be a little, but now there's programs coming out for reading like Bedrock (Interviewee five).

> We're using Fairview and I can't preach it enough. We've had kids make huge reading gains (Interviewee four).

Modified hearing curriculum. Deaf educators cited having to use mandated standardized curriculum, meant for hearing students, which is challenging for deaf students required to learn phonics. National curriculum is becoming more commonplace, as assessments seek to hold deaf students to the same academic standards as hearing students, which is only possible with a consistent curriculum. Some deaf educators found English Language Learner (ELL) curriculum applicable with modifications. With hearing curriculum as the standard, deaf educators work to refashion the materials to fit the needs of deaf students.

> ASL materials were a problem, completely across the board. I was one person, and it wasn't the interpreter's job to adapt hearing material. It was just hard (Interviewee 10).

> We use a lot of hearing curriculum and then do tons and tons of adaptations (Interviewee 12).

> I've been forced on many, many times to do phonics. Phonics is the most challenging teaching experience I've had. We modify by using visual phonics. It was so challenging. Several curriculums I've been given, and I'm like why?! They understand nothing. It's like forcing them to do something that they'll never be able to do. They weren't born with that ability. Sounds have little to no meaning for them. That was my most negative experience (Interviewee 12).

I adapt ELL stuff. I spend money to buy material and still have to adapt it (Interviewee 10).

Other resources used. Other materials used to teach ASL include: Teachers Pay Teachers, SKI-HI (a home language support curriculum), Deaf Mosaic, Deaf Heritage, online ASL classes, and other books. Various titles of books were a standard answer, as teachers relied on whatever was accessible. More online ASL resources and applications are increasingly available to students as a resource.

I typically use a lot of books. I have tons of books at all reading levels (Interviewee two).

We had every copy of Deaf Mosaic. We used Deaf Heritage; there was an adult and kid version workbook (Interviewee three).

Theme Four: Recommendations for ASL Curriculum

Repeatedly deaf educators shared frustrations on the limited availability of ASL L1 curriculum. When asked what an ideal ASL L1 curriculum would look like, responses were enthusiastic. Teachers were anxious to share ideas of what should be included.

No American Sign Language curriculum available. The general response emerging from the analysis is more ASL curriculum is needed. Rather than itemizing specific ASL curriculum needs, deaf educators' most common response was simply more. With the emergence of more ASL curriculum, deaf educators can begin to particularize which components are most necessary.

We need volumes of curriculum material that is presented in excellent sign, with visual cues that can be interacted and digested by every remote child in our nation (Interviewee three).

More of it. More quality materials. That takes time, that takes thought. That's a lot of time and energy. It's worth it (Interviewee five).

Just give us a starting place. I just want curriculum (Interviewee 12).

Videos. The second most common response for what should be included in an ASL L1 curriculum was videos, models of language. Often, the deaf educator is the only sign model deaf students have, restricting receptive skills to a particular style of signing. Videos allow deaf students to benefit from multiple styles of signing, improving accessibility to ASL on a wider scale.

> More signing videos to help with receptive skills and teaching the kids how to process language before they're visualizing it, so they can ask themselves the right kinds of questions. More videos with abstract concepts and more expansion on ASL stories (Interviewee 13).

> A lot of YouTube videos use ASL students who have limited skills; it should have Deaf people signing. It would be nice to have a listening center for signed books, with videos to match (Interviewee seven).

> Videos of stories, situations, paragraphs that my students can watch. Something my kids can see besides just me signing all the time (Subject A from focus group six).

Standards. Teachers agree ASL standards serve as a model of language expectations and want to correlate these standards to curriculum. ASL standards serve as a parallel between ASL and spoken languages, providing equitable alignment between the two languages. Recent efforts to develop K-12 ASL content standards from Gallaudet and Clerc Center were cited as a great start!

> We need to move towards having the same standards for everything. We need to look at the ASL standards starting at the kindergarten level and create appropriate materials that match those goals (Interviewee 13).

> I would love to have some kind of ASL instruction that intertwines with academic standards; that would be ideal (Interviewee six).

> I am really excited about the national K-12 ASL content standards, but we don't know what to do with them (Interviewee nine).

Grammar, culture, and history alongside vocabulary. The focus group and interview data provided convincing evidence showing deaf education teachers agree grammar, culture, and

history are essential teaching topics to include alongside language within an effective ASL

curriculum. When participants were asked to rank the four ASL curriculum categories

(vocabulary, culture, history, and grammar), vocabulary was selected as most important by 57%.

Grammar was deemed the second most important by 47%. Culture was considered the third most

important by 51%, and history was considered the least important by 66% (see Figure 7, p.75).

Several participants admitted to struggling to answer the question, adding all were vital

components. Overall, these studies provide support for the inclusion of all four elements of ASL

within an effective curriculum.

> It would be nice to have a lesson that's already made about Thomas Gallaudet, or Dummy Hoy, or you know, Leroy Colombo. I don't have that. I have to go and look all that up and there are no activities for it. Chuck Baird. Little ones don't know who he is and so it would be great to pull activities that are already made (Subject B from focus group five).

> We're missing the foundational skills that Deaf need, like Deaf culture. Why is it important for Deaf to learn ASL? We should teach Deaf identity (Interviewee 13).

> We could do some isolated grammar instruction, but for the most part, I'd also want to integrate it as part of the curriculum (Interviewee one).

> We want [deaf kids] to get the word meaning, we want them to get the vocabulary, but those kinds of things I can usually find resources, but teaching the deaf kids grammar-it's just hard to go find and pull things for them. And they have to have it! (Interviewee six).

> We're failing our deaf children because we are not teaching them about their Deaf culture, Deaf history, Deaf identity what it means to be a Deaf person. They should be proud. They can be successful. Other Deaf are successful. We have not given them a Deaf identity. We need a curriculum for that! (Interviewee 11).

American Sign Language literature. The data demonstrated the importance of literature

within ASL curriculum. Eight out of thirteen (61%) of the interview participants cited the need

for literature within an ASL curriculum. ASL literature provides a reliable source of linguistic

input and can help deaf students develop language skills.

Poetry. We need a Deaf curriculum for Deaf children that is poetry. Then we can present our principal and say, 'look, this hearing poetry curriculum will not work. They [deaf students] will never identify a rhyming word, but we can teach the same standards in ASL (Subject A from focus group five).

Engaging and beautiful children's literature. English literature with translation, or ASL literature. We need more of that. People need to be writing ASL stories and we need to be illustrating them. Another component of this is to have multi-age signers in the curriculum, little people signing that kids can relate to. A variety of signers, because I notice kids love to watch other kids signing (Interviewee three).

For younger students, we should start with original stories that they can create. Something about Deaf culture or their Deaf experience. Something simple, including topics such as Gallaudet, Laurent Clerc, Deaf institutes,… Maybe we can introduce ABC stories. We should start there (Interviewee eight).

Parent-portion. A fascinating finding was six out of thirteen interview participants

(46%), and four out of six focus groups (66%) cited the importance of including a parent-portion

in ASL curriculum. Lack of family involvement was a recurring theme. Often hearing parents

simply do not know what to do and need direction. Providing activities for parents to sign at

home can improve signing family interaction with deaf children.

I think there's a lack of help at home that affects the classroom, so I don't know if there's a way to partner an ASL curriculum for the kids, but also have a parent's portion that they could take home and also use it. I teach a parent's sign class on Thursday nights, so I'm always pulling straws out of the air, trying to figure out what I'm going to teach a parent so that it will apply in the classroom. I don't know if there's a way maybe to do that, maybe including the homework section that you could do with your parents at home (Subject B from focus group five).

One thing, something for the students to do at home with their parents. That's important for language development-something the parents can easily access and not be afraid of. Maybe a story with captions so parents can follow along. Something that deaf and hearing can read together. Something to encourage parents to sign at home with their child (Interviewee eight).

Also, a parent section. Including stakeholders. We know that 95% of our deaf/hoh students have hearing parents. Involving them. So, the students are learning it, but the parents aren't. That's a real issue. They spend more time at home than they do at school. Maybe something that includes the family as well, something interactive. Maybe they make a book together; they sign a story as part of their homework (Interviewee nine).

Visuals. The need for an ASL curriculum to be visual was a repeated theme within the data, referring to the need for props, interactive videos, computer programs, diagrams, color-coding, icons, digital lessons, pictures of a Deaf classroom, pictures of people signing, posters, puzzles, not text-heavy worksheets, and anything visualizing abstract ASL concepts. As previously mentioned, visuals were an essential element within ASL curriculum as 16.6% of deaf educators relied on visuals to teach ASL. Moving beyond the text and representing through visuals was a repeated theme among the participant responses.

Other American Sign Language curriculum needs. Other needs for ASL curriculum mentioned include digitized versions, puzzles, worksheets, games, differentiation, the inclusion of music, hands-on activities, assessments, teacher's guide, sight words, Deaf plus, and fingerspelling. Another general picture emerging from the analysis is the need for ASL L1 curriculum to have themes. Suggested themes include calendar, time, weather, colors, numbers, shapes, food/drinks, clothing, sports, everyday items, emotions, opposites, famous Deaf quotes, making friends, and fingerspelling. STEM topics such as: math concepts, ocean, dinosaurs, health/hygiene, the life cycle of plants, and animal groups were listed as an urgent need.

> The most important thing is to include differentiation, options. Maybe give three different options for kids who don't have language. Include more activities for independent students. Provide more support for each level, and include lessons for hearing students (Interviewee eight).

> I felt music and signed songs were an excellent way because you end up repeating and repeating things, and that's how hearing children learn language. I thought that would be great for Deaf kids too (Interviewee three).

> Thematic units would help deaf children make connections between multiple subjects in the same way students need to connect English and ASL (Interviewee one).

Reliability and Validity

Threats to reliability and validity were controlled from the beginning as an explicit study design was followed. The data instruments were approved by an expert panel to ensure non-bias in questioning and accuracy of ASL translation. An extreme effort was made to ensure a diverse selection of participants reflected the reflected the deaf education classroom as a whole, including deaf education teachers from a variety of school settings (oral, mainstreamed, and Deaf institutes). The solicitation of participants was made from all 50 states in the United States. Emails were sent to all state Deaf schools, representing participants from 33 states; the most significant representation being Texas (15.7%), California (3.8%), Alaska (3.3%), Washington (3.3%), and New York (2.8%). Data saturation was achieved as a considerable participant pool provided similar responses during the surveys, focus groups, and interviews. Results could be confidently transferred to a similar study, representing the deaf education classroom.

Validity was attained through clear and skilled ASL signing by the interviewer, along with consistent questioning and accurate transcription of signed conversations. An external auditing process approved all transcriptions. Member checking ensured the participant's comments were accurately represented. The coding process had the same method of consistency, categorizing data and making continued connections to the research questions. Ethical procedures, as outlined in chapter three, were followed, governing the research process to ensure confirmability.

Data analysis included examination and direct quotes from the participants to reflect viewpoints on ASL curriculum and instruction. Direct quotes confirmed data analysis and results. Implementation of the explicit study design, as cited, warranted a reliable and valid conclusive study.

The quality of research can be validated as the resulting themes related to the research questions. Four emerging themes were current practices of ASL instruction, recommended practices of ASL instruction, current ASL curriculum used, and recommendations for ASL curriculum. Resulting data showed consistency as similarities in the answers were present. Few differences were noted beyond the expected norm. Trends within the data included lack of sufficient ASL curriculum and the need for direct ASL instruction.

Chapter Summary

Chapter four revealed dimensions of deaf educator experience relating to ASL curriculum and instruction, specifically within prekindergarten to fifth-grade deaf education classrooms. The data collection was detailed including the background of participants and preparation of the dissemination of instruments. Deaf representation was explained, along with the timeline of data collection and disclosure of deviations. The detailed process of transcription was listed.

Data analysis was described using the coding process and the nature of diligent inquiry. Through the surveys, focus groups, and interviews, four themes emerged: current practices of ASL instruction, recommended practices of ASL instruction, current ASL curriculum used, and recommendations for ASL curriculum. Participant responses were cited according to the themes found within the reactions and subthemes were identified. Direct quotes and generalized statements were specified to support these themes.

Theme one, current practices of ASL instruction, elicited ASL instructional methods including: immersion, direct instruction, pull-out sessions, online classes, home visits, and many reported no ASL instruction existed. Second theme, recommended practices of ASL instruction, produced a range of suggestions including: direct ASL instruction, need for native ASL users, grouping deaf students by similar level, teaching ASL grammar, Deaf culture, and Deaf history,

teaching academic language, collaborating with staff, hiring an ASL specialist, and making ASL learning fun. Current ASL curriculum used, what ASL curriculum is used which was the third theme, cataloged the resources deaf educators used including: signing videos, teacher-made materials, L2 ASL curriculum, L1 ASL curriculum, visuals, modified hearing curriculum, and other resources. The most common cataloged response was no ASL curriculum for deaf students exists. A final theme, recommendations for ASL curriculum, what is needed in an ASL curriculum produced a list of suggestions including: videos, standards, incorporating ASL grammar, Deaf culture, and Deaf history alongside vocabulary, ASL literature, parent-portion, visuals, digitized version, differentiation, hands-on activities, teachers' guide, assessments, and themed-units.

Chapter five contains the considerations, conclusions, and recommended actions for improvement in ASL literacy among deaf students. A summary of the research study's usefulness can be considered. The findings of the research study answered the research questions by identifying effective ASL instructional methods and advocate components of a successful ASL L1 curriculum design.

Chapter Five: Findings, Interpretations, Conclusions, and Limitations

Chapter five explores the relationship between the data gathered among deaf educators to recognize and develop American Sign Language (ASL) fluency, which is crucial in establishing language among deaf students. The study is needed to develop effective strategies of intervention for the deaf to improve literacy. Despite an increase in signing environments within deaf education, ASL skills among deaf students continue to stagnate (Beal-Alvarez, 2016). Instruction specific to a sign language arts program, focused on the development of sign language, should be used for explicit language training in bilingual schools (Beal-Alvarez, 2016). Without an analysis of ASL educational pedagogy, deaf students cannot mitigate the existing academic gap between deaf and hearing students (Bortfeld, Hall, Lillo-Martin, & Eigsti, 2017). Deaf education classrooms may be better equipped to support deaf students by determining the barriers to ASL curriculum and instruction.

Deprivation of language is a common occurrence in hearing homes among deaf children. Around 95% of deaf children lack exposure to natural human language (spoken or signed) during the earliest months/years of life (Mitchell & Karchmer, 2004). Less than eight percent of deaf children receive consistent and fluent use of ASL (Gallaudet Research Institute, 2011). Without ASL, deaf children have no framework of language to access other subjects. Academic success depends on language and cognitive skills, not on hearing ability (Bortfeld et al., 2017). Deaf children who were native signers produced academic results similar to hearing peers, in a comparative study of deaf and hearing children with and without language (Bortfeld et al., 2017).

Deaf educators have no access to materials to support ASL literacy, and still, the implementation of ASL instruction relies on limited data, structure, and standards (Kristoffersen & Simonsen, 2016). Designing effective ASL programs and resources for deaf students is an

essential step in developing deaf students' language skills and academic success (Beal-Alvarez, 2016). The development of existing ASL curriculum and instruction has been aimed at hearing students (Snoddon, 2018). The following questions were used to provide direction for the study: How is American Sign Language literacy being taught in deaf education classrooms? What should be included in an effective American Sign Language curriculum for deaf children? Bridging the gap between research and practice is necessary and achievable through the development of ASL curriculum and instruction for deaf students.

A phenomenological approach was taken in order to study the convincing perspectives of deaf educator participants with careful attention. Accurate responses were generated by a holistic process based on experienced people in the field. Chapter four presented common experiences, which emerged from the perspectives of deaf educators. In the data analysis for implementation, themes were identified from the collective experiences. Themes were analyzed to produce resolutions related to existing literature. While deaf educators' experiences differ, each of the resolutions were prominent acknowledgments in motivating deaf students to achieve literacy. Chapter five includes the findings, interpretations, and conclusions of the culmination of data, along with further limitations, recommendations, implications for leadership, and the conclusion.

Findings, Interpretations, and Conclusions

Findings related to ASL curriculum and instruction among deaf students were consistent with existing literature (Allen, 2015; Beal-Alvarez, 2016; Harris, Terlektsi, & Kyle, 2017a; Kristoffersen & Simonsen, 2016; Wang & Williams, 2014). Data collected within the study build upon existing research by answering the call for more investigation on accounts of the successes and failures of ASL education with deaf students (Lange, Lane-Outlaw, Lange, & Sherwood, 2013), strategies for improving ASL instruction (Harris et al., 2017b), and recommendations for

effective ASL curriculum (Knoors, 2007). The following resolutions were constructed: cultivate a school environment of direct ASL instruction; feature native ASL users; teach grammar, culture, and history alongside language; collaborate with school staff and parents of deaf students; and create a culture of high achievement in ASL literacy.

Resolutions were created consistent with the constructivism theory, which is based on the lived experiences, collaboration, and social interaction of deaf educators' classroom encounters (Merleau-Ponty, 2015). The hermeneutic phenomenological study relied on the data collection conducted primarily in the participants' original language to most accurately reflect the intended viewpoints (Kafle, 2013). Categorization of the deaf educators' responses and discussions into meaningful forms resulted in the following resolutions.

Resolution One: Cultivate a School Environment of Direct ASL Instruction

The most common response for improved ASL instruction throughout the study was the need for direct ASL instruction. Most schools (53.3%) rely on ASL immersion for deaf students to pick up the language, rather than explicitly teaching the language (Figure 1, pg. 58). Crume (2013) calls for optimizing ASL teaching for deaf students through daily coaching, calling exposure to direct ASL instruction imperative. Participants (71.2%) agree direct ASL instruction is necessary (Figure 2, pg. 59). If the poor academic success of deaf children is linked to a lack of language, such deficits can be prevented through formal ASL training (Hall, Smith, Sutter, DeWindt, & Dye, 2018; Jasińska & Petitto, 2018). The study shows the correlation between direct ASL teaching and improved language skills. Deaf educators need to include formalized ASL coaching into the instructional schedule.

ASL should be taught as a core class, kindergarten through twelfth grade, and reinforced in all subjects. As deaf students encounter new terminology in other subject areas, teachers

should take the time to explain and practice new terms in ASL directly. Pauses should occur throughout instruction, making time for deliberate ASL instruction in other subjects, connecting knowledge of ASL to other disciplines. In the quest for language and academic success, regular direct communication is paramount. Experiences with others and language generate linguistic understanding and serve as a guide for such interactions (Creswell, 2013a). Prioritization of intentional ASL instruction should become a required component of the instructional day.

Academic growth of deaf students is possible through purposeful ASL practice and separation of ASL and English instruction, linking and unlinking the two languages (Palmer, Martínez, Mateus, & Henderson, 2014). Deaf educators cannot rely on parents of deaf students to provide ASL access to deaf children, because most deaf children are raised in hearing families not proficient in ASL, making the classroom a place where ASL classes are crucial (Crume, 2013). Learning ASL should be equally as important as learning English. Deaf students should study ASL for thirteen years, similar to the English learning requirement. Grasping ASL ensures deaf students are developing strategies to instill vocabulary knowledge, which transfers to success in English and other subjects (Petitto, Langdon, Stone, Andriola, Kartheiser, & Cochran, 2016). Schools should stop relying on mainstreaming as a stopgap for ASL literacy and cultivate an environment of direct ASL instruction within classrooms.

Resolution Two: Feature Native American Sign Language Users in the Classroom

The best mediation for successful transfer between ASL and English is fluent ASL models. Researchers shows proper language modeling can overcome impoverished language deprivation deaf children may have received at home (Henner, Hoffmeister, Fish, Rosenburg, & DiDonna, 2015). Native ASL models allow the natural development of ASL acquisition (Interviewees two, three, five, seven, nine, ten, eleven, and thirteen).

Educators of deaf students and curriculum writers should incorporate, as often as possible, Deaf and native ASL users as tools of cultural practice. Tools include using Deaf mothers and Deaf teachers as ASL storytellers in the classroom, featuring deaf children in signed videos as part of an ASL curriculum, hiring Deaf teachers and aides, and collaborative inquiry with the Deaf community in creating ASL standards, assessments, and curriculum (Hoffman & Andrews, 2016). Proper language development in any language requires use in the belonging community (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). By bringing the Deaf community into the classroom, deaf students are given opportunities to interact with and relate to Deaf role models. Literacy emerges actively and implicitly through social experiences (Kristoffersen & Simonsen, 2016; Vygotsky, 1980). Pursuing the viewpoints and talents of the Deaf should be embedded in teaching practices and curriculum.

With a shortage of Deaf professionals in the field of deaf education and ASL, society needs to implement initiatives to provide the Deaf with a chance to affect the field (Kamm-Larew & Lamkin, 2008). Hearing deaf educators should hire Deaf aides and create opportunities for the Deaf to interact with deaf students in meaningful ways (Interviewee three and nine). Schools should recruit Deaf professionals and universities should seek out Deaf to train deaf students (Interviewee eleven). Curriculum writers need to rely on the expertise of the Deaf to develop and create Language 1 (L1) ASL curriculum (Interviewee three). The Deaf are the greatest asset to advancing ASL literacy skills and deaf students' general knowledge acquisition.

The framework of the study deliberately recruited research participants from the Deaf community (32%) to feature native ASL users, supporting the authentic voice of the Deaf in the study (Kafle, 2013). Deaf inclusion and perspective within the field of deaf education matters. Deaf represent an authoritative source of support for deaf students, within a hearing society,

which often is not attuned to the best interests of deaf students (Hoffman & Andrews, 2016). By actively including the perspective of the Deaf, the hermeneutic study honored the relevant entity of the Deaf community.

Resolution Three: Teach Grammar, Culture, and History Alongside Language

Half of the participants in the focus groups and interviews addressed the importance of teaching ASL grammar, Deaf culture, and Deaf history alongside ASL to deaf students. Next to vocabulary (57%), research participants considered grammar (46.73%) to be the second most important concept to teach to deaf students. One of the guiding principles of the American Council on the Teaching of Foreign Languages (ACTFL) advocates the teaching of grammar within meaningful communicative contexts, leading to a greater understanding of the function of language (ACTFL, 2020). Teaching ASL grammar lays the groundwork for effective use of ASL and should be taught in conjunction with ASL vocabulary (Figure 3, pg. 62; National Standards in Foreign Education Project, 2015). ASL grammar is not acquired naturally; instead, grammatical concepts need to be taught. Proficiency in ASL grammatical concepts results in appropriate language use in a culturally acceptable way. Grammatical exercises alongside ASL vocabulary should be developed by deaf education teachers and ASL curriculum creators.

Teaching Deaf culture is critical to deaf students' understanding of identity as a Deaf person (Huang, 2017). Learning about Deaf cultural topics such as famous Deaf people, De'VIA, Deafspace, name signs, and assistive technology gives deaf students the capacity to breakdown stigmas associated with the Deaf (Leigh, Andrews, & Harris, 2018). Knowledge is developed socially and culturally (Gallagher, 2004). Deaf culture matters in deaf education because deaf children require a robust support mechanism with a group who share experiences coping in a hearing world (Hoffman & Andrews, 2016). ASL instructional practices and curriculum material

for deaf students should embrace Deaf cultural topics, providing a meaningful connection to a sense of community and self.

Deaf history is another beneficial tool for learning ASL. American Deaf history includes events such as: the Milan conference, Deaf President Now, Deaflympics, and the story of ASL (Huang, 2017). Understanding the historical plight and resilience of the Deaf community is empowering to deaf students, serving as a critical reflection of the past, present, and future of the Deaf community and ASL. The American Council of Teaching Foreign Languages (ACTFL) stresses the application of learning a language beyond the vocabulary, developing insight into the nature and heart of human experience (National Standards in Foreign Education Project, 2015). Knowledge of Deaf history equips deaf students with the tools to understand and relate to the Deaf world. Research participants spoke of deaf students' high interest in Deaf history lessons (Focus group five and Interviewee 12), creating inspiration among the group to practice engagement, advocacy, and construction of a better future for the Deaf community.

Resolution Four: Collaborate with school staff and parents of deaf students

Attempting to compensate for deaf students' language deprivation in the home, deaf education teachers yearn for professional collaboration (Interviewees six, seven, eleven, twelve, and thirteen), while continually striving to involve parents (Interviewees eight, nine, and ten; Focus group five). Deaf educators often serve a minority in schools and are a neglected group, receiving limited time to collaborate with staff and families (Hall et al., 2018). Luckner and Dorn (2017) surveyed 495 deaf educators' job satisfaction, and 59% reported dissatisfaction with professional development related to deaf education. Comparatively, deaf educators expressed dissatisfaction with the amount of time dedicated to collaborating with school staff (56%) and families (47%) (Luckner & Dorn, 2017).

Teachers of the deaf receive specialized training and want to share strategies with co-workers on best practices for teaching deaf children. Sometimes, general educators begrudge having to serve the specific needs of a deaf child in a mainstream setting, already filled with a diverse set of challenges (Interviewee 13). Mainstream educators often discount collaborative efforts from deaf educators in favor of standards more aligned with the best interests of the school overall, focused on hearing students. Since 87% of deaf students attend hearing general education classes for some of the school day, deaf educators should advocate on behalf of deaf students and not hesitate to recommend appropriate adaptations, resulting in deaf students having access to academic content and social interactions (Luckner & Dorn, 2017).

General educators have an abundance of professional development opportunities including conferences, online networks, organizations, webinars, and professional learning communities with hearing colleagues (Luckner & Dorn, 2017). Deaf educators are isolated and have to seek out collaboration. Education associations, beyond disability groups, should rise to meet the needs of deaf students by providing professional development for deaf educators. Now is the time to provide inclusion in professional development opportunities for deaf educators.

Lack of collaboration from parents is a familiar cry among deaf educators (Crume, 2013). As mentioned in the review of literature, parent engagement in the ASL learning process is critical to the success of deaf students. Findings gathered from the study reflected upon the lived meaning of deaf educators' experiences (Merleau-Ponty, 2015) and resulted in recommendations for developing practices to support families of deaf students. One way to achieve parent participation is by providing collaborative homework and activities for parents to sign at home (Focus Group five, Interviewee eight, nine, and ten). Collective results from the study recommend an ASL curriculum with a parent-portion, improving family signing interaction with

deaf children. Families want to be involved, but often do not know how and require help (Interviewee eight).

Some specific strategies to support parental involvement include: ASL flashcards, ASL card games, and lesson suggestions/ideas for parent nights (Focus group five). Guiding parents on signs of the week and suggested videos families can watch at home together, allow the deaf child to transfer academic learning to a meaningful context at home. Other suggestions include include: inviting parents to participate in a classroom lesson, passing out fun ASL puzzles families can enjoy together, sending home positive messages in both ASL and English, and organizing collective school experiences such as literacy and science nights (Interviewee eight, nine, and ten). Getting parents involved means more conversations at home and equates to an improved attitude towards learning (Hall et al., 2018).

While many hearing families worry about achieving fluency in signing, research shows the skill of signing is less important than the effort of communicating with the deaf child (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). Deaf children who sign with family members show early development of language and an overall positive outlook towards being Deaf (Mellon, Niparko, Rathmann, Mathur, Humphries, & Lanots, 2015). Teachers of deaf students need to provide favorable opportunities to encourage signing in the home.

Educating deaf students takes a collaborative effort and should involve all stakeholders. Deaf educators alone cannot provide literacy to a deaf child. Literacy within deaf students is built by the interactions, both direct and indirect, in the home, with peers, at school, and in the community (Kristoffersen & Simonsen, 2016). A partnership between stakeholders keeps deaf educators safe from burn-out as the responsibility of educating deaf students is no longer a sole burden, but a plight worth undertaking together as a team.

Resolution Five: Create a Culture of High Achievement in ASL Literacy

Lowering academic expectations in the deaf education classroom is a common practice among educators (Strassman, Marashian, & Memon, 2019). Because deaf students take more time to understand concepts, the instructional response is often simplifying the content, rather than accommodating to provide the language necessary to understand the content (Andrews, Hamilton, Dunn, & Clark, 2016). Language, not cognition, gets in the way of deaf students' learning (Bortfeld et al., 2017). Deaf students should not be limited by expectations based on test scores or experiences in classrooms. Teaching deaf students with rigor is equitable practice and a natural consequence of constructivism. As deaf educators empower deaf students to embrace challenging tasks, intellectual rigor is promoted (Vygotsky, 1980).

Deaf students need direct, explicit instruction of academic language, including vocabulary unique to specialty subjects (Strassman et al., 2019). The capacity for using academic terminology is possible with the purposeful intent of building vocabulary (Interviewee one). Many deaf rely on being exposed to academic language through the use of interpreters, since interpreters have a degree and specialized training relevant to the content (Strassman et al., 2019). Teachers of the deaf should prepare students to understand academic vocabulary, rather than depending on interpreters (Interviewee ten).

During instruction, teachers ask deaf students to perform specific tasks to show an understanding of specific concepts. Often deaf students may understand the concept while misunderstanding the wording of the question (Interviewee nine). Academic language provides deaf students with the tools needed to comprehend and communicate comprehension. The development of STEM-related ASL vocabulary has grown and is a dynamic tool for broadening

deaf students' vocabulary (Strassman et al., 2019). A student's ability to convey information about a topic improves with fluency in high-level vocabulary.

Research shows a gap in the development of ASL academic discourse, including a lack of academic journals, assessment tools, and ASL standards to help guide deaf educators in teaching and developing ASL fluency (Harris et al., 2017a). Deaf educators should teach academic English through the use of ASL. Advancing academic discourse in ASL requires a link between academic study, conferences, and journal publications in academic English and academic ASL, bridging the gap between the two languages. As deaf educators invest in direct academic vocabulary instruction early on, deaf students are sure to advance the level of ASL discourse through academic contributions (van Kleeck, 2014).

Limitations

Throughout the study, previously stated limitations existed. Remote data collection was required throughout the study as the research was conducted in Alaska. Travel was needed to solicit participants and achieve a large sample size from all over the United States. Remote data collection occurred in half of the focus group and interviews, requiring video recording and accurate logs of conversations. Accuracy of conversations in ASL was paramount and resulted in the greatest possible shortcoming of the study.

Potential bias among the participants based on educational philosophies was unavoidable. In the largest focus group (number one), seven opinions were present, representing oral, total communication, and bilingual/bicultural deaf education philosophies and a mix of hearing, deaf, and hard-of-hearing participants. While participants demonstrated respect among the group, the potential for influence remained. The level of control was another limitation as the data was based on participant narratives, allowing contributors the freedom to share openly. Additional

limitations include possible bias among significant Deaf solicitation and participation. While the perspective of Deaf was a highly valued feature of the study, the Deaf perspective represents an inclination towards certain viewpoints and could likewise be viewed as a control of the study.

Limitations were managed by traveling to two national deaf education and ASL-related conferences, allowing face-to-face solicitation and data collection. Many of the participants met during the conferences, joined remote conversations and vouched for the study, encouraging peers to contribute as well. Errors in the ASL translations were managed through a multi-step transcription process. An initial ASL to English or spoken English to written English translation was followed by an inspection from a certified ASL interpreter for an accuracy check. Upon inspection, the transcription was sent to the original participant for approval. Translation edits were made in accordance with the certified interpreter and original participant's requests and then sent once more to the original participant. Meticulous care in transcribing the signed narratives overcame the potential translation challenge.

Bias of the varying beliefs of deaf educational philosophy was dealt with through a balanced presentation of group and individual opinions. Triangulation of data occurred through focus groups, surveys, and one-on-one interviews, delivering a fair narrative, considering both the group and the individual perspectives. Level of control during the focus groups was mitigated through the repetition of the research questions to bring conversations back on topic. The intention of the study was aware of the strong Deaf presence in the study and welcomed the valued viewpoints of the Deaf as a contributing factor.

Recommendations

Future studies should aim to replicate the study in older grade levels. The research was focused on prekindergarten through fifth grade on the ASL literacy curriculum and teaching

efforts. Much continues to be studied, like higher education, in grades six and above. Universities are just beginning to offer advanced degrees in ASL instruction and the development of ASL academic discourse is within inaugural stages. Providing similar study to higher grade levels would continue to explore effective teaching strategies and recommendations for L1 ASL curriculum for older students.

As ASL curriculum for deaf students is developed, comparative case studies should be completed to measure effectiveness. Deaf educators and schools need to put into practice unfamiliar and evolving L1 ASL curriculum and report on the impact. More specific data collection would be beneficial as a comparison study to see if deaf students show greater ASL literacy in an ASL immersion or ASL direct-instruction environment. ASL literacy from deaf students of Deaf parents compared to deaf students of hearing parents would be constructive and would substantiate existing data on the study comparing deaf students fluent in ASL to hearing peers (Bortfeld et al., 2017). For such studies to occur, a standardized ASL assessment should be developed to serve as a standardized measure of results.

A more complex recommendation is to allow an ASL literacy study to be completed entirely in ASL, without an English translation, providing a more faithful representation of the experiences of the deaf students. For now, academic ASL discourse has not developed enough to provide a platform for such research. English is the only language of publication and the condition of the English language is a requirement. Future research should aim to find solutions for improving ASL literacy through ongoing research by investigating the experiences of deaf educators.

Implications for Leadership

The qualitative hermeneutic phenomenological study's results are significant to deaf educators, school administrators, curriculum writers, and general educators who teach mainstreamed deaf students, as efforts continue to address language deficiencies in deaf learners. Findings of the study reflect resolutions to affect change and improve ASL literacy in deaf education classrooms. Specific interventions can be put into practice and implemented to improve literacy among deaf students. School leaders can adjust instructional practices and address the academic gap between deaf and hearing students with practical solutions.

An advancement of ASL curriculum development can confidently rely on the research-based recommendations of deaf educators. Stakeholders can use the curriculum recommendations as a framework for creating L1 ASL curriculum. Curriculum developers can contribute to and extend the knowledge base of effective L1 ASL curriculum notions, providing further developments in the field.

Stakeholders can work together to advocate for the underrepresented group of deaf students by sharing the results of the study with talented deaf education professionals. Advocacy is the first step in affecting change. The results of the study aim to proliferate workable interventions in improving ASL literacy through effective instruction and creation of L1 ASL curriculum.

Conclusion

The cause of cognitive impairment in deaf students is language deficiency rather than hearing loss (Bortfeld et al., 2017). Deaf children do not have sufficient access to ASL literacy as a means to learn other subjects (Lange et al., 2013). Early exposure to ASL is the foundation for significant learning of literacy (Lange et al., 2013). The notion of the need for improved ASL

instructional strategies and curriculum for deaf students is generally accepted in the study. Two

questions guided the qualitative study. Research question one asked how American Sign

Language literacy was being taught in deaf education classrooms? Question two asked what

should be included in an effective American Sign Language curriculum for deaf children?

The qualitative hermeneutic phenomenological study utilized 209 surveys, six focus

groups, and thirty-nine interviews. Interviews were video recorded, translated into written

English, and approved by participants before coded and analyzed. Data were reconstructed into a

narrative and five resolutions to the research questions emerged including: cultivate a school

environment of direct ASL instruction, feature native ASL users, teach grammar, culture, and

history alongside language, collaborate with school staff and parents of deaf students, and create

a culture of high achievement in ASL literacy.

Resolution one, cultivate a school environment of direct ASL instruction, calls for direct

ASL instruction. Reliance on mainstreaming, though prevalent in schools, is not the most

effective means for instilling ASL literacy. The second resolution, feature native ASL users in

the classroom, entails the active inclusion of native ASL users within curriculum and instruction.

A third resolution is to teach grammar, culture, and history alongside language. Such practice

ensures the application of learning ASL beyond the vocabulary, mastering the language, and

offering a positive link to a sense of self and community. Collaboration with school staff and

parents of deaf students was resolution four, demanding a partnership between stakeholders and

ensuring deaf students' success. Resolution five, create a culture of high achievement through

direct academic vocabulary instruction, allows deaf students to grow intellectually.

Data collected, relative to existing literature, provided convincing evidence

demonstrating the validity of the explained resolutions. Insights gained from the study have

confirmed specific teaching strategies, along with a greater understanding of what should be included in an effective ASL curriculum for deaf students. The academic success of deaf students demands stakeholders to use the results and recommendations of the study to break down the limitations of achievement and redefine best practices in ASL literacy and deaf education. Continuing to advance ASL curriculum and instruction is essential for the improvement of knowledge acquisition in deaf students.

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Appendix A: Research Participation Recruitment Letter

Recruitment Script

Study Introduction
Good morning/afternoon (Name), my name is Jessica Parker. I am a doctoral student at American College of Education. I am conducting research for my dissertation, and you were identified as a possible participant for my study. The purpose of the research study is to gather data regarding American Sign Language curriculum and instructional strategies used among deaf educators in America. We want to question deaf education teachers to ask them how ASL literacy is taught within the deaf education classroom and what they think should be included in ASL curriculum for deaf students. Would you be interested in participating?
Caller is Not Interested
I understand and appreciate your time. Do you have anyone you would recommend?
Caller is Interested
Great! Before enrolling people in this study, we need to determine if you may be eligible to participate. I would like to ask you six questions about your teaching experience. Do I have your permission to ask you screening questions?   • Are you a certified teacher for the deaf and hard-of-hearing?   • Do you teach elementary deaf students in grades PreK-5th grade?   • How long have you taught?   • Are you fluent in American Sign Language?   • Are you deaf, hearing, or hard-of-hearing?   • What is the teaching philosophy at the school you currently teach at?
Qualified Post Response Communication
Based on your answers to the questions, it appears you are eligible to participate in the research study. Participation involves a questionnaire, three interviews that may last up to one hour each, one month apart, and involvement in two focus groups. Your participation in the study is voluntary. If you do not wish to participate in the study, you may withdraw at any time. I may publish the results of this study. I will not use your name or share any information you provided. Your information will remain confidential. Do you have any questions for me so far? While there is no compensation, the potential benefit of your participation is that it

will offer a greater understanding about ASL literacy among deaf children and methods to
improve upon ASL curriculum. In this research study, there are no known risks to you. How does this sound? (Answer any further questions, set up time for the interview, and explain the process for Informed Consent). Thank you for your time. I greatly appreciate that you have taken the time to discuss this with me. (Offer contact information).

Not Qualified Response Communication
Based on your answers to the questions, it appears you are not eligible to participate in the research study. I appreciate your time. Thank you very much.

Appendix B: Informed Consent Agreement

PREPARATION TO TEACH DEAF STUDENTS ASL

Jessica Parker, Ed Doctorate candidate, Principal Investigator

Introduction
You are invited to be in a research study. Research studies are designed to gain knowledge that may help other people in the future. There are no health risks associated with this study. Your participation is voluntary. Please take your time to make your decision, and ask the researcher to explain any words or information that you do not understand.
Why is this study being done?
The purpose of this study is to gather data regarding American Sign Language curriculum and instructional strategies used among deaf educators in America.
How many people will take part in this study?
Approximately 12 interview participants and 30 participants in the focus groups.
What is involved in this study?
Each participant will complete approximately three interviews in the participants' native language, American Sign Language or English. The interview will then be transcribed and sent to the participant for their approval and to ensure authenticity of translation. The participant will participate in two focus groups, which will also be transcribed for accuracy.
How long will you be in the study?
The interviews and focus groups will not be longer than one hour. Participants can be expected to participate in five hours of discussion over three-months.
What are the risks of the study?
There are no known risks associated with this study.
Why is this study being done?
The purpose of this study is to gather data regarding American Sign Language curriculum and instructional strategies used among deaf educators in America.

What are the benefits to taking part in this questionnaire
It will offer a greater understanding about ASL literacy among deaf children and methods to improve upon ASL curriculum.
How will your confidentiality be protected?
Your name will not be used and your information will remain confidential. All study records will be kept private in a safe and password-protected computer.
What are your rights as a research study participant?
Taking part in this study is voluntary. You may choose to leave the study at any time.
Who do you call if you have questions or concerns?
For questions about the study, contact the study investigator, Jessica Parker at (907) 782-7124 or at aslconceptsak@gmail.com. You will be given a signed and dated copy of this consent form.
Certificate of Consent
I have the read the information about the study, or it has been read to me. I have had the opportunity to ask questions about the study, and any questions have been answered to my satisfaction. I consent voluntarily to be a participant in this study. _____ Subject Name (printed)   _____   _____ Subject Name (signature)   Date I confirm the participant was given an opportunity to ask questions about the study and all the questions asked by the participant have been answered to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.   _____ Lead Researcher (printed)   _____   _____ Lead Researcher Signature   Date

Appendix C: School Permission Letters

Dear _____,

Warmest greetings! Please read this consent form carefully and ask as many questions as you like before you decide whether or not you want to participate in this research study. I would like to ask your permission to allow me to conduct interviews and focus groups among the deaf education teachers in your school. The purpose of the interviews and focus groups is to gather data regarding American Sign Language curriculum and instructional strategies used among deaf educators in America. This data will provide a greater understanding about ASL literacy among deaf children and methods to improve ASL curriculum.

Project Title: Preparation to Teach Deaf Students ASL: A Phenomenological Qualitative Investigation of Perceptions, Processes, Experiences, and Current Practices

I am conducting these interviews and focus groups among schools with deaf education programs grades PreK-5th. Each participant will complete three interviews in the participants' native language, American Sign Language or English. The interview will then be transcribed and sent to the participant for their approval to ensure authenticity of translation. The participant will also be invited to participate in focus groups, which will also be transcribed and approved. The interviews and focus groups will be no longer than one hour each. Participants can be expected to participate in three hours of discussion over three-months and one hour per focus group they choose to participate in. Participation in the interviews and focus groups is entirely voluntary. All information will be kept confidential and the names of the teachers and schools participating will not appear in any documents or publications resulting from this questionnaire unless agreed upon.

After the data has been analyzed, the school and the research participant will receive a copy of the results of the study. I hope to publish the results so that other interested people may learn from the research. Research participants will be provided with one free ASL Concepts book of their choosing after each focus group/interview session. There will also be free drinks and snacks provided during the focus group discussions. If you agree, kindly sign the Informed Consent giving me permission to conduct interviews and focus groups among your teachers and return the signed form in the enclosed envelope or scan and email back to me.

Your approval regarding this questionnaire is greatly appreciated. As a reminder, participation is voluntary and participants may withdraw at any time. Thank you in advance for your interest and assistance with this research.

Sincerely,

Researcher, Jessica Parker
11374 Tulin Park Loop
Anchorage, AK 99516
aslconceptsak@gmail.com

Dear School for the Deaf,

Warmest greetings! My name is Jessica Parker and I would like to ask your permission to allow me to conduct surveys, interviews, and focus groups among the deaf education teachers in your school. The purpose of the surveys, interviews and focus groups is to gather data regarding American Sign Language curriculum and instructional strategies used among deaf educators in America. This data will provide a greater understanding about ASL literacy among Deaf children and methods to improve ASL curriculum for the Deaf.

Project Title: Teacher's Preparation to Teach Deaf Students ASL: A Phenomenological Qualitative Investigation of Perceptions, Processes, and Current Practices

I am conducting these surveys, interviews, and focus groups among schools with deaf education programs grades PreK-5th. Participants will be asked to answer 15 inquiry form questions. Participants may also choose to participate in in-depth interviews and focus groups. Interview participants will complete three interviews in the participants' native language, American Sign Language or English. The interview will then be transcribed and sent to the participant for their approval to ensure authenticity of translation. The participant will also be invited to participate in focus groups, which will also be transcribed and approved. The interviews and focus groups will be no longer than one hour each. Participants can be expected to participate in three hours of discussion over three-months and one hour per focus group they choose to participate in. Participation in the surveys, interviews and focus groups is entirely voluntary. All information will be kept confidential and the names of the teachers and schools participating will not appear in any documents or publications resulting from this questionnaire unless agreed upon.

After the data has been analyzed, the school and the research participant will receive a copy of the results of the study. I hope to publish the results, so that other interested people may learn from the research. Research participants will be provided with one free ASL Concepts book of their choosing after each focus group/interview session. There will also be free drinks and snacks provided during any on-site focus group discussions. If you agree, kindly sign the Informed Consent giving me permission to conduct surveys, interviews, and focus groups among your teachers and return the signed form and email back to me.

Your approval regarding this questionnaire is greatly appreciated. As a reminder, participation is voluntary and participants may withdraw at any time. I've included a research summary, the research questions, and the site consent form as attachments. If you have any questions regarding this research please feel free to contact me directly. Thank you in advance for your interest and assistance with this research.

Sincerely,

Jessica Parker
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Certificate of Consent

I have the read the information about the study, or it has been read to me. I have had the opportunity to ask questions about the study, and any questions have been answered to my satisfaction. I consent voluntarily to allow teachers within my school to participate in the research study.

_____

Administrator's Name (printed)

_____   _____

Administrator's Name (signature)   Date

I confirm that the administrator has not been coerced into giving consent, and the consent has been given freely and voluntarily.

_____

Lead Researcher (printed)

_____   _____

Lead Researcher Signature   Date

Appendix D: Semi-structured Interview Templates

Interview #1

1. **Tell me about your role as a deaf education teacher.**
▪ What type of school do you teach at? Day school, residential, mainstreamed, or other?   ▪ What grades do you teach?   ▪ What does your classroom look like?   ▪ What is your class size?   ▪ Do you have instructional support?   ▪ What does your instructional day look like?   ▪ What type of resources are available to you? Smart board, laptop, video phone, etc.
2. **Tell me about your experiences with teaching American Sign Language to Deaf children.**
▪ Do you teach ASL as a separate class?   ▪ Do you give ASL vocabulary tests?   ▪ Do you give ASL homework?
3. **Tell me about your school's philosophy in deaf education and ASL literacy.**
▪ Is it bilingual, oral, ASL only?   ▪ Is it a signing only environment or is voicing allowed?   ▪ Are speech classes provided?   ▪ Do you have an ASL specialist on staff?
4. **What materials/resources do you use to teach American Sign Language to Deaf children?**
▪ What are your favorite books, videos, and websites?   ▪ Where do you buy your materials?   ▪ Do you create your own materials?   ▪ What organizations provide credibility in finding quality resources?
5. **What should be included in an effective American Sign Language curriculum for Deaf children?**
▪ Clarification questions based on their answers and field notes.

Interview #2

1. Is ASL literacy a problem in your classroom?
▪ Do Deaf students struggle more with expressive or receptive skills? ▪ How do these problems impact your classroom?
2. Do you believe direct ASL instruction is necessary or do ASL-immersive classrooms suffice?
▪ What does direct ASL instruction look like? ▪ What does ASL immersion look like? ▪ List positives and negatives to each approach.
3. How would you rate the importance of these ASL concepts in developing ASL literacy among Deaf students-vocabulary, grammar, culture, and history?
▪ How would the ranking be different in consideration of ASL curriculum for hearing students?
4. Can you give me an example of a positive ASL teaching moment in your classroom?
▪ What was the lesson? ▪ What made it fun? ▪ How did the students react? ▪ Describe the contributing factors to its success.
5. What are some challenges that you face in developing ASL literacy?
▪ How do you adapt to these challenges? ▪ How does ASL fluency play a role?

Interview #3

1. What are your thoughts on ASL literacy among Deaf children?
▪ How has ASL literacy improved over the past 10 years? ▪ What areas do we need to work on? ▪ What areas have the seen the most growth?

2. In your opinion, are we succeeding or failing our Deaf children?
▪ What are some examples of success in deaf education? ▪ What are some examples of failings in deaf education?

3. How does mainstreaming Deaf students affect ASL literacy?
▪ Do mainstreamed Deaf students typically experience a decline in their ASL skills? ▪ Does mainstreaming Deaf students enhance ASL skills? ▪ Does mainstreaming Deaf students confuse ASL skills?

4. Describe for me a perfect deaf education classroom.
▪ What is the perfect staff/student ratio? ▪ What role does technology have in a deaf education classroom? ▪ Describe an ideal visual layout for a deaf education classroom? ▪ What should be displayed on classroom walls?

5. What would your ideal ASL curriculum look like?
▪ How should these lessons be formatted for ease of use? ▪ How should lessons be categorized? ▪ How should academic levels be determined?

Appendix E: Online Questionnaire for Deaf Educators

Online Teacher Questionnaire

Thank you for agreeing to take part in this questionnaire assessing ASL curriculum and instruction within Prekindergarten through 5th grade deaf education classrooms. Today we will be asking you your thoughts and opinions in order to better serve Deaf students in the future. This questionnaire should only take 4-5 minutes to complete. Be assured that all answers you provide will be kept in the strictest confidentiality. Please only take the questionnaire once.

1. Are you a certified teacher?
   ☐ Yes
   ☐ No
   ☐ Working on it

2. Do you currently teach Deaf students in a Pre-kindergarten through 5th grade classroom?
   ☐ Yes
   ☐ No

3. How many years have you been teaching in a deaf education classroom?
   ☐ This is my first year
   ☐ 1-2 years
   ☐ 3-5 years
   ☐ 6-10 years
   ☐ 11-15 years
   ☐ 16-20 years
   ☐ More than 20 years

4. What is your highest level of completed formal education?
   ☐ bachelor degree
   ☐ master's degree
   ☐ doctoral or Professional degree

5. How would you describe your fluency in American Sign Language (ASL)?
   ☐ Native-like
   ☐ Advanced
   ☐ Intermediate
   ☐ Beginner
   ☐ I do not know ASL

6. Which best describes you?
   ☐ hearing
   ☐ hard-of-hearing
   ☐ Deaf

7. Are you a CODA (child of a Deaf adult)?
   ☐ Yes
   ☐ No

8. Which of the following best describes your current school?
   ☐ Day school- Deaf students go to school Monday-Friday and go home every day, like a normal school. All students are Deaf or hard-of-hearing.
   ☐ Residential School- Deaf students live at the school in a dorm and go home on the weekends. All students are Deaf or hard-of-hearing.
   ☐ Mainstreamed-Deaf students are placed in regular classrooms with hearing students. They have interpreters and deaf education support services. (May include some Deaf self-contained classes).
   ☐ Other (please specify) _____

9. Which of the following deaf education philosophies best describes your current school?
   ☐ Oral Communication-The education of Deaf students through spoken language by using voice, speech-reading, lip-reading, and amplification.
   ☐ Total Communication-Uses a combination of various methods and approaches i.e. voice, written, amplification, gestures, American Sign Language, manually coded English systems, fingerspelling, and spoken words to meet the child's individual needs.
   ☐ Bilingual/Bicultural-Recognizes American Sign Language (ASL) as the primary language of the Deaf child and uses ASL for instruction and conceptual understanding of material.
   ☐ Other (please specify) _____

10. How is ASL taught at your school?
    ☐ Immersion-students are taught others subjects in American Sign Language
    ☐ Stand-alone class-students are regularly taught specific lessons in ASL
    ☐ Pull-out sessions-students work with an ASL specialist to develop their ASL skills
    ☐ Other (please specify) _____

11. Do you believe direct ASL instruction is necessary or is ASL-immersion just as effective?
    ☐ ASL instruction is necessary.
    ☐ ASL-immersion is effective.

12. If specific ASL lessons are taught, what materials are used to create ASL lessons? (Specific answers are very helpful here) _____
_____

13. On a scale from 1-10, with 10 being the greatest, how great is the need for improved ASL curriculum and instruction for deaf children?

14. . Rank the following in order of importance when teaching ASL to Deaf students.
    _____ Vocabulary
    _____ Grammar
    _____ Culture
    _____ History

15. May we contact you for future research questions? If yes, please fill out the below contact information.
    Name: _____
    Email address: _____
    Phone number: _____
    State: _____

Appendix F: Focus-Group Discussion Questions

Focus Group Discussion #1-ASL Literacy

1. How does a child's background affect ASL literacy?
▪ If the Deaf child has Deaf/hearing parents? ▪ If the Deaf child has other disabilities?
2. Is ASL literacy a problem among Deaf children?
▪ How do your Deaf students compare academically to hearing students? ▪ Do you have students that do not know ASL?
3. How do you measure success in ASL literacy?
▪ Do you use a specific assessment tool? ▪ Does your school have an ASL specialist on staff?
4. How does a cochlear implant impact ASL literacy?
▪ What percentage of your students have cochlear implants? ▪ What are the differences in literacy from implanted to non-implanted students?
5. What are some challenges that you face in developing ASL literacy?
▪ What do you notice about developing ASL literacy in Pre-K vs. older grades? ▪ How important is abiding by Deaf cultural beliefs in developing ASL literacy? For example, Deaf power, cochlear implant, voice-off, certified Deaf interpreters
6. How do you enhance ASL literacy in pre-school Deaf children?
▪ How do you address the challenges of ASL literacy in pre-school children among Deaf with Deaf children vs. Deaf children with hearing parents? ▪ How does exposing Deaf children to reading from an early age affect ASL literacy?
7. What are some myths of ASL language acquisition?
▪ How do we dispel these myths?

8. Do we need K-12 ASL standards? Why or why not?
- How do we develop ASL competencies?   - Are you aware of K-12 ASL standards?   - Does your school use them?

Focus Group Discussion #2-ASL Instruction

1. Do you believe direct ASL instruction is necessary or do ASL-immersive classrooms suffice?
▪ Do you have time allotted in your lessons for direct ASL instruction? ▪ What does an ASL-immersive environment look like?
2. What kind of drills are useful to use in teaching ASL?
▪ Do you use manipulatives or other resources to conduct these drills?
3. Are teaching songs helpful in teaching ASL?
▪ Have your students ever performed a song in ASL at a school event? ▪ Does your school have a drum song? If not, would you find this beneficial? Why or why not?
4. How do you pace your classroom?
▪ Describe your classroom routines? ▪ How long are your lessons? ▪ How do you transition from lesson to lesson?
5. When you teach, do you voice on/off?
▪ What do you notice about your students' learning during voice off vs. voice on? ▪ When you use ASL, are they more likely to sign or voice back to you?
6. Describe for me the environment of a perfect deaf education classroom?
▪ What is the perfect staff/student ratio? ▪ What role does technology have in a deaf education classroom? ▪ Describe an ideal visual layout for a deaf education classroom? ▪ What should be displayed on classroom walls?

Focus Group Discussion #3-Benefits of Early ASL Acquisition/Experiences

1. What does it mean to have a firm first language foundation?
▪ Which language, English or ASL, would you say are most of your Deaf students' first language? ▪ Would you say Deaf students have a firm first language foundation in Preschool? ▪ What do you notice about ASL fluency in Deaf of Deaf vs. Deaf of hearing parents?
2. How does early ASL acquisition affect behavior?
▪ Do Deaf children who lack ASL fluency exhibit more negative behaviors compared to Deaf peers who are ASL fluent? ▪ Does ASL fluency assist in student/teacher relations?
3. What supports early ASL learning?
▪ What role do parents play in developing ASL? ▪ What role do siblings play in developing ASL? ▪ What role does the community play in developing ASL?
4. What qualities do you notice about Deaf children who are fluent in ASL compared to Deaf children who are not?
▪ Socially? ▪ Emotionally? ▪ Academically? ▪ Other? Please explain.
5. How does ASL literacy affect speech development?
▪ Do your Deaf students have speech therapy? Why or why not? ▪ Do you agree with Deaf students learning phonics? Why or why not? ▪ What is your approach to facing the differences that exist among diverse Deaf children? For example, those who use their voices, have cochlear implants, have Deaf parents, or are hard-of-hearing?

Focus Group Discussion #4-Developing ASL Curriculum

1. Do you currently use any ASL curriculum?
▪ Who chose this curriculum? Was it mandated by the school administration? Did you have input in what was purchased? ▪ Is your curriculum supported by online resources?
2. What is an ASL lesson structured?
▪ What is needed to teach expressive and receptive skills in ASL? ▪ Where do you find signing models? Are they deaf? Hearing? CODAs? ▪ Do you incorporate ASL stories?
3. How would you rate the importance of these ASL concepts in developing ASL literacy among Deaf students-vocabulary, grammar, culture, and history?
▪ How would the ranking be different in consideration of ASL curriculum for hearing students?
4. How do you partner with the Deaf community to develop ASL curriculum?
▪ How do you share information about local Deaf events? ▪ How would you describe your local Deaf community? ▪ How involved is your local Deaf community in your school? ▪ Have you ever invited a Deaf native speaker to your classroom?
5. Do you include trends and current events within the Deaf world in your ASL curriculum?
▪ How do you stay informed on the ever-changing variations of ASL in developing ASL curriculum? ▪ Do you incorporate ASL slang and idioms in your ASL curriculum? ▪ Do you use online publications, vlogs, and social media sites?
6. What kinds of ASL materials do you want for the classroom?
▪ Where would you look to buy these materials? ▪ How do you know the materials are accurate reflections of ASL? ▪ What organizations provide credibility in finding quality resources?

7. **What types of lessons should be included in a perfect ASL curriculum for Deaf children?**
▪ How should these lessons be formatted for ease of use? ▪ How should lessons be categorized? ▪ How should academic levels be determined?

Focus Group Discussion #5-ASL Concepts

1. What specific vocabulary themes should be included in an ASL curriculum?
Clarification questions based on their answers and field notes.
2. What specific culture topics should be included in an ASL curriculum?
Clarification questions based on their answers and field notes.
3. What specific grammar rules should be included in an ASL curriculum?
Clarification questions based on their answers and field notes.
4. What specific history lessons should be included in an ASL curriculum?
Clarification questions based on their answers and field notes.
5. What specific shared Deaf community beliefs and practices should be included in an ASL curriculum?
Clarification questions based on their answers and field notes.

Focus Group Discussion #6-Deaf Educator ASL Instruction Narratives

1. Tell me about your experience as a deaf educator.
▪ Education ▪ Teaching experience ▪ Personal teaching philosophy ▪ Why you chose this profession?
2. Tell me about an inspiring student who excelled in your class.
▪ Did the student have a strong support system? ▪ How did you inspire them? ▪ How did ASL fluency play a role in their success?
3. Tell me about a challenging student who did not succeed in your class.
▪ What were the obstacles they faced? ▪ How did you provide support? ▪ How did ASL fluency play a role?
4. Tell me about an exciting lesson that you are proud of.
▪ What was the lesson? ▪ What made it fun? ▪ How did the students react? ▪ Describe the contributing factors to its success.
5. Tell me about a lesson that didn't go as planned.
▪ What was the lesson? ▪ How did the students react? ▪ What factors led to its downfall?