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The purpose of this study was to investigate the relationship between K-12 interpreters' training in relation to the Model Standards (1993), their perceptions of preparation, and their evaluation scores on the Educational Interpreter Performance Assessment (EIPA) of current and recently working K-12 educational interpreters. A questionnaire was created and distributed to coordinators, chairs, and professors of interpreter training programs, national interpreting organizations, as well as to educational interpreting and American Sign Language interpreting groups on social media outlets. A total of 324 participants responded to the survey; 276 reported currently working in a K-12 educational setting, and 48 reported previous employment as an interpreter in a K-12 setting within the past 5 years. Results revealed that topic areas from the Model Standards (1993) are not being provided in formal interpreter training programs, EIPA scores continue to be below the minimum recommended skill level of 4.0, and participants feel unprepared to work as educational interpreters supporting deaf and hard-of-hearing students in K-12 settings.

EDUCATIONAL INTERPRETERS FOR THE DEAF AND HARD OF HEARING: PROFESSIONAL PREPARATION, EVALUATION, AND PERCEPTIONS

by

Kimberly F. Hutter

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Approved by

_____
Committee Chair

APPROVAL PAGE

This dissertation, written by Kimberly F. Hutter, has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair _____

Committee Members _____

_____

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Date of Acceptance by Committee

_____

Date of Final Oral Examination

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To my manfriend, thank you for believing in me and for opening your heart and offering your love to me. You are home.

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CHAPTER I

INTRODUCTION

Daily, deaf and hard-of-hearing (D/HH) students attend school in K-12 settings, some students supported by a sign language interpreter. A sign language interpreter provides the D/HH student access to the curriculum by using a signed language, American Sign Language (ASL) in the United States, or sign system (e.g., Manually Coded English [MCE]) to interpret the classroom teacher's instruction. The sign language interpreter prepares for this work by attending a training program; however, not all of these programs prepare the pre-service interpreter for the unique work required in an educational setting. Thus, some sign language interpreters working in educational settings may not have the necessary knowledge and skills to perform their jobs well, which may have negative consequences on D/HH student's academic outcomes. Because interpreters often work, at least initially, in the school system, it is imperative that training programs offer preparation focused on interpreting in educational settings, and that pre-service interpreters who intend to seek positions in educational settings attend training programs focused on preparing interpreters for educational settings.

Statement of the Problem

The passage of Public Law 94-142 in 1975 prompted a dramatic shift in how D/HH students received instruction from schools for the deaf to mainstream settings (Marschark et al., 2005). Currently, over 87% of D/HH students receive instruction in

their neighborhood school with their hearing peers (National Center for Education Statistics, 2016). Many of these D/HH students receive support services from a sign language interpreter. A sign language interpreter facilitates communication between D/HH and hearing individuals using a signed language/system. A sign language interpreter who works in an educational setting with D/HH students is often referred to as an educational interpreter; however, not all "educational interpreters" have received specialized training that qualifies them to provide services to D/HH students. In addition, reported scores from a national assessment used to evaluate the skills of interpreters' working in K-12 settings, the Educational Interpreter Performance Assessment (EIPA), consistently show the majority (77%-87%) of working educational interpreters fail to reach the minimum acceptable (i.e., proficient) score of 4.0 (Johnson et al., 2018), leading one to question how these interpreters are prepared. Two survey studies, conducted almost 30 years apart, reveal that training programs remain unchanged without any specialized focus on educational interpreting. Both studies focused on collecting curricula data from coordinators/directors of interpreter training programs, and both studies revealed a lack of curricula focused on educational interpreting (Dahl & Wilcox, 1990; Hutter & Pagliaro, 2017). In fact, of the 115 interpreter preparation programs outlined in the 2015 reference issue of *American Annals of the Deaf*, only six identified as having some sort of specialization in preparing interpreters to work in educational settings (Hutter & Pagliaro, 2017). Additionally, of five programs receiving Office of Special Education Programs (OSEP) grant monies to fund the preparation of interpreters

for an educational setting, three offered no classes specific to interpreting in educational settings (Johnson et al., 2018).

Furthermore, there is no research to guide the field to determine whether those programs that have a specialization in educational interpreting are successful in comparison to those programs that do not offer any specialization for educational settings. If D/HH students' academic access and, by account, outcomes depend on sign language interpreters, and if formal interpreter training programs do not offer specialized training for interpreting in educational settings or are not effective in doing so, then D/HH students may suffer academically with detrimental consequence.

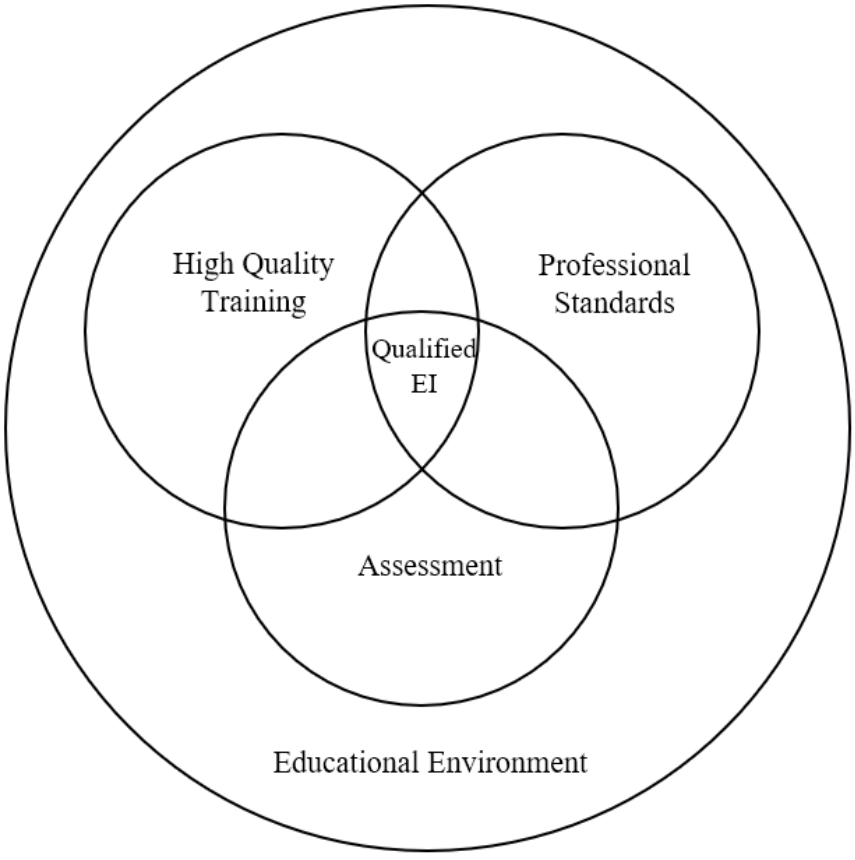
Theoretical Framework

Johnson et al. (2018) framed foundational requirements of sign language interpreters in K-12 settings in four ways: pre-service training, demonstration of knowledge and skills before entering the workforce, continued education requirements, and supervision and accountability. The current research focuses on the first two foundational requirements: (a) pre-service training, and (b) demonstration of knowledge and skills before entering the workforce (Johnson et al., 2018) to investigate topics of formal interpreter training curricula, standard-based interpreter evaluation, and educational interpreters' perceptions of their formal training program. Figure 1 portrays the theoretical framework that guides this study. In it, the quality educational interpreter (EI) is the ultimate goal. The larger circle labeled the educational environment, represents the context for interpreting (i.e., topics, concepts, terminology, legislature, development, etc.) and is the domain in which learning takes place for D/HH students. The circles

within the educational environment or context represent three areas that embody a sufficiently prepared educational interpreter. These are high-quality training, professional standards (i.e., the Model Standards [1993]), and valid assessment (i.e., the Educational Interpreter Performance Assessment [EIPA]). These three areas are foundational in creating a quality educational interpreter who has demonstrated his/her/their knowledge of educational interpreting and is able to function and provide support to the D/HH student within an educational environment. The present study is supported by this framework.

Figure 1

Theoretical Framework



Purpose of the Study

The purpose of this study was to investigate the relationship between K-12 interpreters' training in relation to the Model Standards (1993), their perceptions of preparation, and their evaluation scores on the EIPA. The following research questions guided the study:

1. How many courses related to K-12 interpreting did participants who graduated from formal interpreter training complete, and what percentage of curricula from the Model Standards (1993) were met?
    1.1. How does reported coverage of curriculum topics by participants compare between the focus of reported program attended (i.e., community/educational)?
2. How do evaluation scores of interpreters working in K-12 settings compare between participants who did not attend a formal training program and participants who did attend a formal training program?
    2.1. How do interpreter evaluation scores of participants compare between the focus of reported program attended (i.e., community/educational)?
3. What are the perceptions of interpreters who attended formal training programs on their preparation?
    3.1. How do participants' perceptions compare between the focus of reported program attended (i.e., community/educational)?

Summary

The present study presents information on the preparation of educational interpreters. A national survey of current and recent interpreters working in educational settings was conducted to (a) determine whether a relationship exists between type of interpreter training program attended, courses and curriculum topics covered in those programs, and scores from evaluations used to assess interpreting skills, and (b) to gain a deeper understanding of working educational interpreters' perceptions of the formal training they received and how it prepared them for a career as an educational interpreter. In Chapter II, the research and theories surrounding the preparation, perceptions, and evaluations related to interpreters employed in educational settings are reviewed, including that D/HH students' academic success may be dictated by the formal interpreter training a sign language interpreter receives, leading to the research questions. In Chapter III, a detailed description of the research design, and data collection methods and analyses, as well as how the validity of the study was achieved is provided. In Chapter IV, the findings from the survey are detailed, answering the previously stated research questions. Finally, in Chapter V, a discussion of the major findings is offered along with how these findings may impact the field, and suggestions for implementation of the findings and further research.

Definitions

The following terms are defined for this study.

American Sign Language—a visual and natural language used by the North American Deaf community, developed naturally over time, that exhibits all of the features of language (Valli et al., 2011).

Community interpreter—a sign language interpreter who facilitates communication in medical, legal, theatrical, and other more general, community-based settings (Telelanguage, 2019).

"d" deaf—an audiological condition in which one is lacking in the sense of hearing (Merriam-Webster, 2019).

"D" Deaf—a group of deaf people who share a language (i.e., American Sign Language) and a culture (National Association of the Deaf, 2020).

Educational interpreter—a sign language interpreter who facilitates communication between the D/HH student(s) and other members of the educational team in a mainstream or inclusion setting and provides access to academic coursework (Hutter & Pagliaro, 2016) as well as teacher and peer communication (Schick et al., 2006).

Hard of hearing—relating to or having a defective but functional sense of hearing (Merriam-Webster, 2019).

Inclusion—the act or practice of including students with disabilities with their non-disabled peers (Merriam-Webster, 2019) in K-12 educational settings.

Mainstream—to place a student (i.e., a disabled student) in general education classes (Merriam-Webster, 2019).

Manually Coded English (MCE)—a signed system for spoken English, made up of signs, some signs borrowed from American Sign Language, and is similar to the grammar, sentence structure, and word order of English (Centers for Disease Control and Prevention, 2019).

Native language—the first language an individual acquires, typically the primary language of the home (Gottlieb, 2006).

Pidgin Signed English (PSE)—a blending of and use of signs from both ASL and MCE (Centers for Disease Control and Prevention [CDC], 2019).

Sign language interpreter—an individual who facilitates communication, using a signed language, between D/HH and hearing individuals (National Deaf Center, 2019).

Source language—the language which is to be translated/interpreted into another language (Merriam-Webster, 2019).

Target language—the language to which another language is to be translated (Merriam-Webster, 2019).

CHAPTER II

REVIEW OF THE LITERATURE

In this chapter, the research and theories that indicate the need for this study are summarized. First, the landscape of the history of interpreting and the evolution of laws surrounding the field of interpreting, specifically how Public Law 94-142 changed the educational environment for deaf and hard of hearing (D/HH) students, are provided. Next, the context of how an interpreter fits into the educational setting by synthesizing studies of the experiences and preparation of educational interpreters working within an educational setting is examined. Third, a discussion of current evaluations used to assess interpreters and the evaluation results of educational interpreters working with K-12 D/HH students is provided. Last, the rationale for this study is presented.

Sign Language Interpreter Defined

Daily, D/HH individuals are forced to communicate in a hearing world, continually struggling to gain access to information and communication. Many D/HH individuals call on sign language interpreters to assist in opening this access. A sign language interpreter is an individual who facilitates communication between D/HH and hearing individuals (National Deaf Center, 2019) across a variety of settings (i.e., medical, legal, educational, etc.). For this review, two types of interpreters will be discussed—community interpreters and educational interpreters.

A community interpreter is a sign language interpreter who facilitates communication in medical, legal, theatrical, and other more general, community-based settings (Telelanguage, 2019). Deaf and hard-of-hearing persons can gain access to communication in their environments via community interpreters. More often, a community interpreter provides a service to D/HH adults.

Community interpreters adhere to two main principles: (a) autonomy of the D/HH individual, and (b) representation of communication in a faithful manner (Brown & Schick, 2011). Both principles can be found in the Code of Professional Conduct from the Registry of Interpreters for the Deaf (i.e., the national association for sign language interpreters in the United States). The first principle holds that all decisions be made by the D/HH individual; essentially, the interpreter does not intervene and allows the D/HH individual to be an autonomous person (Brown & Schick, 2011). The second principle implies that the D/HH individual is responsible for understanding the signed message, and that responsibility is not placed on the interpreter (Brown & Schick, 2011).

An educational interpreter facilitates communication between the D/HH student(s) and other members of the educational team in a mainstream or inclusion setting and provides access to academic coursework (Hutter & Pagliaro, 2016) and teacher and peer communication (Schick et al., 2006).

Interpreting History

As documented by Fant (1990) in his 25-year review of the Registry of Interpreters for the Deaf (RID), D/HH individuals in the United States first focused on fighting for equal rights to access their environment before there was even a profession of

community interpreting and before the growth of the profession of community interpreters. Before the 1960s, D/HH adults depended on any person who knew some sort of sign language to interpret for them. Often these people were friends, co-workers, family members, and even children. Taking on the role of a helper, these individuals had no formal preparation (Frishberg, 1990). Several landmark laws and litigation changed this situation.

Access to Community

During the 1950s, the case decision *Brown v. Board of Education* stated that racially segregated public schools were "inherently unequal" (McCarthy et al., 2014). This landmark decision created a gateway for other advocacy groups, including families of children with disabilities, to move through the court system fighting for those same equal rights. They argued that if individuals were to receive equal educational opportunities based on race, then individuals with disabilities should receive equal educational opportunities as well (Yell et al., 2017). For D/HH individuals, this meant a fight for equal access to communication. Victories came after each successful piece of legislation, necessitating the hiring of community interpreters to support communication between D/HH and hearing persons.

Vocational Rehabilitation Act Amendments of 1965

Demonstrating how the United States was moving toward a society that provided equal opportunities for individuals with disabilities, The Vocational Rehabilitation Act Amendments of 1965 (P.L. 89-333) included sign language interpreting as a service provided for D/HH individuals in vocational rehabilitation settings (Frishberg, 1990). As

the number of D/HH individuals requiring American Sign Language (ASL) interpreting services in varying situations (i.e., legal, medical, therapy, religious, etc.) was identified, professionals from across the United States believed there was a need for more interpreters. In 1964, the Workshop on Interpreting for the Deaf was held at Ball State Teachers College in Muncie, Indiana, attended by educators of the deaf, administrators, and D/HH adults. The main goal was recruiting people to become interpreters; the focus on training individuals to become interpreters would later follow (Fant, 1990).

Rehabilitation Act of 1973

In 1973, The Rehabilitation Act of 1973 was signed into law, prohibiting discrimination based on disability for programs receiving federal funding, as well as for federal employment (U.S. Department of Justice, 2009). Implementation of legislation that prohibited discrimination in programs where interpreting services were provided to D/HH adults continued to increase employment opportunities for sign language interpreters in varying settings (Fant, 1990; Frishberg, 1990; Johnson et al., 2018).

The Americans with Disabilities Act

In 1990, the Americans with Disabilities Act (ADA) was enacted, prohibiting discrimination against people with disabilities in all public areas of their lives, including employment, public services, and public accommodations (ADA National Network, 2019). A civil rights law, the ADA stated that any public or private place open to the general public must also be open and accessible to people with disabilities. Additionally, the ADA prohibited discrimination on the basis of race, color, religion, sex, or national origin (ADA National Network, 2019).

During the same time that these landmark civil rights laws provided changes for adults, one major education law was enacted and has since been amended numerous times, which impacted D/HH children/youth—the Individuals with Disabilities Education Act.

Access to Education

Contrary to community interpreting, where interpreters provide a service to D/HH individuals with the goal of access to their environment (Fleetwood, 2000), educational interpreters are required by the Individuals with Disabilities Education Act (2004) to provide the related service of interpreting for D/HH students in mainstream educational settings.

Individuals with Disabilities Education Act

In 1975, President Gerald Ford signed into law Public Law (P.L.) 94-142, the Education of All Handicapped Children Act (EAHCA). Public Law 94-142 increased the federal government's role in special education. It was enacted to ensure that all children with disabilities receive a free appropriate public education (FAPE) designed to meet their needs, to protect the rights of children with disabilities and their parents, to support states that provide services to students with disabilities, and to monitor the effectiveness of the education for all children with disabilities (U.S. Department of Education, 2010). Before 1975, 80% of children with disabilities received instruction in school settings separate from the general, non-disabled population (Yell et al., 2017). Specifically, more than 80% of D/HH students were being educated in schools for the deaf with their D/HH peers (Marschark et al., 2005). After the passage of P.L. 94-142, the educational

placement for D/HH students drastically shifted from schools for the deaf to neighborhood schools (i.e., schools closest in proximity to the child's residence). Thus, PL 94-142 became known as "The Mainstream Act." The interpretation and implementation of P.L. 94-142 moved students with disabilities from segregated settings and integrated them with their nondisabled peers. In 1990, P.L. 94-142 was renamed the Individuals with Disabilities Education Act (IDEA) and amended to include person-first language (e.g., a student with autism as opposed to an autistic student), and plans for transition (Yell et al., 2017). The IDEA was amended again in 1997 with an emphasis on improving educational outcomes and requiring schools to develop an Individualized Education Program (IEP) (i.e., a specialized program that had to produce meaningful and measurable educational progress) for students with disabilities (Yell et al., 2017). In 2004, the IDEA was once again amended and renamed the Individuals with Disabilities Education Improvement Act (IDEIA), although it continues to be called IDEA. The reauthorization included the addition of "interpreting services" to the list of related services providers, and IEPs now required a statement of related services provided in a student's special education program based on peer-reviewed research (Bateman, 2017; Yell et al., 2017). In other words, when the IEP team decides that a student with disabilities requires related services, that decision must be based and supported by peer-reviewed research. Public Law 94-142 originally outlined how states were to provide access to educational programs but did not guarantee the level of educational opportunity of IDEA (2004); over time, amendments made to the Act continued to focus on increasing educational outcomes for students with disabilities.

Free Appropriate Public Education in the Least Restrictive Environment

Under IDEA, any student determined to be eligible for special education services is to receive a Free Appropriate Public Education (FAPE), clarified through their IEP. FAPE is defined in IDEA as

> special education and related services that (a) are provided at public expense, under public supervision and direction, and without charge; (b) meet standards of the state educational agency; (c) include an appropriate preschool, elementary, or secondary school education in the state involved; and (d) are provided in conformity with the individualized education program. [20 U.S.C. §1401(9)]

The law states that FAPE must be realized in the Least Restrictive Environment (LRE), requiring all students with disabilities to be educated with their non-disabled peers to the maximum extent possible (IDEA, 2004, §300.114). Students with disabilities should only be removed from the general education environment when the severity of the disability does not provide FAPE with the use of supplementary aids and services within the general education setting satisfactorily (IDEA, 2004).

The LRE centers on a continuum of placements for students with disabilities and spans education in what the law considers to be the most restrictive setting (i.e., homebound or separate school) to being educated in the least restrictive setting (i.e., the general education classroom) as determined by the IEP team.

Individualized Education Program

The IEP is a specialized education plan designed specifically for any student who has been determined to have a disability. The IEP must include

> a statement of the student's present level of educational performance, measurable annual goals, a statement of the specific special education and related services required, a statement of needed transition services, the date the special education services will begin and the anticipated duration of these services, and appropriate objective criteria and evaluation procedures. (IDEA, 2004, §300.320)

Every member of the IEP team and those educators implementing the IEP must know their role concerning the student with a disability, as an IEP is specially designed for the student, and the educator implementing the IEP will most likely need to adapt the content or delivery of instruction (Bateman, 2017). Additionally, one must know what the student's IEP goals are to determine the student's progress. Interpreting services as related services were added when the IDEA was amended in 2004. This requirement identifies educational interpreters as one of the 11 primary categories of related services providers to deliver support services to students with special needs (Johnson et al., 2018).

According to IDEA (2004), an educational interpreter is a related services provider; however, there is a lack of peer-reviewed, evidence-based research that supports the use of interpreters in an educational setting (Fleetwood, 2000; Frishberg, 1990; Johnson et al., 2018). Despite the educational interpreter's role being vastly different from that of a community interpreter, the preparation for both types of interpreting remains much the same, and little is known about whether educational interpreters possess the qualifications to support the educational outcomes of D/HH students.

Interpreting Process

Interpreting written, oral, or signed languages, across the world, can be defined as "understanding speech and rewording that understanding in a different language"

(Jungwha, 2003, p. 1). The Interpretive Theory of Seleskovitch and Lederer (1978) encompasses four pillars that every interpreter should possess. The first pillar, knowledge of the native language, states that interpreters must have the ability to use their own native language fluently, including all subtleties and nuances (Jungwha, 2003). The second pillar, knowledge of the target language, requires that the interpreter master the complexities of grammatical and phonological aspects of the second language, the target language (Jungwha, 2003). The third pillar, knowledge of content, states that beyond language, the interpreter must have command of the relevant world and background knowledge.

Given that the world is everchanging, the acquisition of new knowledge is continuous, and an interpreter must be able to not only consistently acquire new knowledge, but also apply the new knowledge in his/her interpretation (Jungwha, 2003). The fourth pillar, interpreting methodology, encompasses the thought processes that an interpreter must possess. The interpreter must be able to formulate and interpret both the literal and figurative language of a message and must understand the sense/meaning of the language, including the application of the interpreter's "cognitive complements" (i.e., command of language and world knowledge) (Jungwha, 2003, p. 2). The four pillars of the Interpretive Theory are foundational pieces for interpreting in any language and can be applied to any pair of languages with which an interpreter is working (Jungwha, 2003). The Integrated Model of Interpreting (Colonomos, 2015) expands on these four pillars, specifically for sign language interpreting.

Integrated Model of Interpreting

The Integrated Model of Interpreting (IMI), developed by Colonomos (2015) and inspired by Seleskovitch and Lederer's (1978) Interpretive Theory, describes the process of interpreting between a spoken language and a signed language. This process begins with the source message, which is received by the interpreter from the speaker/signer (Colonomos, 2015). Colonomos (2015) states that for the sign language interpreter to be successful at conveying the message, he/she must include seven analysis factors into his/her interpretation. The seven factors are:

- process skills—how quickly and accurately an interpreter creates the meaning of the source message, as well as constructing language forms to create the target message;
- process management—command of a variety of tasks including processing time (time to analyze the message), breaking the message into chunks, and determining if additional clarification from the speaker is needed;
- competence in source and target language and culture—aptitude in grammatical rules, vocabulary, discourse, phonology, and application of these appropriate to the specific context and understanding of one's cultural norms, rules, values, beliefs, and traditions;
- knowledge—experiences and knowledge the interpreter has stored in long-term memory;
- reparation—how the interpreter prepared for the assignment (e.g., researching the topic, stress management, meeting with team members, etc.);

- environment—conditions during interpreting, which can include both external and internal environmental factors (e.g., lighting, noise, stress, illness, hunger, conflicting cultural behaviors/expectations); and
- filters—the interpreter's biases, beliefs, and habits, which may affect how the interpreter perceives other individuals, meanings, and situations (Colonomos, 2015).

Successful interpretation (i.e., the receiver understands the complete message as intended by the speaker) is determined by how well a sign language interpreter accomplished the seven analysis factors (Colonomos, 2015). It is possible that if a sign language interpreter does not have competence in the source or target language, he/she may not successfully interpret the message as intended by the speaker. An individual with the goal of becoming a sign language interpreter must be educated on the process of sign language interpreting, training that is obtained in a formal interpreter training program.

Although it is presumed, in many cases, that an educational interpreter has been previously prepared and is qualified to take on the primary role of interpreting as well as a variety of secondary roles (Stuckless et al., 1989), research continues to reveal that educational interpreters are not prepared to work in educational settings (Dahl & Wilcox, 1990; Fleetwood, 2000; Hutter & Pagliaro, 2017; Schick et al., 2006). Given the intricacies involved in successful sign language interpreting and the mandated, specialized, high-stakes nature of special education/deaf education, high-quality preparation for educational interpreters is critical.

Interpreter Preparation and Curricula

Before the establishment of formal Interpreter Training Programs (ITP), sign language interpreters were "prepared" by merely observing other working sign language interpreters and trying to imitate them (Fant, 1990). It was not until 1965, at the second Registry of Interpreters for the Deaf (RID) Workshop on Interpreting for Deaf People, when those in attendance focused specifically on creating a curriculum to train interpreters formally (Quigley & Youngs, 1965).

General Interpreter Training Program Curriculum

The overall training curriculum has been and continues to be referred to as interpreter training. The following suggested curriculum includes areas that were of the greatest importance in 1965. Pre-service sign language interpreters were required to complete drills encompassing repetitive fingerspelling for interpreters to recognize words and training in lipreading to support D/HH individuals who use the oral method. One area of curricula focused on training in translating—changing the English message into signs exactly as they are spoken, as well as training on how to "sing" in sign in front of groups and how to condense a message into signed language without losing the intent of the message. Pre-service sign language interpreters practiced interpreting phone messages or a set of directions to another individual to gain experience in person-to-person interpreting and were trained in seminar-type scenarios, where students would sit in a circle, half discussing a controversial topic and the other half providing an interpretation of the discussion. Students preparing to become sign language interpreters were tested on the Registry of Interpreters for the Deaf (RID) Code of Ethics, both in written and oral

formats. They received training on idioms and manual communications, including the study of facial expression, body movements, and intonations of speech. Additionally, pre-service sign language interpreters participated in on-the-job training, which took place with a small group of D/HH individuals at a church service or a party with both D/HH adults and hearing people (Quigley & Youngs, 1965). It is important to note here that this curriculum was designed to prepare sign language interpreters to provide services to D/HH adults (Fant, 1990), without any attention given to interpreting for children.

Much of the curriculum today, more than 5 decades later, is similar to that of 1965, including the training in platform interpreting and a focus on accuracy and speed of the interpretation (i.e., drills) versus the content of the target message as a whole (Roy, 2000). Interpreter training program curricula do not appear to dig deep into the process and theories of interpreting. Part of this problem may be because many educators of interpreter training programs are still trying to determine what to teach to produce a quality entry-level sign language interpreter (Roy, 2000). Roy (2000) states that in the past, interpreter training programs would borrow theories from "translation studies, spoken-language training exercises, and information-processing techniques" (p. 1), not from interpreting theories available to the field of sign language interpreting. Knowing that sign language interpreters use both ASL and English, interpreter training program educators believe curricula for pre-service interpreters need to include courses to build fluency in both ASL and English and courses that provide a liberal arts background (Roy, 2000).

Some interpreter training educators have looked to gain accreditation through the Commission on Collegiate Interpreter Education (CCIE). The CCIE is the accrediting body for professional interpreter training programs. Through the accreditation process, the interpreter training program must meet the current standards set forth by the CCIE. For example, Standard 6.0 Curriculum: Knowledge Competencies, and Standard 7.0 Curriculum: Skill Competencies, provide the curriculum standards deemed acceptable for accreditation. These standards focus on ASL/English language development, multicultural instruction, knowledge of the interpreting profession, interpreting theory and research, instruction in human relations, and decision-making skills (CCIE, 2018). The CCIE fails to provide curriculum standards in specialized fields such as education, however, merely suggesting that interpreter training programs create their own standards for interpreting in a variety of settings and include those in their training program curriculum (Commission on Collegiate Interpreter Education, 2018).

Although there is a lack of research surrounding interpreter training program curricula, the majority of training programs do not appear to focus on educational contexts, but rather provide general interpreting knowledge (Hutter & Pagliaro, 2017). Just one study has investigated specialized settings. Walker and Shaw (2011) conducted a mixed methods study on the qualifications of interpreters who had graduated from an interpreter training program, both associate and bachelor level programs, and who work in specialized settings. Results showed that post-school experience, not formal coursework, prepared sign language interpreters with the needed preparation for specialized settings (Walker & Shaw, 2011). Of the 93 respondents, 51% accepted an

assignment in a healthcare setting within a year of graduating from their training program. Of the 51%, 20% reported feeling “very prepared” (p. 101) for their first healthcare assignment (Walker & Shaw, 2011). Respondents ranked their preparedness for interpreting in a healthcare setting as (a) experience in the field (39%), (b) from in-service/workshops (35%), and (c) formal preparation (34%). Interpreting in a mental health setting was analyzed, and researchers found participants perceived their preparedness was from in-service/workshops (47%) versus from their training program (14%). Legal interpreting was analyzed by the researchers as well, and 28% of respondents reported having experience working in a legal setting. Respondents reported being prepared for a legal setting through colleague interactions/mentorship (62%), and 11% indicated their training program prepared them for interpreting in legal settings (Walker & Shaw, 2011). Although the participants in the study had varying levels of education, the majority (59%) held a 2-year interpreting degree. Overall, respondents reported that their formal training did not prepare them for work in specialized settings.

Educational Interpreter Training Program Curriculum

The National Task Force on Educational Interpreting was created in 1985 to improve preparation, certification, and hiring of educational interpreters. Consisting of professionals from a variety of educational and interpreter-related national, parent, and consumer organizations, the Task Force set out to research educational interpreting and to provide relevant assistance and materials to D/HH students receiving supported interpretation services in K-12 classrooms. After 4 years of investigation, the Report of the National Task Force on Educational Interpreting: Educational Interpreting for Deaf

Students (Stuckless et al., 1989) was published. During the same time the research was being conducted for the report, researchers were also suggesting specialized preparation in educational interpreting (Gustason 1985; Rittenhouse, 1987; Zawolkow & DeFiore, 1986), as there was a lack of qualified educational interpreters providing services in educational environments. In the Report, the Task Force recommended that a joint committee between the Council on Education of the Deaf (CED) and the RID be established to develop professional standards for the preparation and certification of educational interpreters (Sanderson & Gustason, 1993). In 1993, the Model Standards for the Certification of Educational Interpreters for Deaf Students was published. The Model Standards (as they have come to be known) were to be used as a guide for states to ensure educational interpreters hired by Local Education Agencies (LEAs) were qualified. The Model Standards could also be used as a guide to established ITPs that wished to adjust their curriculum to include training interpreters for the field of education and develop new Educational Interpreter Training Programs (EITPs) (Sanderson & Gustason, 1993). Professional curriculum standards generated the development of training programs within the context of education. The preparation of educational interpreters are carefully laid out in the Model Standards. They include topics under each of the following areas with the headings of: (a) General Education, (b) Foundations in Education and Deafness, (c) Foundations in Interpretation, (d) Educational Interpreting, (e) Communication and Educational Interpreting Skills, and (f) Observation and Practicum (Sanderson & Gustason, 1993). The “General Education” standard focuses on incorporating courses that will provide the pre-service educational interpreter with a broad range of knowledge

needed to be successful in a variety of K-12 content. Course topics include *English, Humanities, Physical sciences, Social sciences, Public speaking, and Interpersonal skills* (Sanderson & Gustason, 1993). "Foundations in Education and Deafness" centers on information for pre-service educational interpreters as it applies to the ages/grade levels of D/HH students and how these students can successfully function in a mainstream setting. Course topics include *Communication, Hearing impairment, D/HH people in society, Human development, Education, Special education, Education of D/HH students, Vocabulary and concepts of major curriculum areas, and Interpersonal relations* (Sanderson & Gustason, 1993). The "Foundations in Interpretation" standard provides the pre-service interpreter with knowledge of theory, psycholinguistics, and ethical behavior in the interpreting process. Course topics for this standard are *Theory, Interpreting, Ethics, Research/Trends/Issues in interpreting, Physical considerations, and Techniques of interpreting* (Sanderson & Gustason, 1993). The next standard, "Educational Interpreting," is a specific standard addressing the unique role and function of an educational interpreter. As a member of the special education team, the educational interpreter must have knowledge of an educational setting and be able to work cooperatively with fellow team members. Course topics include *Role and responsibilities, Multidisciplinary team, Ethical codes and standards, Student development, Educational support services, Orientation to deafness, Communication comprehension, and Professional development* (Sanderson & Gustason, 1993). The standard "Communication and Educational Interpreting Skills" focuses on the act of interpreting in educational settings for K-12 D/HH students. Course topics include *Receptive communication skills,*

Expressive communication skills, and Educational interpreting skills (Sanderson & Gustason, 1993). The last standard, "Observation and Practicum," requires a pre-service educational interpreter to gain hours of experience in the field and to provide direct application of his/her skills in an educational setting. Course topics include *Observation, Evaluation, and Practicum experience* (Sanderson & Gustason, 1993). The Model Standards are thorough, but despite their creation more than 25 years ago and 4 years of research by the Task Force before that, the landscape of educational interpreting has largely remained unchanged, according to the literature.

Educational Interpreter Preparation

Few studies were found in a review of the literature on educational interpreter preparation. In 1990, Dahl and Wilcox sent out a survey containing six questions to 50 interpreter training programs, listed in the April 1986 issue of *American Annals of the Deaf*, to gain an understanding of the preparation pre-service interpreters were receiving. Of the 45 programs that responded, 31 offered no course related to educational interpreting, and the remaining programs offered only one course in educational interpreting (Dahl & Wilcox, 1990). Further analysis showed that those programs with one educational interpreting course included a variety of different topics including sign invention and educational vocabulary, tutoring, note-taking, aspects of deaf education, and how to problem-solve with a team (Dahl & Wilcox, 1990). It is doubtful that the Model Standards can be adequately covered in just one educational interpreting course or that an interpreting graduate is prepared to interpret for a D/HH student in an educational setting after receiving such little specialized training in the field of educational

interpreting. Still, this study is almost 30 years old and is missing a vast amount of demographic data on interpreter training programs (i.e., type of program, years of work experience, etc.) that could provide a more robust picture of the overall preparation of educational interpreters.

The U.S. Department of Education, Office of Special Education Programs provides grant monies to universities with established interpreter training programs to provide specialized training in educational interpreting. The University of Northern Colorado-Distance Opportunities for Interpreter Training Center (UNC-DO IT Center) received funding to investigate patterns of practice. One area studied was interpreter education curricula and resources of seven interpreter training programs funded to prepare "highly qualified K-12 interpreters" (Johnson et al., 2018, p. 34). Only five of the seven programs permitted the researchers to analyze their curriculum. The five programs were each located in different states; three were housed at universities, and two were housed at community colleges. Two were accredited through CCIE (Johnson et al., 2018). In general, it was found that resources being used in the training programs were outdated, lacked an evidence basis, and little of the curricula was focused on educational interpreting. Results showed that no program had curriculum prerequisites for Deaf cultural competencies, and only three of the five programs had American Sign Language prerequisites (Johnson et al., 2018). Across all programs, researchers discovered that resources on teaching educational interpreting were outdated. Most articles used in coursework were published several decades earlier (the 1980s) and were mostly anecdotal (Johnson et al., 2018). Despite all five programs receiving funding specifically

to prepare educational interpreters, only one program required 18 credits in educational interpreting. One required just one 3-credit course in educational interpreting, and the other three programs did not offer any specialized courses in educational interpreting (Johnson et al., 2018). The study, however, did not provide insight into whether the Model Standards were articulated within the coursework.

Hutter and Pagliaro (2017) conducted a national survey study of all interpreter training programs to understand whether programs' educational interpreter training programs or interpreter training programs followed the Model Standards set forth for pre-service educational interpreters. Surveys were sent to 115 program directors, listed in the 2015 reference issue of *American Annals of the Deaf,* and the researchers received 57 responses. Hutter and Pagliaro (2017) found that only six of the 57 programs identified themselves as being educational interpreter training programs, focused specifically on training sign language interpreters for educational settings; however, both interpreter training programs and educational interpreter training programs reported a similar number of graduates who found jobs in educational settings. The curriculum topics of *Hearing loss in children/adults*, *Human development*, O*verview of education*, *Special education and education law*, *Education of D/HH students*, and *Sign systems* were reported covered at or less than 50% for interpreter training programs (Hutter & Pagliaro, 2017), while directors of educational interpreter training programs reported covering these same topics at or less than 67%. Additionally, they found less than 25% of the reported 57 interpreter training programs and educational interpreter training programs required a course in English Linguistics (Hutter & Pagliaro, 2017). Despite the alarming

results reporting a deficiency in preparation specific to educational interpreting, again, it should be noted that the results are from approximately one-half of the programs listed, which means there could be additional training programs in the United States that offer specialized training in educational interpreting. Still, the study suggests both interpreter training and educational interpreter training graduates continue to gain employment in educational settings yet have not been appropriately prepared to work with the D/HH student population.

If interpreters entering the educational workforce do not have a solid foundation in the field of educational interpreting, one could question whether a D/HH student is actually getting the support services mandated by IDEA in the student's IEP. As Colonomos (2015) discussed in the Model of Interpreting, a lack of knowledge on the part of the educational interpreter may impact the learning experience of the D/HH student. Thus, a D/HH student's success, or lack thereof, may be tied to the insufficient preparation of educational interpreters. However, to better understand the preparation educational interpreters receive, it is helpful to learn of their own personal experiences and perceptions of working in K-12 settings.

Perceptions of Working Educational Interpreters

In 1997, working K-12 educational interpreters from Kansas, Missouri, and Nebraska were asked to participate in an Educational Interpreter Questionnaire consisting of 57 questions addressing duties performed, sign systems used, qualifications, and perceived need to improve interpreter training preparation programs (Jones et al., 1997). A total of 322 surveys were mailed, and the researchers received 222 responses. Thirty-

six percent of respondents had no degree but had attended college at some point, 17% had a high school diploma/vocational certificate, 21% had a 2-year degree, 21% held a 4-year degree, and 5% held a master's degree (Jones et al., 1997). There is no breakdown of what field of study the interpreters earned their certificates/degrees in, so it is unknown whether any of the respondents had specialized training in an educational setting. The researchers did, however, report that 63% of participants had no type of certification for sign language interpreting, and 61% reported that they were either "not proficient" or "somewhat proficient" in signing. Yet, they were hired and accepted a position providing interpreting services to D/HH students. Additionally, when asked about the need for additional training, 95.5% perceived a need for continued training.

Similarly, Yarger (2001) investigated the perceptions of educational interpreters working in two rural western states. One hundred three individuals completed a questionnaire, 63 of whom were working as educational interpreters at the time. Of the 63 participants, 16% had completed an interpreter training program (Yarger, 2001). Open-ended questions regarding the participants' skills revealed that educational interpreters felt they lacked receptive skills (i.e., sign to voice) and had weak sign-to-English interpreting skills, as well as an incomplete understanding and knowledge of ASL and insufficient knowledge of vocabulary (Yarger, 2001).

In 2011, Walker and Shaw conducted a mixed methods study to gain an understanding of interpreter training program graduates' perceptions of their qualifications for working in specialized settings. The researchers recruited 198 interpreters from 2-year and 4-year interpreter training programs from the southeastern

region of the United States, which included 27 states and Puerto Rico. Of the 198 participants recruited, only 120 met the criteria for eligibility to complete the 93-question survey (Walker & Shaw, 2011). The researchers reported that 59% of participants were graduates of a 2-year interpreter program, 25% held a 4-year interpreting degree, 13% held a 2-year and 4-year degree, and one participant held a master's degree. Despite the screening qualifications of participants, there was no identifying information regarding whether the preparation these educational interpreters received in their training program was specialized for interpreting in an educational setting. When asked how prepared the participants felt for interpreting in a K-12 setting, 51% reported feeling unprepared for specialized work in an educational setting. One participant stated, "I am uncomfortable with the level of involvement that is expected from one who works in K-12: the role of *loco parentis* or of being a language model to young students" (p. 104), while another participant responded, "I started out feeling that deaf children need solid language role models and that I did not fit that criteria" (Walker & Shaw, 2011, p. 104). Despite participants' perceptions of being unprepared to work in an educational setting with D/HH students, 86% reported having had worked in a K-12 setting at some point in their career.

Finally, another recent investigative study focused on the roles of three rural education interpreters, each having worked for over 5 years in an educational setting. This case study revealed that the three interpreters struggled with varying roles in K-12 settings (Fitzmaurice, 2017). All three educational interpreters had difficulties with curriculum content, specifically the ability to convey important vocabulary during

lessons. Furthermore, they found it problematic to relay the key vocabulary in both English and sign language (Fitzmaurice, 2017). All three interpreters had a formal education, two held a master's degree, and one held an associate's degree; however, the exact field of study the interpreters earned their degrees in was not disclosed. Again, it is unknown if the participants attended an interpreter training program or if they received specialized training for interpreting in an educational setting, yet all three were working in an educational setting.

To summarize, over the past 20 years, working interpreters in K-12 settings have felt unprepared for the role of educational interpreter. Unfortunately, these studies lack any detailed information about their preparation, the interpreter training programs attended by participants, specifically what their field of study/degree was in, and whether the interpreters received specialized instruction in interpreting for K-12 D/HH students. A third way to gain clarity on the qualifications and training of educational interpreters is to review the research related to the evaluation of interpreters.

Interpreter Evaluation

There are a variety of evaluations used to assess sign language interpreters' skills. This review focuses on evaluations offered through or governed by the two following entities—the Registry of Interpreters for the Deaf (RID), and Boys Town National Research Hospital.

Registry of Interpreters for the Deaf Certification

The Registry of Interpreters for the Deaf (RID), founded in 1964, is the national membership certificating organization for individuals who provide services to people

who use spoken English and people who use sign language (Registry of Interpreters for the Deaf, 2018b). While RID recognizes various certifications (e.g., Certificate of Interpretation, Certification of Transliteration, Comprehensive Skills Certificate, or certification awarded by the National Association of the Deaf [NAD]), the organization currently awards just one for hearing sign language interpreters—the National Interpreter Certification (NIC) (Registry of Interpreters for the Deaf, 2018b).

The NIC is the current national certification a sign language interpreter can hold, deeming him/her to be qualified by the Registry of Interpreters for the Deaf (RID) to provide community interpreting services to D/HH persons. The RID has offered the NIC since 2005. To become certified, an applicant must take and pass the two parts of the NIC evaluation—the Knowledge Exam, and the Interview and Performance Exam (Center for Assessment of Sign Language Interpreters [CASLI], 2016).

NIC Knowledge Exam

The NIC Knowledge Exam consists of 150 multiple-choice questions and is scored from 200 to 800, with a minimum passing score of 500. The evaluation assesses general knowledge related to the role, tasks, and knowledge of interpreting as determined by the RID Role Delineation Study (CASLI, 2016), which focused on the development of statements related to and defined by the National Council on Interpreting Role Delineation Panel (CASLI, 2016). The knowledge areas assessed through the NIC Knowledge Exam include evaluating whether one is qualified for an interpreting assignment, determining the logistics of an assignment, continuing professional development, and evaluating ASL and English skills (CASLI, 2016). The role of

delineation statements is general, spanning the field of interpreting. The NIC Knowledge Exam neither assesses an interpreter's content knowledge of a K-12 educational setting, nor is it specific to any other specialized setting.

NIC Interview and Performance

The NIC Interview and Performance portion of the exam measures how well a sign language interpreter implements the RID role delineation study statements on role and tasks as it applies to the National Association of the Deaf – Registry of Interpreter for the Deaf (NAD-RID) Code of Professional Conduct to varying ethical and interpreting vignettes (CASLI, 2016). The NAD-RID Code of Professional Conduct contains tenets of professional behavior and ethics to be followed for sign language interpreter practitioners (RID, 2018). The Interview and Performance portion of the NIC examination consists of two ethical vignettes and five performance vignettes, which show an interpreting activity or real-world problems (CASLI, 2016). During the ethical vignettes, the candidate is provided an ethical dilemma and is evaluated on how well they apply tenets of the NAD-RID Code of Professional Conduct to the situation. The five performance vignettes require the candidate to perform simultaneous interpreting (i.e., signing and voicing), in both English-to-ASL and ASL-to-English (CASLI, 2016). Although the information on the signers within the vignettes is not provided by CASLI, a subsidiary of RID established for assessing sign language interpreters practice tests, which are provided to mimic the real exam, included only adults (RID, 2018). One can assume, then, that the current NIC examination does not include any child signers, only adults.

If a candidate passes both the NIC Knowledge and the NIC Interview and Performance portions of the exam, he/she is deemed qualified by the RID to interpret generally in a variety of settings. The NIC Exam does not focus on specialized fields (i.e., educational interpreting), and thus may not be an appropriate exam for interpreters seeking employment in K-12 educational settings. In fact, RID offers no certification specific to educational interpreting.

Boys Town National Research Hospital

Boys Town National Research Hospital in Omaha, Nebraska, offers the only evaluation specific to interpreting in a K-12 setting, the Educational Interpreter Performance Assessment (EIPA). The EIPA is used to assess the skill levels of interpreters working in K-12 settings (Schick & Williams, 2004; Schick et al., 1999). In 1991, as a response to requests for tools to assess educational interpreters, the Boys Town National Research Hospital began production of the EIPA (Classroom Interpreting, n.d.). Like the NIC, the EIPA consists of two portions—the Written Test developed in 2000, and the Performance Test developed in 1991. Unlike the NIC, test-takers of the EIPA can take one or both portions, determined by states, which set the requirements and benchmark for passing.

EIPA Written Test

The EIPA Written Test assesses an interpreter's understanding of critical information needed to interpret in an educational setting with D/HH students (Classroom Interpreting, n.d.). The EIPA Written Test is a computer-based exam that consists of 177 questions and is pass/fail (Classroom Interpreting, n.d.). Knowledge standards on which

interpreters are evaluated include Student Development, Sign Systems, Cognitive Development, Tutoring, Language Development, Guidelines for Professional Conduct, Education, Culture, Interpreting, Literacy, Linguistics, Roles & Responsibilities, Medical Aspects of Deafness, and Technology (Classroom Interpreting, n.d.). Interpreters are also tested on the EIPA Code of Professional Conduct for Educational Interpreters. The EIPA Code of Professional Conduct for Educational Interpreters are guidelines and professional practices written to assist interpreters working in an educational setting and includes information about Individualized Education Programs (IEPs), collaboration with the educational team, and the educational setting (Classroom Interpreting, n.d.). Educational interpreters should be familiar with the *Educational Interpreter Performance Assessment (EIPA) Guidelines for Professional Conduct* to help them make decisions and guide their work in K-12 settings (Classroom Interpreting, n.d.). The Guidelines for Professional Conduct includes areas related to (a) being a related service provider, (b) understanding and implementing the D/HH student's IEP, (c) maintaining open communication with the educational team, (d) providing advice and information to the educational team, and (e) knowledge of educational systems, learning theories, instruction, and child development (Classroom Interpreting, n.d.). Currently, the written test is required in 16 states.

EIPA Performance Test

The EIPA Performance Test evaluates interpreting skills in voice-to-sign (i.e., the interpreter listens to the speaker and produces an equivalent message in sign) and sign-to-voice (i.e., the interpreter receives the message in sign and produces an equivalent message in spoken English) in both expressive and receptive modes (Classroom

Interpreting, n.d.; Schick et al., 1999). Test-takers have the option of choosing a level, elementary or secondary, as well as the target sign language or system (i.e., ASL, Pidgin Sign English [PSE], Manually Coded English [MCE], or Cued Speech) (Classroom Interpreting, n.d.). The elementary option provides a video of a child signer in a K-8 classroom, while the secondary option provides a video of a teen signer in a secondary classroom. The test-takers are evaluated on 37 skill areas using the following Likert scale: "no skills (0), beginner (1), advanced beginner (2), intermediate (3), advanced intermediate (4), and advanced (5)" (Schick et al., 1999, p. 147). The skill levels are defined as follows:

- Level 1: Beginner, interpreter lacks sign vocabulary, the production of the interpreter's sign may be incomprehensible, can only communicate simple ideas, and an interpreter at this level is not recommended for interpreting in a classroom setting;
- Level 2: Advanced Beginner, interpreter possesses basic sign vocabulary, frequent grammatical errors and errors in sign production, hesitation in signing, and is not recommended for interpreting in a classroom setting;
- Level 3: Intermediate, interpreter lacks technical vocabulary, has errors in sign production, may need repetition to comprehend signed messages, can communicate basic content in the classroom, and needs continuous supervision;
- Level 4: Advanced Intermediate, the interpreter is generally correct with sign production, facial expressions are appropriate most of the time, may encounter

problems with complex information, and can convey the classroom content most of the time; and

- Level 5: Advanced, the interpreter uses vocabulary fluently, can communicate new concepts and words, minimal production errors, communicates details of the original message, and the majority of the time accurately conveys classroom interactions (Classroom Interpreting, n.d.; Schick et al., 1999; Schick et al., 2006).

Researchers and the developers of the EIPA recommend that any sign language interpreter working in a K-12 setting with D/HH students possess a 4.0 or higher (Johnson et al., 2018). States, however, vary in their required EIPA scores, with seven states requiring a minimum of 3.0, 24 states requiring a minimum of 3.5, and 11 states requiring a 4.0 or higher.

EIPA Written Test Evaluation Results

Johnson et al. (2018) is the only study found that analyzed EIPA written test scores. In an analysis of 826 participants who took the EIPA written portion from 2012 to 2014, the researchers found that interpreters performed poorly in content knowledge areas, which directly relate to the Integrated Model of Interpreting (Colonomos, 2015), specifically Competence in Source and Target Language and Culture and Knowledge. Of the 11 domains assessed on the EIPA written exam, the three highest scores were in Literacy (85%), Interpreting (84%), and Education System and Practices (83%); the three lowest scores were in Linguistics (72%), Tutoring (72%), and English (70%). Unfortunately, once again, in this study, there is no demographic information of the

participants' educational/preparation background to know if they have received specialized training in an educational setting.

EIPA Performance Test Evaluation Results

Analyses of scores from the performance portion of the EIPA have been conducted in a few studies on working educational interpreters. A study of EIPA scores taken from 3 years of data on 59 interpreters from an educational interpreter evaluation program in Colorado, revealed that 75% of participants earned an EIPA performance score under a 4.0 (Schick et al., 1999), the minimal recommended skill level (Johnson et al., 2018). Out of the 59 interpreters included in this study, only 29% had attended an interpreter training program, and 14% reported having had no training at all (Schick et al., 1999). No additional information was reported on whether the program attended was specialized for interpreting in an educational setting. Results also showed that, on average, interpreters had been practicing for 6 years using varying languages/communication modes (Schick et al., 1999). The results of this study should be alarming. Schick et al. (1999) discuss how interpreters are often a language model for D/HH students, and many times the only individual the D/HH student may communicate with throughout the school day. In this case, D/HH students are learning a language and accessing communication from an individual who is, by the recommended skill level of 4.0 (Johnson et al., 2018), inadequate (Schick et al., 1999).

A more extensive study 5 years later (Schick et al., 2006) revealed similar results. From 2002 through 2004, 2,091 individuals took the EIPA performance portion. Results reflect information from 1,505 interpreters, 46% of whom completed an interpreter

training program, and 26% held a bachelor's degree. Participants reported having an average of 6.5 years of experience interpreting in an educational setting (Schick et al., 2006). Again, there is no additional information regarding whether the participant had attended a specialized educational interpreter training program. Based on the EIPA rating scale, of the 1,505 participants, just 17% obtained the recommended 4.0 or higher; conversely 83% scored below the recommended minimum for educational interpreting. The findings of this study too disclose that working educational interpreters are insufficiently qualified to work in K-12 settings with D/HH students. According to evaluations only, no study has related the scores on the EIPA to preparation based on the Model Standards (1993). Across past studies, it is difficult to determine if there is a connection between the type of training program attended and the EIPA performance score, as there is a lack of information that identifies whether a participant attended a program focused on educational interpreting or a general interpreter training program. Collecting programmatic information and educational background (i.e., training program attended) of the participant would help to identify training programs that have produced interpreters who score high on the EIPA and provide the field with needed information on preparation.

EIPA vs. NIC

Despite the EIPA being the only assessment offering an analysis of interpreting skills specific to a K-12 educational setting, some interpreters working in an educational setting have only been evaluated using the NIC. One study was located that compared the scores from both the EIPA performance and NIC Knowledge and NIC Interview &

Performance exams. An exploratory study was conducted on 18 students graduating from the Western Oregon University 4-year ASL/English Interpreting Program (Maroney & Smith, 2010). All 18 students passed the NIC Knowledge exam, with 14 also passing the NIC Interview and Performance portion (Maroney & Smith, 2010). Of the 18 students, only one achieved a 4.0 on the EIPA performance, seven obtained a score between 3.5 and 3.9, and the 10 remaining students received below a 3.5. Given that some states require only a pass on the NIC, all 14 of these interpreters could obtain a position in an educational setting, despite only one reaching the recommended 4.0 skill level (Johnson et al., 2018). None of the 18 students took the EIPA written test, resulting in the inability to compare their NIC Knowledge Exam results to the EIPA Written exam results.

Overall, there is a lack of research in the field that compares evaluation results of those educational interpreters who attended training programs focused on community or educational settings, which could provide the field with additional information as to how sign languages interpreter should be prepared for interpreting in educational settings.

Rationale of the Study

The field of interpreting as a profession began in the 1960s, with the focus being on training individuals to work with D/HH adults (Fant, 1990). Approximately 10 years later, in 1975, Public Law 94-142 was passed and ultimately created a new profession in K-12 settings—educational interpreting for D/HH students. More than 87% of D/HH students are currently integrated for a full or partial day with their hearing peers (National Center for Education Statistics, 2016), many gaining access to the curriculum via a sign language interpreter. Studies on interpreter training program and educational interpreter

training program curricula and evaluations indicate that educational interpreters are insufficiently prepared for specialized work with this unique population (Dahl & Wilcox, 1990; Hutter & Pagliaro, 2017; Johnson et al., 2018; Schick et al., 1999; Schick et al., 2006). It is unclear whether individuals are receiving any specialized training in their formal training programs for interpreting in educational settings. Few studies conducted in the field of educational interpreting encompasses perceptions of working educational interpreters and scores achieved on the EIPA performance and written tests. This body of research contains many limitations that could provide the field with pertinent information on preparing sign language interpreters for working in educational settings. First, the field needs to establish if there is a relationship between EIPA performance scores and the type of program the interpreter attended. Second, knowing the number of educational interpreting courses offered and curricula areas covered in formal training programs could direct the field in curricula development for specialization in educational interpreting. Third, gaining insight into the working educational interpreter's perceptions of their formal training program may also support formal training programs in curricula development.

Research Questions

The purpose of this study was to investigate the relationship between K-12 interpreters' training in relation to the Model Standards (1993), their perceptions of preparation, and their evaluation scores on the EIPA. The following research questions guided the study:

1. How many courses related to K-12 interpreting did participants who graduated from formal interpreter training complete, and what percentage of curricula from the Model Standards (1993) were met?
    1.1. How does reported coverage of curriculum topics by participants compare between the focus of reported program attended (i.e., community/educational)?
2. How do evaluation scores of interpreters working in K-12 settings compare between participants who did not attend a formal training program and participants who did attend a formal training program?
    2.1. How do interpreter evaluation scores of participants compare between the focus of reported program attended (i.e., community/educational)?
3. What are the perceptions of interpreters who attended formal training programs on their preparation?
    3.1. How do participants' perceptions compare between the focus of reported program attended (i.e., community/educational)?

CHAPTER III

METHODS

The purpose of this survey study was to investigate the relationship between K-12 interpreters' training in relation to the Model Standards (1993), their perceptions of preparation, and their evaluation scores on the EIPA. Descriptive and inferential statistics were conducted to understand the following research questions.

Research Questions

1. How many courses related to K-12 interpreting did participants who graduated from formal interpreter training complete, and what percentage of curricula from the Model Standards (1993) were met?
    1.1. How does reported coverage of curriculum topics by participants compare between the focus of reported program attended (i.e., community/educational)?
2. How do evaluation scores of interpreters working in K-12 settings compare between participants who did not attend a formal training program and participants who did attend a formal training program?
    2.1. How do interpreter evaluation scores of participants compare between the focus of reported program attended (i.e., community/educational)?
3. What are the perceptions of interpreters who attended formal training programs on their preparation?

3.1. How do participants' perceptions compare between the focus of reported program attended (i.e., community/educational)?

Participants

The researcher utilized convenience sampling to recruit a total of 324 participants who currently worked in a K-12 educational setting (*n*=276) or had worked in a K-12 educational setting in the past 5 years (*n*=48). The participants were recruited via the National Association of Interpreters in Education (NAIE), colleges and universities that offer formal interpreter training programs, and postings on listservs and social media platforms that focused on interpreting (e.g., Facebook, Instagram, etc.). As an incentive, all participants who completed the survey had the opportunity to enter into a random drawing, whereby three participants were selected to receive a $50 Amazon Gift Card.

Researcher Statement

The researcher is a White, single, childless, female doctoral student at The University of North Carolina-Greensboro. After graduating from high school, she attended an educational interpreter training program, developed from the Model Standards (1993), at Northcentral Technical College in Wausau, Wisconsin. Upon graduating, the researcher sought to obtain her bachelor's degree; however, she found that no bachelor-level interpreter training program (ITP) would accept credits from the educational interpreter training program, and all bachelor level programs she identified were "community" programs (i.e., general interpreting). Over the years, as she worked as an educational interpreter, she noticed the daily struggles other educational interpreters experienced within an educational environment. Most of the interpreters with whom she

worked had not attended a formal interpreter training program and appeared to struggle with the pedagogy required to work with deaf and hard of hearing (D/HH) students in an educational setting. These experiences caused her to question "why" training programs for interpreters were so vastly different from one another, and shortly after that, found herself fully engaged in academia to be able to answer her question.

Understanding her position above and knowing she possesses her own biases, which could potentially impact the data collection and analysis, required the development of a strong methodological research study. The researcher checked her biases by collaborating with experts from the field during the process of developing and finalizing the survey instrument. This process is described in the section, "Data Sources," below.

Ethical Considerations

The researcher submitted an Institutional Review Board (IRB) application to the University of North Carolina at Greensboro. All participants were protected in that they would not be identified by name, their responses were completely anonymous, and their answers were in no way able to be connected to the final question for the Amazon Gift Card Drawing. Participation in the survey was completely voluntary (see Appendix A).

Research Design

This study was a survey study that utilized a cross-sectional design, whereby the researcher collected data "at one point in time" (Creswell, 2015, p. 380). Survey research is used when a researcher has a goal of describing the "attitudes, opinions, behaviors, or characteristics of a population" (Creswell, 2015, p. 379). The use of a survey design allows the researcher to describe trends drawn from the responses to questions by

statistically analyzing data. Data were collected through a survey form to answer the research questions. The quantitative data gathered from the survey measured the frequency of courses and covered curricula areas, evaluation scores, and participants' perceptions of their formal training programs.

Data Sources

Survey Development

The initial survey draft consisted of a questionnaire composed of close-ended questions with a focus on four constructs. The four constructs measured in this survey research included (a) Program focus (i.e., community or educational), (b) Educational interpreter curriculum (i.e., number of courses related to educational interpreting and topics covered as outlined in the Model Standards), (c) Interpreter evaluation scores (i.e., Educational Interpreter Performance Assessment [EIPA] and evaluations offered through the Registry of Interpreters for the Deaf [RID]), and (d) Participants' perceptions of their formal preparation.

The researcher developed the questionnaire, which contained questions to achieve data for each construct. Construct 1, Program focus, included questions about the training program type, program length, degree awarded, and the university/college where the program took place. Construct 2, Educational interpreter curriculum, was comprised of questions related to the number of courses specific to educational interpreting, and a battery of questions about topics outlined in the Model Standards, using a Likert scale for measurement. Construct 3, Interpreter evaluation scores, asked the participant to report on assessments taken (i.e., EIPA or a RID evaluation), score/level received, and how

many times the assessment had been taken. Construct 4, Participants' perceptions of their formal preparation program, contained a battery of questions about the respondents' perceptions of how their training program prepared them for their career as an educational interpreter, measured on a Likert scale.

Validity

The evaluation of a survey for validity focuses on three standards: (a) Content standards, (b) Cognitive standards, and (c) Usability standards (Groves et al., 2009). Content standards focus on whether the question being asked is targeted at what the researcher wants the participant to answer. The researcher's advisor reviewed the survey, three separate times, checking for accuracy of the constructs being measured to substantiate the validity of the content standards of the questionnaire. Next, the survey was evaluated for Cognitive standards (i.e., if respondents consistently understand the survey item). The researcher held a cognitive focus group with two experts in the field of educational interpreting. The first expert holds an M.Ed. in Adult Learning and Education and an Ed:K-12 Certification from RID (i.e., passed the EIPA written portion and obtained 4.0 or higher on the EIPA performance portion). The second expert holds a Ph.D. in Linguistics and obtained a 4.7 on the EIPA performance portion. Within the focus group, these experts reviewed the survey as a whole for any inconsistency in the use of words or ambiguous questions (Groves et al., 2009). Throughout the discussion, the researcher took notes and asked clarifying questions. After the focus group discussion was finished, the researcher implemented the feedback and modified the survey accordingly.

The final step in determining the validity of the questionnaire was to review Usability standards (i.e., the ease with which the questionnaire was completed; Groves et al., 2009). This step included the completion of the questionnaire, disseminated to another expert in the field of educational interpreting. The expert holds a Ph.D. in Deaf Education and an Ed:K-12 Certification from RID. The goal of this step was to determine the usability of the overall survey. The field questionnaire was distributed to the expert electronically. The time it took the expert to complete the survey was 9 minutes, with Qualtrics providing a range of 10-15 minutes for survey completion. The expert and researcher discussed possible glitches, and the researcher adjusted the questionnaire to increase its usability by participants.

Survey Distribution

An email with a survey link was distributed to the National Association of Interpreters in Education (NAIE) organization, which distributed the survey to their members via email and Facebook, colleges and universities that offer formal interpreter training programs, and posted on listservs and social media platforms that focus on interpreting (e.g., Facebook, Instagram, etc.). Qualtrics, a web-based software used for creating surveys and generating reports, was used as the platform for the survey, allowing participants to complete the survey via computer or smartphone. The distributed email included an introduction to the current study (see Appendix B) and a link to the survey via Qualtrics. The survey was available for working/previously working educational interpreters to participate for one month (i.e., 4 weeks). Two reminders were sent, one on the Monday after the survey was distributed, and another on the Monday before the

survey closed. The email reminders highlighted the $50 Amazon Gift Cards, with the hope that more working educational interpreters would participate in the survey.

Data were stored in the researcher's password-protected Qualtrics account, and data files uploaded from Qualtrics to Excel files were saved to the researcher's university password-protected BOX account. Data were cleaned, and statistical analyses were conducted via IBM SPSS.

Data Analysis

Data from the survey were entered into SPSS for analysis. Analyses were chosen to address the questions being investigated (Creswell, 2015). The data from the survey were coded into SPSS for analysis to answer the research questions. For the first research question, descriptive statistics were used to determine the number of courses related to K-12 interpreting and the degree to which participants felt their training met the topics from the Model Standards (1993). A chi-square test was used to determine if the number of courses differed by type of training program. Independent-samples *t*-tests were conducted to identify any significant differences between the means of percentage curricula covered based on formal program focus. Independent-samples *t*-tests were conducted to compare EIPA evaluation scores between participants who had formal training and those who did not, a comparison of EIPA evaluation scores between RID certification holders and non-RID certification holders, and to compare the EIPA scores between those who attended community vs. educational training programs (i.e., focus of program) to answer the second research questions.

Additionally, one-way between-groups analysis of variance (ANOVAs) were conducted to explore the impact of practicum hours on EIPA scores and to explore the impact of practicum weeks on EIPA scores. Descriptive statistics were used to analyze participants' perceptions of how well their formal program prepared them for specified curricula areas to answer the last research questions. Independent-samples *t*-tests were conducted to compare participants' perceptions based on the focus of the program attended (i.e., community or educational). An ANOVA was used to explore the impact of the number of courses focused on K-12 interpreting and participants' perceptions of curricula areas. Additionally, comments from participants were analyzed for major themes.

Summary

Current and recent (within 5 years) working interpreters in K-12 educational settings were recruited to participate in this survey research. The researcher utilized a cross-sectional survey design to collect data at one point in time. The survey was developed with a focus on four constructs: (a) Program focus, (b) Educational interpreter curriculum, (c) Interpreter evaluation scores, and (d) Participants' perceptions of their formal preparation. Experts in the field were recruited to ensure the validity of the survey instrument through the use of Content, Cognitive, and Usability standards (Groves et al., 2009). The survey was distributed via a variety of organizations, formal training programs, and social media platforms. Data were prepared and analyzed using descriptive and inferential statistics to answer the research questions.

CHAPTER IV

RESULTS

The purpose of this chapter is to report the results of the survey seeking to answer the following questions:

1. How many courses related to K-12 interpreting did participants who graduated from formal interpreter training complete, and what percentage of curricula from the Model Standards (1993) were met?
    1.1. How does reported coverage of curriculum topics by participants compare between the focus of reported program attended (i.e., community/educational)?
2. How do evaluation scores of interpreters working in K-12 settings compare between participants who did not attend a formal training program and participants who did attend a formal training program?
    2.1. How do interpreter evaluation scores of participants compare between the focus of reported program attended (i.e., community/educational)?
3. What are the perceptions of interpreters who attended formal training programs on their preparation?
    3.1. How do participants' perceptions compare between the focus of reported program attended (i.e., community/educational)?

This chapter is organized as follows: first, the researcher reports the demographics of the survey participants to provide context to the results; second, a comparison of the evaluation scores of those interpreters with formal training and those without formal training is provided to show the similarities and differences between the groups; third, a summarization of the pre-service preparation (courses and curricula) of those interpreters who attended formal interpreting programs is outlined, and comparisons between groups based on the focus of program attended (i.e., community or educational) are presented. Last, perceptions of the survey participants who attended formal training programs are reported, and again, a comparison between the two groups (i.e., community and educational) is outlined.

Sample Demographics

A total of 324 individuals participated in the survey; 276 participants reported currently working in a K-12 educational setting (85%), and 48 participants reported previous employment as an interpreter in a K-12 setting within the past 5 years (15%).

Several job titles were reported (see Table 1), the more frequent being "educational interpreter" (41%, *n*=128), and "sign language interpreter" (31%, *n*=96). Years of work experience in a K-12 setting ranged from less than one year to 21 or more years. The majority of participants, 60% (*n*=188), reported having 10 or fewer years of interpreting experience in K-12 settings (see Table 2). Participants (*n*=303) reported spending more than one-third of their time providing services at a high school level (ninth-12th grades), with a little less than one-third in elementary (first-fifth grades), 23% in middle school (sixth-eighth grades), and 11% in preschool-kindergarten (see Table 3).

Eighty-four percent of participants (*n*=255) who took this survey reported having formal interpreter training.

Table 1

Primary Job Titles of Participants

Job Title	*n*	%
Educational Interpreter	128	40.8
Sign Language Interpreter	96	30.6
Other	34	10.8
ASL Interpreter	28	8.9
Interpreter	16	5.1
I do not know	5	1.6
Language Facilitator	4	1.3
Signing Aide	3	1.0
Total	314	100.0

Table 2

Years' Experience Interpreting in K-12 Settings

Years of Experience	*n*	%
Less than 1 year	28	8.9
1 year	9	2.9
2 years	33	10.5
3-5 years	59	18.8
6-10 years	59	18.8
11-15 years	41	13.1
16-20 years	36	11.5
21 or more years	48	15.3
Total	313	100.0

Table 3

Overall Percentage of Time Spent in Grade Levels (*n*=303)

Grade Levels	%
Preschool – Kindergarten	10.8
First grade – fifth grade (elementary school)	30.1
Sixth grade – eighth grade (middle school)	23.0
Ninth grade – 12th grade (high school)	36.1
Total	100.0

Evaluation

The following section provides evaluation data reported by the participants.

Registry of Interpreters for the Deaf Certifications

Certifications offered by the Registry of Interpreters for the Deaf (RID) assess the general skills of sign language interpreters. Twenty-two percent (*n*=66) of participants (*n*=296) reported that they hold a certification from RID. These participants identified as having one or more of the following certifications: 49% (*n*=32) attained National Interpreter Certification (NIC), 3% (*n*=2) reported having the NIC Advanced, 2% (*n*=1) reported obtaining their NIC Master, 18% (*n*=12) attained their Certification of Interpretation, 8% (*n*=5) have their Certification of Transliteration, 2% (*n*=1) reported having their Comprehensive Skills Certification, 3% (*n*=2) hold their NAD III Generalist, and 15% (*n*=10) reported having an "other" certification.

Educational Interpreter Performance Assessment

The Educational Interpreter Performance Assessment (EIPA) offered through the Boys Town National Research Hospital evaluates skills of sign language interpreters

specific to K-12 educational settings. Seventy-six percent (*n*=226) affirmed that they had taken the EIPA. Reported scores ranged from a 2.7 to 5.0 (*M*=3.7; *SD*=.45; *n*=217). Shown in Table 4 are test scores of all reported data. Of the participants reported scores, 73% scored below the recommended skill level of 4.0 (Johnson et al., 2018).

Table 4

Educational Interpreter Performance Assessment Scores

Score	*n*	%
2.7	1	.5
2.8	1	.5
2.9	2	.9
3.0	11	5.1
3.1	5	2.3
3.2	12	5.5
3.3	6	2.8
3.4	14	6.5
3.5	38	17.5
3.6	28	12.9
3.7	19	8.8
3.8	17	7.9
3.9	5	2.3
4.0	14	6.5
4.1	11	5.1
4.2	9	4.1
4.3	8	3.7
4.4	1	.5
4.5	2	.9
4.6	2	.9
4.7	5	2.3
4.8	2	.9
4.9	2	.9
5.0	2	.9
Total	217	100.0

Preparation

Participants reported attending 80 different interpreter training programs across the United States. The top five were Bloomsburg University of Pennsylvania (11%; *n*=28), Spokane Falls Community College (6%; *n*=16), Idaho State University 6% (*n*=15), Community College of Baltimore County 4% (*n*=11) and the University of Northern Colorado 4% (*n*=11) (see Table 5 for a complete listing).

Table 5

Formal Interpreter Training Program Attended with Reported Focus of Program

Name of University/College	Community *n*	Educational *n*	Total *n*	Total %
Total	179	72	251	100.0
Bloomsburg University of Pennsylvania	24	4	28	11.1
Spokane Falls Community College	8	8	16	6.3
Idaho State University	7	8	15	5.9
Community College of Baltimore County	11	0	11	4.3
University of Northern Colorado	2	9	11	4.3
Front Range Community College	2	7	9	3.6
Gardner-Webb University	8	1	9	3.6
Iowa Western Community College	10	0	9	3.6
Salt Lake Community College	6	1	7	2.7
LaGuardia/City University of NY	0	6	6	2.3
Lansing Community College	5	0	5	1.9
Cincinnati State Technical and Community College	4	0	4	1.6
Columbus State Community College	4	0	4	1.6
National Technical Institute for the Deaf	3	1	4	1.6
Oklahoma State University	4	0	4	1.6
Sinclair Community College	4	0	4	1.6

Table 5

Cont.

Name of University/College	Community *n*	Educational *n*	Total *n*	Total %
Total	179	72	251	100.0
University of Wisconsin, Milwaukee	4	0	4	1.6
Utah Valley University	3	1	4	1.6
Waubonsee Community College	4	0	4	1.6
Western Oregon University	4	0	4	1.6
Camden County College (other)	3	0	3	1.2
Columbia College Chicago	1	2	3	1.2
Northcentral Technical College	0	3	3	1.2
Phoenix College	2	1	3	1.2
St. Paul College (other)	2	1	3	1.2
University of Arizona	0	3	3	1.2
University of North Carolina at Greensboro	2	1	3	1.2
Eastern Kentucky University	1	1	2	0.8
Florida State University, Jacksonville	2	0	2	0.8
Gallaudet University	1	1	2	0.8
Kent State University	0	2	2	0.8
Keuka College	2	0	2	0.8
Maryville College	2	0	2	0.8
MCC-Maple Woods (Other)	2	0	2	0.8
Mississippi Gulf Coast Community College (other)	1	1	2	0.8
Southwestern Illinois College	1	1	2	0.8
Tarrant County College	2	0	2	0.8
Troy University	1	1	2	0.8
Tulsa Community College	2	0	2	0.8
University of Cincinnati (other)	1	0	2	0.8
University of Nebraska-Omaha	0	2	2	0.8

Table 5

Cont.

Name of University/College	Community *n*	Educational *n*	Total *n*	Total %
Total	179	72	251	100.0
Valdosta State University	1	1	2	0.8
American River College	1	0	1	0.4
Blue Ridge Community College	0	1	1	0.4
California State University, Fresno	1	0	1	0.4
Community College of Allegheny County	1	0	1	0.4
Cuyahoga Community College	1	0	1	0.4
Davis Applied Technology Center (other)	1	0	1	0.4
Dixie State University (other)	1	0	1	0.4
El Camino College	1	0	1	0.4
Floyd College (other)	1	0	1	0.4
Georgia Highlands (other)	1	0	1	0.4
Georgia Perimeter College	1	0	1	0.4
Hillsborough Community College	1	0	1	0.4
Illinois Central College	1	0	1	0.4
John A. Logan College	1	0	1	0.4
Johnson County Community College	1	0	1	0.4
Kapiolani Community College (other)	0	1	1	0.4
Madonna University	1	0	1	0.4
Metropolitan Community College (other)	1	0	1	0.4
Minot State University (other)	0	1	1	0.4
Mount San Antonio College	1	0	1	0.4
Northern Essex Community College	1	0	1	0.4
Northwestern Connecticut Community College	1	0	1	0.4
Ocean County College	1	0	1	0.4
Ohio University (other)	1	0	1	0.4
Ohlone College	1	0	1	0.4

Table 5

Cont.

Name of University/College	Community *n*	Educational *n*	Total *n*	Total %
Total	179	72	251	100.0
Palomar College	0	1	1	0.4
Pima Community College	1	0	1	0.4
Santa Fe Community College	1	0	1	0.4
Santa Rosa Junior College (other)	1	0	1	0.4
Seattle Central Community College (other)	1	0	1	0.4
Siena Heights University	1	0	1	0.4
St. Louis Community College	1	0	1	0.4
St. Petersburg College	1	0	1	0.4
Tennessee Temple University (other)	1	0	1	0.4
University of Akron (other)	1	0	1	0.4
University of North Florida	1	0	1	0.4
University of South Florida	0	1	1	0.4
Wilson Community College	1	0	1	0.4

Most participants reported having earned a degree from an interpreter training program, with most (47%) earning a bachelor's as their highest degree (*n*=118) (see Table 6). A vast majority (71%; *n*=179) of those who attended an interpreter training program reported that their program focused on interpreting in community settings, while 29% (*n*=72) reported that their program focused on interpreting in educational settings.

Table 6

Highest Educational Level Achieved

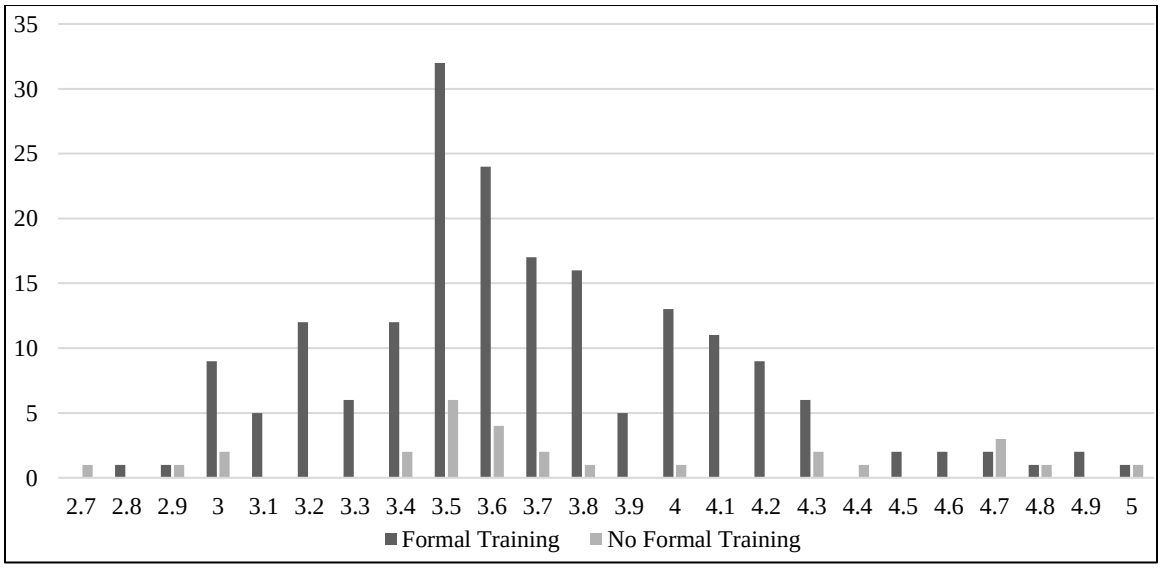
Academic Level	*n*	%
Certificate	29	11.6
Associate Degree	97	38.6
Bachelor's Degree	118	47.0
Master's Degree	1	0.4
Doctoral Degree	0	0.0
Other	6	2.4
Total	251	100.0

EIPA Scores and Preparation

Evaluation scores (Figure 2) were broken down to show the scores of those participants who reported having formal training and those who did not have formal interpreter training.

Figure 2

EIPA Scores by Preparation



The distribution of EIPA scores between the two groups of participants, those with formal training and those without formal training, was similar. The mode for both groups was 3.5, with a range of between 2.8 and 2.7, respectively, and 5.0. Seventy-four percent (*n*=189) of participants who had formal training scored below the recommended 4.0 score, while among those participants with no formal training, 68% (*n*=28) scored below a 4.0. An independent-samples *t*-test was conducted to compare the EIPA scores for formal training and no formal training. There was no significant difference in scores for formal training (M = 3.68, SD = .41) and no formal training (M = 3.78, SD = .61) t (215) = -1.066, p = .29, two-tailed. The magnitude of the differences in the means (means difference = -.096, 95% CI: -.27 to .08) was very small (eta squared = .003).

A one-way between-groups analysis of variance was conducted to explore the impact of years of K-12 interpreting experience on EIPA scores. Participants were divided into eight groups according to their years of experience (less than 1 year; 1 year; 2 years; 3-5 years; 6-10 years; 11-15 years; 16-20 years; 21 or more years). There was a statistically significant difference at the $p < .05$ level in EIPA scores among the eight groups: F (7, 209) = 2.6, p = .01. Despite reaching statistical significance, the actual difference in mean scores between the groups was moderate. The effect size, calculated using eta squared, was .08. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for those with less than 1 year of experience (M = 3.45, SD = .53) and those with 2 years of experience (M = 3.55, SD = .43) were significantly different from those with 21 or more years of experience (M = 3.95, SD = .52). There were no other statistically significant differences between the other groups.

An independent-samples *t*-test was conducted to compare the EIPA scores of participants who reported their formal program focused on community or educational settings. There was no significant difference in scores for those participants who reported their program focused on community (M = 3.67, SD = .40) or on an educational setting (M = 3.70, SD = .44) t (187) = -.371, p = .71, two-tailed. The magnitude of the differences in the means (means difference = -.02, 95% CI: -.15 to .10) was extremely small (eta squared = .000).

A one-way between-groups analysis of variance was conducted to explore the impact of the highest educational level achieved on EIPA scores. There was no statistically significant difference at the $p < .05$ level in EIPA scores for the four groups (i.e., Certificate, Associate, Bachelors, and Other).

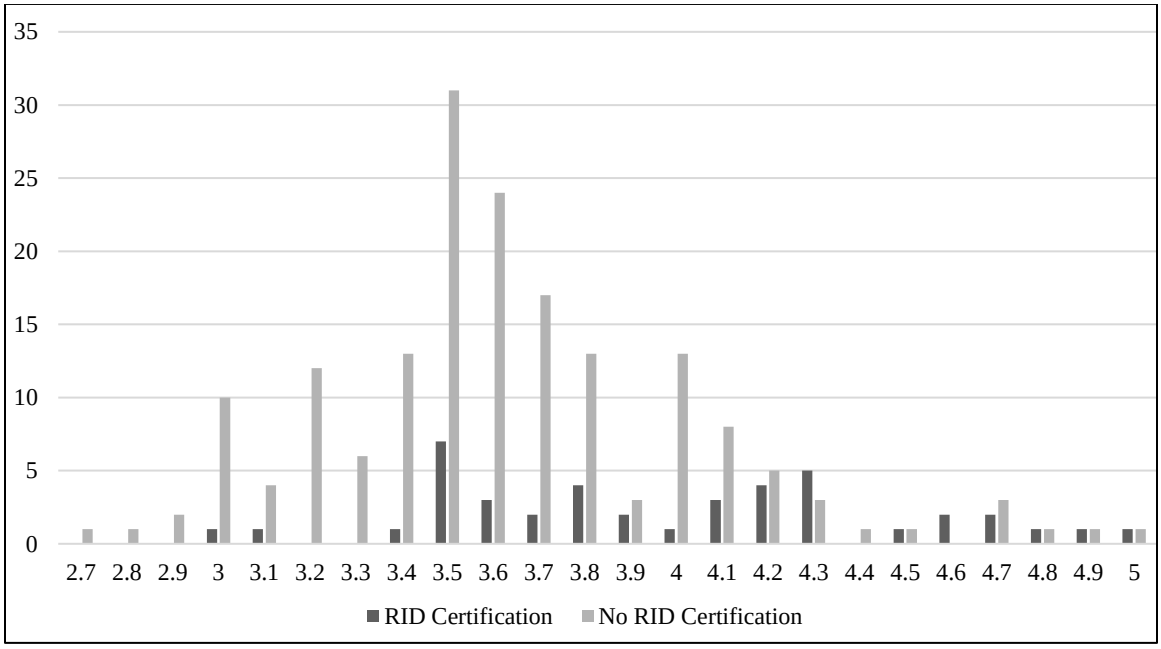
EIPA and RID Evaluation Comparisons

A crosstabulation was conducted on the reported EIPA scores between those participants who hold RID certification and those who do not hold RID certification (see Figure 3). EIPA scores reveal that half (50%; n=21) of those participants who hold RID certification obtained scores below the recommended skills level of a 4.0. The average score on the EIPA of RID certification holders is 4.0 (n=42). EIPA scores of participants who do not hold RID certification show that 79% (n=137) scored below the recommended skills level of 4.0 and the average score on the EIPA of non-RID certification holders is 3.6 (n=174). The mode for both groups was 3.5, with a range of between 3.0 and 2.7, respectively, and 5.0. An independent-samples *t*-test was conducted to compare the EIPA scores for RID certification holders and non-RID certification

holders. There was a statistically significant difference between the EIPA scores of participants with RID certification (M = 3.98, SD = .48) and those without (M = 3.62, SD = .40) t (214) = 4.946, p = .00, two-tailed. The magnitude of the differences in the means (means difference = .36, 95% CI: .22 to .50) was near moderate effect (eta squared = .053).

Figure 3

EIPA Scores Comparison of RID and non-RID Certification Holders



Curriculum

This section provides the results on the number of courses in participants' training programs that focused on K-12 interpreting as well as related curricula areas outlined in the Model Standards (1993) as critical to preparation. Almost 2/3 of participants reported that they took no more than one course related to K-12 interpreting

in their training program, with 25 % (*n*=61) of participants reported having taken zero courses focusing on K-12 interpreting in their training programs. Sixteen percent (*n*=38) of the participants reported taking four or more courses (see Table 7). The mean number of courses taken that focused on K-12 interpreting was 1.48. A chi-square test for independence was conducted to determine whether number of courses differed by the type of training program. Results indicate a statistically significant association between program focus and the number of courses focused on K-12 settings, $\chi^2(4) = 101.13$, $p = 0.000$ (see Figure 4) with community training programs offering fewer courses targeting K-12 interpreting.

Table 7

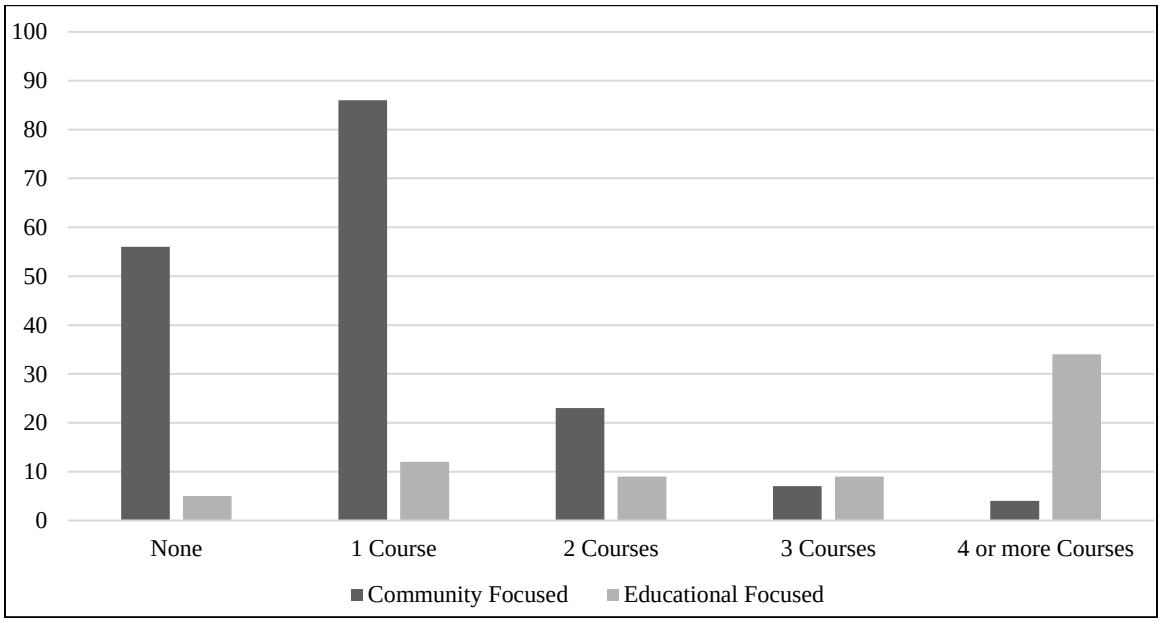
Number of Pre-Service Courses Taken That Focused on K-12 Interpreting

Number of Courses	%	*n*
None	24.9	61
1 course	40.0	98
2 courses	13.1	32
3 courses	6.5	16
4 or more courses	15.5	38
Total	100.0	254

A one-way between-groups analysis of variance was conducted to explore the impact of the number of K-12 interpreting courses on EIPA scores. There was no statistically significant difference at the $p < .05$ level in EIPA scores among the five groups (i.e., 0, 1 course, 2 courses, 3 courses, and 4 or more courses).

Figure 4

Percentage of Participants Taking Courses in K-12 Interpreting by Program Focus



Curricula Topic Areas

Results related to curricula topic areas, as outlined in the Model Standards (1993), are reported here by topic title. The description can be found within the full questionnaire in Appendix C, as presented in the survey.

Foundations in Education and Deafness

Results for topic areas under the heading of "Foundations in Education and Deafness" (Model Standards, 1993) are provided in Table 8. The two topics most frequently reported as covered "A great deal" are *Deaf and hard of hearing persons in society* (41%) and *Communication* (38%). Almost one-fourth (24%) of participants reported that the topic of *Education* was covered "None at all," and another 48% reported the topic covered "A little." Other topics reported by participants as covered "None at

all" or "A little" include *Hearing loss* (none at all, 9%; a little, 53%), *Human development* (none at all, 16%; a little, 49%), *Special education* (none at all, 15%; a little, 44%), and *Education of deaf and hard of hearing students* (none at all, 12%; a little, 49%).

Table 8

Topic Preparation in Foundations in Education and Deafness

Topic	*M* (*SD*)	None at all (0)	A little (1)	A lot (2)	A great deal (3)
Communication	2.17 (.77)	0.85%	20.00%	40.85%	38.30%
Hearing loss	1.41 (.81)	8.94%	53.19%	25.96%	11.91%
Deaf and hard of hearing persons in society	2.25 (.73)	0.85%	14.47%	43.40%	41.28%
Human development	1.28 (.84)	16.17%	48.51%	26.38%	8.94%
Education	1.16 (.92)	23.83%	47.66%	17.02%	11.49%
Special education	1.37 (.88)	15.32%	43.83%	28.94%	11.91%
Education of deaf and hard of hearing students	1.40 (.85)	11.91%	48.51%	27.66%	11.91%
Major curriculum areas	1.36 (1.00)	20.85%	40.00%	21.70%	17.45%
Interpersonal relations	1.67 (.95)	10.21%	36.17%	29.79%	23.83%

Note. *M*=Mean; *SD*=Standard Deviation.

Independent-samples *t*-tests were conducted to compare covered curriculum topics based on participants who reported attending a community-focused training program and those who reported attending an educational-focused training program.

There were statistically significant differences in covered curriculum topic based on program focus (i.e., community or educational), for six out of the nine topics (see Table 9).

Table 9

Independent *t*-test Foundations in Education and Deafness, Community vs. Educational Settings

	Community (*n*=169)		Educational (*n*=66)			
Topic	*M*	*SD*	*M*	*SD*	*t*	Sig, two-tailed
Communication	2.16	.78	2.18	.74	-.197	.844
Hearing loss	1.41	.80	1.41	.86	-.043	.966
Deaf and hard of hearing persons in society	2.33	.68	2.06	.82	2.533	.012*
Human development	1.15	.81	1.61	.84	-3.810	.000*
Education	1.05	.89	1.45	.93	-3.107	.002*
Special education	1.25	.85	1.70	.89	-3.580	.000*
Education of deaf and hard of hearing students	1.28	.80	1.70	.89	-3.484	.001*
Major curricula areas	1.20	.96	1.76	.99	-3.951	.000*
Interpersonal relations	1.62	.96	1.82	.93	-1.472	.142

Note. * $p < .05$. *M*=Mean; *SD*=Standard Deviation.

Educational Interpreting

Results for topic areas under the heading of "Educational Interpreting" in the Model Standards (1993) are given here. Participants reported all eight of the following topics covered by their formal training program as "None at all;" *Roles and*

responsibilities (14%), *Multidisciplinary team* (22%), *Ethical codes and standards* (10%), *Student development* (21%), *Educational support services* (33%), *Orientation to deafness* (20%), *Communication comprehension* (29%), and *Professional development* (23%). Of the eight topics, the topic with the highest percentage of participants reporting being covered "A great deal" was *Ethical codes and standards* (27%). Full data on topic percentages are presented in Table 10.

Table 10

Percentage of Topic Preparation in Educational Interpreting

Topic	*M* (*SD*)	None at all (0)	A little (1)	A lot (2)	A great deal (3)
Roles and responsibilities	1.45 (.91)	14.29%	40.26%	31.17%	14.29%
Multidisciplinary team	1.25 (.92)	21.65%	43.29%	23.81%	11.26%
Ethical codes and standards	1.71 (.97)	10.39%	35.06%	27.71%	26.84%
Student development	1.24 (.88)	21.21%	41.56%	29.00%	8.23%
Educational support services	.90 (.80)	32.90%	49.35%	12.99%	4.76%
Orientation to deafness	1.16 (.83)	20.35%	49.78%	22.94%	6.93%
Communication comprehension	1.09 (.90)	29.00%	40.69%	22.94%	7.36%
Professional development	1.33 (.99)	22.94%	35.50%	26.84%	14.72%

Note. *M*=Mean; *SD*=Standard Deviation.

Independent-samples *t*-tests were conducted to compare covered curriculum topics in "Educational Interpreting" based on participants who reported attending a community focused program and those who reported attending an educational focused program. Statistically significant differences were found for all eight topics. The mean scores were higher for all eight topics of those participants who reported their program focused on educational settings (see Table 11).

Table 11

Independent *t*-test for Educational Interpreting, Community vs. Educational Settings

	Community (*n*=167)		Educational (*n*=64)			
Topic	*M*	*SD*	*M*	*SD*	*t*	Sig, two-tailed
Roles and responsibilities	1.28	.85	1.91	.90	-4.915	.000*
Multidisciplinary team	1.04	.84	1.80	.89	-6.041	.000*
Ethical codes and standards	1.53	.96	2.19	.87	-4.815	.000*
Student development	1.06	.80	1.72	.92	-5.390	.000*
Educational support services	.75	.72	1.27	.88	-4.521	.000*
Orientation to deafness	1.07	.83	1.41	.77	-2.787	.006*
Communication comprehension	.93	.87	1.48	.87	-4.315	.000*
Professional development	1.17	.94	1.77	.99	-4.260	.000*

Note. * $p < .05$. *M*=Mean; *SD*=Standard Deviation.

Educational Interpreting Skills, Receptive and Expressive

Topic areas under the heading of "Educational Interpreting Skills, Receptive and Expressive" in the Model Standards (1993) are given here. All topic percentages are

displayed in Table 12. Thirty-one percent of participants reported that the topic *Interpret from ASL to spoken English and spoken English to ASL* was covered in their training programs "A great deal," while 6% of participants reported this topic being covered "None at all." The topic of *Transliterate from spoken English to MCE and MCE to spoken English* was reported as being covered "None at all" by 35% of participants. Participants reported the topic area of *Transliterate from spoken English to PSE and PSE to spoken English* as covered "None at all" (14%).

Table 12

Topic Preparation in Educational Interpreting Skills, Receptive and Expressive

Topic	*M* (*SD*)	None at all (0)	A little (1)	A lot (2)	A great deal (3)
Interpret from ASL to spoken English and spoken English to ASL	1.87 (.91)	5.68%	31.88%	31.88%	30.57%
Transliterate from spoken English to MCE and MCE to spoken English	.90 (.85)	35.37%	44.54%	14.41%	5.68%
Transliterate from spoken English to PSE and PSE to spoken English	1.49 (.90)	13.54%	38.86%	32.75%	14.85%

Note. *M*=Mean; *SD*=Standard Deviation.

Independent-samples *t*-tests were conducted to compare the topics from "Educational Interpreting Skills, Receptive and Expressive" of participants who reported attending a community focused program and those who reported attending an educational

focused program. There were significant differences between community and educational focused groups for all three topics. Again, mean scores were higher for all three topics of those participants who reported their program focused on educational settings (see Table 13).

Table 13

Independent *t*-test for Educational Interpreting Skills, Receptive and Expressive, Community vs. Educational Settings

	Community (*n*=166)		Educational (*n*=63)			
Topic	*M*	*SD*	*M*	*SD*	*t*	Sig, two-tailed
ASL to English	1.73	.90	2.24	.86	-3.821	.000*
English to MCE	.79	.76	1.21	.97	-3.402	.001*
English to PSE	1.41	.88	1.70	.94	-2.171	.031*

Note. * $p < .05$. *M*=Mean; *SD*=Standard Deviation.

Practicum

A full-time practicum, equivalent to a semester in a K-12 educational setting, is suggested in the Model Standards (1993), where a pre-service interpreter has the opportunity to apply theory to practice. Sixty-nine percent of participants (*n*=229) reported having a practicum in a K-12 educational setting. The majority of participants reported spending 6-8 hours (56%) per day and 9-12 weeks (38%) in a K-12 practicum setting. Full results for practicum hours and weeks are displayed in Tables 14 and 15, respectively.

Table 14

Number of Practicum Hours per Day Spent in the K-12 Classroom

Number of Hours Per Day	*n*	%
0-2	12	7.6
3-5	58	36.7
6-8	88	55.7
Total	158	100.0

Table 15

Number of Practicum Weeks Spent in the K-12 Classroom

Number of Weeks	*n*	%
0-4	24	15.2
5-8	44	27.8
9-12	60	38.0
13 or more	30	19.0
Total	158	100.0

EIPA Scores and Practicum

An independent-samples *t*-test was conducted to compare the EIPA scores for participants who participated in a K-12 educational practicum and those who did not. There was no significant difference in EIPA scores for those participants who had a practicum ($M = 3.67$, $SD = .44$) and those participants who had no practicum ($M = 3.7$, $SD = .39$; $t\ (172) = -.594$, $p = .55$, two-tailed).

A one-way between-groups analysis of variance was conducted to explore the impact of number of practicum hours per day on EIPA scores. There was no statistically

significant difference at the $p < .05$ level in EIPA scores based on the number of hours per day spent in a K-12 setting practicum (i.e., 0-2, 3-5, 6-8 hours/day).

A one-way between-groups analysis of variance was conducted to explore the impact of the number of practicum weeks on EIPA scores. Participants were divided into four groups according to the number of practicum weeks (0-4 weeks; 5-8 weeks; 9-12 weeks; 13 or more weeks). There was a statistically significant difference at the $p < .05$ level in EIPA scores for the four groups: F (3, 121) = 3.6, p = .02. The effect size, calculated using eta squared, was .08. Despite reaching statistical significance, the actual difference in mean scores between the groups was moderate. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for 0-4 weeks (M = 3.42, SD = .31) was significantly different from 9-12 weeks (M = 3.73, SD = .38) and 13 or more weeks (M = 3.82, SD = .48). There were no other statistically significant differences between the other Groups.

Perceptions

Perception of Formal Preparation in Foundations of Deafness

Participants' perceptions of the preparation they received in their formal training program were based on a 4-point Likert scale (i.e., *Strongly disagree, Somewhat disagree, Somewhat agree, Strongly agree*). On all topics, more than one-half of the participants (n=228) felt they "Strongly agree" or "Somewhat agree" with being prepared; however, participants also reported they "Strongly disagree" on being prepared in the topics of *Communication* (7%), *Hearing loss* (20%), *Education* (22%), *Special*

education (13%), and *Deaf education* (15%). Full data for topics are displayed in Table 16.

Table 16

Perception of Formal Preparation in Foundations of Deafness Topics

Topic	*M* (*SD*)	Strongly disagree (0)	Somewhat disagree (1)	Somewhat agree (2)	Strongly agree (3)
Communication	2.17 (.88)	6.58%	12.28%	39.04%	42.11%
Hearing loss	1.43 (.93)	19.74%	28.51%	40.35%	11.40%
Education	1.42 (.99)	22.37%	28.07%	35.09%	14.47%
Special education	1.76 (.96)	12.72%	22.81%	39.91%	24.56%
Deaf education	1.56 (.94)	15.35%	29.39%	39.04%	16.23%

Note. *M*=Mean; *SD*=Standard Deviation.

Perception of Formal Preparation in Educational Interpreting

Participants (*n*=224) reported feeling well prepared (Strongly agreed) in *Ethical codes and standards* (51%), *Student development* (34%), *Role and responsibilities* (29%), and *Multidisciplinary team* (25%). Participants reported they "Strongly disagree" with being prepared for the topics of *Role and responsibilities* (13%), *Multidisciplinary team* (20%), *Ethical codes and standards* (11%), *Student development* (10%), *Individualized education program* (35%) and *Educational support services* (25%). Full data are displayed in Table 17.

Table 17

Perception of Formal Preparation in Educational Interpreting

Topic	*M* (*SD*)	Strongly disagree (0)	Somewhat disagree (1)	Somewhat agree (2)	Strongly agree (3)
Role and responsibilities	1.84 (1.0)	13.39%	18.75%	38.39%	29.46%
Multidisciplinary team	1.66 (1.0)	19.64%	20.09%	34.82%	25.45%
Ethical codes and standards	2.19 (1.0)	10.71%	10.27%	28.13%	50.89%
Student development	1.99 (.95)	10.27%	14.73%	40.63%	34.38%
Educational support services	1.33 (.99)	25.00%	29.91%	32.14%	12.95%
Individualized education program	1.12 (1.0)	34.82%	29.46%	24.55%	11.16%

Note. M=Mean; *SD*=Standard Deviation.

Comparisons of Perceptions Based on Formal Program Focus

Independent-samples *t*-tests were conducted for the perception of each topic under Foundations of Deafness and Educational Interpreting by program focus (i.e., community vs. education). Tables 18 and 19, respectively, show the results.

Table 18

Independent *t*-test Perceptions of Formal Preparation for Foundations of Deafness, by Program Focus

	Community (*n*=165)		Educational (*n*=63)			
Topic	*M*	*SD*	*M*	*SD*	*t*	Sig, two-tailed
Communication	2.12	.89	2.29	.87	-1.257	.210
Hearing loss	1.38	.91	1.59	.98	-1.534	.126
Education	1.26	.97	1.83	.94	-3.967	.000*
Special education	1.61	.95	2.16	.90	-3.947	.000*
Deaf education	1.38	.91	2.03	.84	-4.905	.000*

Note. * $p < .05$. *M*=Mean; *SD*=Standard Deviation.

There were statistically significant differences in perception on three out of the five topics under Foundations of Deafness based on program focus (i.e., community or educational), and on all six topics under Educational Interpreting (see Table 19). Those participants who reported their formal program focused on educational settings reported feeling more prepared in all topics for work as an educational interpreter; however, despite statistically significant differences between the program focus groups (i.e., community or educational), the overall mean scores are also low in all topics for those participants who reported their program focused on an educational setting.

Table 19

Independent *t*-test Perceptions of Formal Preparation for Educational Interpreting, Community vs. Educational Focus

	Community (*n*=163)		Educational (*n*=61)			
Topic	*M*	*SD*	*M*	*SD*	*t*	Sig, two-tailed
Role and responsibilities	1.63	1.0	2.41	.72	-5.575	.000*
Multidisciplinary team	1.48	1.1	2.13	.90	-4.198	.000*
Ethical code and standards	2.10	1.1	2.44	.81	-2.308	.022*
Student development	1.83	.98	2.43	.72	-4.351	.000*
Educational support services	1.14	.96	1.84	.92	-4.901	.000*
Individualized education program	.96	.98	1.56	.99	-4.076	.000*

Note. * $p < .05$. *M*=Mean; *SD*=Standard Deviation.

A one-way between-groups analysis of variance was conducted to explore the impact of number of courses in K-12 interpreting on perceptions of topics in the areas of Foundations of Deafness and Educational Interpreting. Participants were divided into five groups according to the number of courses they reported focused on K-12 interpreting (0 courses; 1 course; 2 courses; 3 courses; 4 or more courses). There were statistically significant differences at the $p < .05$ level; post-hoc comparisons were conducted using the Tukey HSD test to determine the differences between groups. Results of the one-way between-groups analysis of variance can be found in Table 20.

Table 20

Number of K-12 Interpreting Courses by Perception Topics

	Number of courses											
	0[a]		1[b]		2[c]		3[d]		4 or more[e]			
Topic	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F* (4, 221)	η^2
Communication	2.00	.96	2.21	.91	2.15	.77	2.50	.86	2.47	.70	2.2	.04
Hearing loss	1.21[e]	.98	1.35	.88	1.59	.93	1.71	.91	1.75[a]	.91	2.6[*]	.05
Education	1.05[de]	.93	1.28[de]	.94	1.63	.93	2.14[ab]	.86	1.86[ab]	.99	7.0[**]	.11
Special education	1.28[bcde]	.96	1.73[a]	.95	1.93[a]	.78	2.36[a]	.75	2.19[a]	.86	7.8[**]	.12
Deaf education	1.00[bcde]	.87	1.51[ae]	.91	1.74[a]	.66	2.07[a]	.62	2.17[ab]	.88	12.4[**]	.18
Roles and responsibilities	1.13[bcde]	1.02	1.80[ae]	.93	2.22[a]	.64	2.29[a]	.73	2.53[ab]	.74	16.6[**]	.23
Multidisciplinary teams	.93[bcde]	.98	1.70[ae]	1.04	1.78[a]	.89	2.43[a]	.65	2.28[ab]	.82	14.3[**]	.21
Ethical codes and standards	1.71[bcde]	1.15	2.22[a]	.99	2.41[a]	.80	2.64[a]	.75	2.50[a]	.78	5.4[**]	.09
Student development	1.27[bcde]	1.03	2.03[ae]	.84	2.26[a]	.66	2.50[a]	.86	2.56[ab]	.65	15.9[**]	.23
Educational support services	.75[bcde]	.84	1.22[ae]	.92	1.67[a]	.92	1.86[a]	.77	1.97[ab]	.94	12.9[**]	.19
Individualized education program	.44[bcde]	.63	1.11[ae]	.99	1.37[a]	.97	1.79[a]	1.05	1.72[ab]	1.00	13.9[**]	.20

Note. [*] $p < .05$; [**] $p < .001$. Letters in subscript indicate which means are significantly different from each other.

Comments from Participants on Formal Training

Participants shared comments they had about their formal training or experience as an interpreter in K-12 settings. Content analysis was used to categorize data into categories. One topic category that many interpreters expressed had to do with IEP teams. Many participants expressed they felt they were not part of the IEP team or had no previous preparation regarding IEP development and implementation. Another category participants expressed grievances with was the lack of formal training for working in a K-12 setting. Participants felt the topic of K-12 interpreting was briefly touched on in their formal training and also expressed their concern of being "shamed" for using English signs in K-12 interpreting. The last topic category that emerged from participants was the need for career development specific to K-12 settings. Participants felt they did not receive formal training that prepared them for working in a K-12 setting; therefore, participants reported attending deaf education training programs, taking courses outside of their program of study, and having to learn on their own (see Table 21) to increase their knowledge of interpreting in K-12 settings.

Table 21

Participant Quotes

Theme 1: IEP Teams
"I have never seen an IEP. As a working interpreter, we are not allowed to."
"I had no idea about collaborating with a team or developing/implementing IEPs."
"We were given a mock IEP, and that was about it."

Table 21

Cont.

Theme 1: IEP Teams (cont.)
"I was not accepted as team member and was not prepared for that resistance."
"I had no training in IEP implementation or development."
"Some professionals consider me part of the team some don't . . . it's hard working with them."
"When asked to participate in a student's IEP, I did not know what that was."
Theme 2: Formal Interpreter Training
"I didn't have any class specific to educational interpreting or even specific to working with DHH children."
"I didn't take the K-12 elective."
"The program prepared us to really just lift our hands when someone is talking and to expect that the student will always be watching."
"My training program provided one class focused on educational interpreting and it was a module. Meaning a shortened class and reduced credits."
"Even though most novice interpreters start out in education, there were only two classes dedicated to educational interpreting."
"My training program shamed students for using English signs. I was not prepared to use signed English when I got into Educational Interpreting."
"During my time in my training program, their goal was 50-50 to prepare for education and community, but there was not much focus on education."
"We only had one educational interpreting class. There is only so much you can learn in one class."
"I felt completely unprepared for my first job as an educational interpreter."
"Most of my knowledge I learned through my internship."

Table 21

Cont.

Theme 3: Career Development for K-12 Settings
"There are some things that you can't really prep students for, you have to experience it in the field. They can prep and explain situations and necessary skills, buy you don't fully comprehend until you are living it."
"I sought out Deaf Education training for interpreters."
"All of what I have learned about K-12 interpreting has been learned on the job."
"The only things I remember being taught were vocabulary, history, ethics, and ASL. Everything else was learned on the job."
"Those areas not focused on in my ITP were learned in my courses required for my bachelor's in Deaf Education."
"I learned more in my Teacher of the Deaf Bachelor's degree program."
"Much of the information that I learned regarding student placement, support services, IEP and 504 plans was learned through taking classes from the child development department. These classes were not required by our interpreter training program."
"Most of the information specific to educational interpreting I had to learn on my own, because my program was directed towards community interpreting."

Summary

Data were collected from participants and focused on three main areas: evaluation, curricula, and the participants' perceived preparedness for working in an educational setting. Results from participants revealed low scores on interpreter evaluations, curricula topics of the Model Standards (1993) are not being met, and

participants do not feel prepared for a career working in an educational setting. Chapter V provides a discussion of the findings and implications for the field are explored.

CHAPTER V

DISCUSSION

This survey study investigated the relationship between K-12 interpreters' training concerning the Model Standards (1993), their perceptions of preparation, and their interpreter evaluation scores on the EIPA. Specifically, the following research questions were answered:

1. How many courses related to K-12 interpreting did participants who graduated from formal interpreter training complete, and what percentage of curricula from the Model Standards (1993) were met?
    1.1. How does reported coverage of curriculum topics by participants compare between the focus of reported program attended (i.e., community/educational)?
2. How do evaluation scores of interpreters working in K-12 settings compare between participants who did not attend a formal training program and participants who did attend a formal training program?
    2.1. How do interpreter evaluation scores of participants compare between the focus of reported program attended (i.e., community/educational)?
3. What are the perceptions of interpreters who attended formal training programs on their preparation?

3.1. How do participants' perceptions compare between the focus of reported program attended (i.e., community/educational)?

Three hundred twenty-four interpreters who currently work or recently worked within the previous 5 years in a K-12 setting from across the United States responded to the 74-question survey. The following summary and interpretation of results align with each research question. Implications for the field, study limitations, and future directions for research are provided.

Research Question 1: Preparation

1. How many courses related to K-12 interpreting did participants who graduated from formal interpreter training complete, and what percentage of curricula from the Model Standards (1993) were met?
   1.1. How does reported coverage of curriculum topics by participants compare between the focus of reported program attended (i.e., community/educational)?

The current study showed that educational interpreters complete a range of courses focused on K-12 interpreting, from 0 to more than 4, with the majority (65%) reporting having taken none or one course. These results are noteworthy given the fact that all of the respondents were or had been within the last 5 years an educational interpreter in the K-12 setting. This is consistent with findings from 30 years ago by Dahl and Wilcox (1990), who found that 31 of the 45 interpreter training programs surveyed offered no courses related to K-12 interpreting, while the rest offered only one course. Additionally, the results of this study indicate that those who attend an educational-

focused training program take more courses in K-12 interpreting than do those from community-based training programs. While the results show this is the case, Hutter and Pagliaro (2017) discovered that the same number of interpreters graduating from both types of programs (i.e., community or educational) were acquiring positions in educational settings. This study supports Hutter and Pagliaro's (2017) findings, as all participants in this study currently work or previously worked as an educational interpreter, yet only two-thirds of the participants took no more than one course targeted in K-12 interpreting.

Because the number of courses does not necessarily equate to adequate preparation of topics specific to educational interpreting, curricula topics from the Model Standards (1993) were included in the survey. The Model Standards (1993) encompass 4 years of research and outline a specialized educational interpreting curriculum. Yet, the present study showed that essential areas are hardly being covered in the curriculum of training programs. For 90% of topics (18 out of the 20 curricula topics), 38-82% of educational interpreters reported that their formal training programs covered a particular curriculum topic "None at all" or "A little." Eighty-two percent of educational interpreters reported the curriculum topic, *Educational support*, an area that provides foundational knowledge on educational interpreting strategies (i.e., tutoring, monitoring, use of visuals, etc.), was covered either "None at all" or "A little." Educational interpreting strategies are used daily to support D/HH students' learning, yet, the majority of educational interpreters reported they had not been exposed to these strategies. Likewise, 82% reported that the topic *Transliterate from spoken English to MCE and*

MCE to spoken English was covered "None at all" or "A little," and 52% reported the area *Transliterate from spoken English to PSE and PSE to spoken English* was covered "None at all" or "A little." This result is all the more significant given that past research has indicated that the majority of educational interpreters use an MCE system or PSE in K-12 settings (Jones et al., 1997) with D/HH students. It is a wonder how D/HH students are accessing the general education curriculum when educational interpreters are reporting not being trained in areas pertinent to their work with D/HH students. Worse yet is that for every curriculum topic, there were educational interpreters who reported that area being covered "None at all." Again, these *working* (or recently working) educational interpreters did not receive the necessary specialized preparation to work in the educational environment. It is clear from the present study that the Model Standards (1993) are not being included in the majority of formal interpreter training programs across the United States. These results are congruous with the findings from Hutter and Pagliaro (2017), where directors from interpreter training programs (n=51) reported that curricula topic areas from the Model Standards (1993) were covered in their program at or less than 50%, and directors from educational interpreter training programs (n=6) reported curricula topic areas being covered at or less than 67%.

Coverage of these essential topics was different between those educational interpreters who reported attending a training program focused on community interpreting and those who reported attending a training program focused on educational interpreting, with those educational interpreters who reported their program focused on an educational setting reporting more topics covered to a greater degree, seemingly

offering educational interpreters some knowledge of the curricular areas necessary for their role in the educational setting; however, 73% of these educational interpreters still scored below the minimum skills level of 4.0 on the EIPA, revealing that the program focus (i.e., community or educational) and increased perception of topic coverage do not appear to be relevant. Sign language interpreters working in K-12 settings, regardless of training, do not appear to reach the proficiency level necessary for their jobs.

The last curricular standard from the Model Standards (1993) focuses on practicum/internship. Only 69% of educational interpreters reported participating in a K-12 practicum setting. A little over 50% of those educational interpreters spent 6-8 hours per day in a practicum setting. Additionally, only 57% of educational interpreters participated in a practicum that continued for 9 weeks or longer. A full-time practicum in a K-12 setting is recommended in the Model Standards (1993), yet it is clear full-time practica in K-12 settings are not being required consistently.

As with coursework, the analysis of EIPA scores based on educational interpreters who participated in a practicum and those who did not revealed no difference in EIPA scores. However, an additional analysis showed that those educational interpreters who had a practicum for 9 or more weeks had significantly higher scores on the EIPA than did those with 0-4 weeks of practicum in an educational setting. It is pertinent, then, that pre-service interpreters participate in a full-time practicum in a K-12 setting, as outlined in the Model Standards (1993). Yet, prior research shows that full-time practica in K-12 settings are not being provided. While 95% of training programs (n=57) required a practicum, only 7% of programs required all practicum hours to take place in an

educational setting, with a wide range of reported hours from as little as 30 hours per semester up to 540 hours per semester (Hutter & Pagliaro, 2017).

Research Question 2: Evaluation

2. How do evaluation scores of interpreters working in K-12 settings compare between participants who did not attend a formal training program and participants who did attend a formal training program?
    2.1. How do interpreter evaluation scores of participants compare between the focus of reported program attended (i.e., community/educational)?

As mentioned above, 84% of educational interpreters in the present study had some kind of formal training in interpreting (be it a 2- or 4-year training program). Despite this majority, there was no statistically significant difference in the Educational Interpreter Performance Assessment (EIPA) between those educational interpreters who received formal training and those who did not. These results indicate that formal training programs are not providing sufficient (in amount or quality) specialized preparation focused on K-12 interpreting. In fact, 74% of the educational interpreters who received formal training scored below the recommended skill level of 4.0. Based on the findings from the curricular topics portion of the study, these scores make sense. The EIPA is an evaluation tool used to assess the skills of an interpreter specific to K-12 settings (Schick & Williams, 2004; Schick et al., 1999). If pre-service interpreters are not receiving specialized preparation for interpreting in educational settings, one would expect that these same individuals will not perform at or above the minimum required skill level of 4.0. The present study also provided results from EIPA scores based on program focus—

community or education. There was no statistical difference in scores between the two groups. This is an interesting finding, as one may assume that those who received more preparation focusing on interpreting in K-12 settings would score higher on the EIPA; yet, this study does not support that assumption. Those educational interpreters who reported having had more courses focused on K-12 settings did not differ in their EIPA scores. Thus, it may be that even in a training program perceived to focus on educational interpreting, the necessary knowledge and skills needed to obtain a minimum skills level of a 4.0 on the EIPA are not being received.

Currently, many states accept RID certification when hiring interpreters for a K-12 setting. This could be problematic, as there are interpreters who hold a RID certification yet score poorly on the EIPA. In the present study, half of the educational interpreters who held RID certification and took the EIPA scored below the recommended skill level of 4.0 (even though a comparison of means revealed a moderate difference of 0.38 between mean scores in favor of those with RID certification). If a state accepts RID certification for its hiring of educational interpreters, as many states do, a school district would be unaware of the applicant's EIPA skill level and may still get an "unqualified" educational interpreter. Thus, states using RID certification as an adequate evaluation for hiring educational interpreters should not be an acceptable practice. Pre-service teachers are required to take and pass various professional exams and evaluations in their teaching area to obtain work in a K-12 setting; educational interpreters should not be an exception. Educational interpreters should be required to take the EIPA and receive a 4.0 before working in a K-12 setting. The EIPA is specific to the skills needed to work

with D/HH students in K-12 settings. In contrast, RID certification assessments focus on general skills needed to interpret for D/HH adults and should be viewed as such. If the goal is to provide an appropriate education in the least restrictive environment for D/HH students, then it is crucial to demand high-quality personnel to work with and support these students.

An analysis to determine if there was any impact of years of experience working in an educational setting and EIPA score was conducted. While there was a statistical difference between those educational interpreters with less than one year (M = 3.45) and 2 years (M = 3.55) of experience compared to those having 21 or more years (M = 3.95) of experience, there were no other significant differences identified between the groups (1 year, 3-5 years, 6-10 years, 11-15 years, and 16-20 years). It appears from the results that years of experience interpreting in a K-12 setting does not necessarily equate to a higher EIPA score. Therefore, it is pertinent that pre-service educational interpreters receive curricula focused on K-12 interpreting before entering the workforce.

Research Question 3: Perceptions

3. What are the perceptions of interpreters who attended formal training programs on their preparation?
    3.1. How do participants' perceptions compare between the focus of reported program attended (i.e., community/educational)?

Finally, perceptions provided by educational interpreters indicate there is a lack of preparation focused on K-12 interpreting. Educational interpreters feel unprepared in all 11 curricula topics, with the highest percentages (strongly disagree and somewhat

disagree combined) in the areas of *Education* (50%), *Educational support services* (55%), and *Individualized education program* (64%). The curriculum topic of *Individualized education program* contains knowledge of the development and implementation of the D/HH student's IEP, along with attending and participating in the IEP as a team member—a critical, *mandated* component of the child's education, yet 64% of educational interpreters feel unprepared in this topic area. The IEP is a blueprint of the D/HH student's educational plan, which includes the educational interpreter as a related services provider, placing that educational interpreter into the educational environment to support the D/HH student in gaining access to the general education curriculum. Despite the critical support role of the educational interpreter in the IEP process, educational interpreters do not possess the necessary knowledge to provide input regarding the D/HH student's IEP. Educational interpreters reported having "never seen an IEP," and "When asked to participate in a student's IEP, I didn't know what that was." In reality, most educational interpreters are in the classroom with D/HH students without knowing what their true role is as a mandated related services provider and member of the IEP team. Often, without knowing what an IEP is or ever having seen one, educational interpreters are required to provide access to the general education curriculum so that the D/HH student can benefit from his/her education without understanding the D/HH student's strengths, challenges, academic goals, etc.

Overall, educational interpreters with formal training in interpreting do not feel they are prepared to work in K-12 settings. These results confirm findings from Walker and Shaw's (2011) study. In that study, 51% of participants felt unprepared for

specialized work in educational settings, yet 86% reported having worked in a K-12 setting at some point during their career. Again, the results from all educational interpreters who received some type of formal interpreter training revealed they do not feel prepared to take on the unique role of an educational interpreter.

Results were analyzed further to determine if there was a difference between educational interpreters' perceptions based on program focus (i.e., community or educational). Educational interpreters who reported attending a program with an educational focus felt more prepared than those whose program focused on community settings. Additionally, the more courses the educational interpreter took that focused on K-12 interpreting, the more prepared they felt for their role as an educational interpreter in K-12 settings. These results are congruent with how educational interpreters reported the Model Standards (1993) being covered in their training program. Those educational interpreters who reported their training programs met "A great deal" of the curricula topics from the Model Standards (1993) also "somewhat agreed" or "strongly agreed" with feeling more prepared to interpret in an educational setting. Despite this finding, means were low for both groups—community and educational. While there are those educational interpreters who may feel more prepared to take on work in a K-12 setting, overall, both groups continue to feel unprepared for careers in educational settings.

Implications

The framework of this study incorporates three areas—high-quality training, professional standards (i.e., the Model Standards [1993]), and valid assessment (i.e., the Educational Interpreter Performance Assessment [EIPA]). These three areas are

foundational in creating a quality educational interpreter who can function and provide support to the D/HH student within an educational environment. Given that those working as educational interpreters have indicated that they feel insufficiently prepared to provide interpreting services in an educational setting and 74% of the participants scored below the minimum skill level of 4.0 on the EIPA, it is pertinent that all stakeholders act. In the following sections, important implications for educational interpreters, interpreter training programs, local education agencies (LEAs), state education agencies (SEAs), and researchers are suggested.

Implications for Pre-Service and In-Service K-12 Interpreters

The results of the present study have several implications for pre- and in-service interpreters. First, sign language interpreters who take positions in K-12 settings are inadequately prepared for these positions but at no fault of their own. These individuals are doing their part; the majority have sought out formal training (Fitzmaurice, 2017; Schick et al., 2006; Walker & Shaw, 2011) to gain knowledge and skills to create a career for themselves. However, these educational interpreters expressed that they do not feel their formal program prepared them to work in an educational setting. Not only are interpreters being failed, but so too are those D/HH students whom interpreters are there to support. These students' education may be inhibited due to the lack of knowledge related to the educational environment on the educational interpreter's part.

Pre-service interpreters depend upon training programs to steer them in the right direction. An individual who may be interested in the field of educational interpreting may not be able to locate a program that focuses on educational settings. The majority of

training programs are focused on community settings (Hutter & Pagliaro, 2017), and the average number of courses offered by even those formal interpreter training programs that focus on K-12 interpreting is one, leaving pre-service interpreters without a choice for quality postsecondary education in educational interpreting. Additionally, the results of this study show that despite some participants reporting having more courses focused on educational interpreting, they still did not feel prepared for work in a K-12 setting. It is of utmost importance that pre-service interpreters seek out training programs that embed professional standards, focused on educational interpreting, in their curricula.

Second, pre-service educational interpreters must take and obtain the minimum skill level of 4.0 on the Performance portion and pass the Written portion of the EIPA *before* entering the workforce. The EIPA Performance and Written portions evaluate the necessary knowledge and technical skills needed to provide interpreting services in an educational environment, per this studies' framework and the recommended foundational requirements of Johnson et al. (2018). The results of this study revealed that 74% of educational interpreters who participated in the survey did not meet the minimum skill level of 4.0 on the EIPA. Any skill level on the EIPA under 4.0 needs continuous supervision in a classroom setting. In fact, a Level 3: Intermediate interpreter lacks technical vocabulary, has errors in sign production, can communicate basic content in the classroom, and may need repetition to comprehend signed messages (Classroom Interpreting, n.d.; Schick et al., 1999; Schick et al., 2006). If a sign language interpreter is unable to meet the minimum required EIPA score of 4.0, then that interpreter should recognize he or she is unqualified and should not take a position as an educational

interpreter whose responsibility is to provide interpreting services to D/HH students in an educational environment.

Third, in-service educational interpreters will need to continue to seek out additional training above and beyond their formal pre-service training to gain the necessary skills to work with such a unique population (Jones et al., 1997; Walker & Shaw, 2011; Yarger, 2001). This study revealed numerous educational interpreters who reported having to go back to college/university to obtain a bachelor's degree in Deaf Education to understand their role. It truly is vital that educational interpreters continue to develop their foundational knowledge within an educational environment and create a professional development plan focused on increasing their knowledge and skills as they pertain to K-12 interpreting. Educational interpreters should demand from their local school district administrator(s) appropriate training targeted to K-12 interpreting.

Interpreters working in K-12 settings are there because, per IDEA (2004), they are related services providers. This makes them part of the Individualized Education Program (IEP) team. Yet, educational interpreters conveyed a lack of understanding of the IEP, and the study further revealed there is a complete lack of acknowledgment by other team members regarding their role. It is imperative not only that educational interpreters receive formal preparation on their role as it relates to IDEA and the IEP, but that educational interpreters build rapport with faculty, staff, and administration so to be included in the IEP team process for the longevity of the D/HH student's program.

Moreover, it is encouraged that educational interpreters become a member of their professional organization, The National Association of Interpreters in Education (NAIE).

The NAIE focuses on developing knowledge of best practices in the field of educational interpreting, as well as providing resources and professional development opportunities to their members.

Implications for Interpreter Training Programs

The results of the study and the above recommendations for pre-service/in-service educational interpreters have implications for training programs. In 1985, the Model Standards (1993) for educational interpreting outlined a new curriculum for formal training programs; however, more than 30 years later, training programs remain unchanged (Dahl & Wilcox, 1990; Hutter & Pagliaro, 2017). While some programs may offer a few courses focused on K-12 interpreting, the curriculum provided does not reflect the Model Standards (Hutter & Pagliaro, 2017). Daily, D/HH students enter a classroom and are dependent upon a K-12 interpreter to gain access to the general education curriculum. The Model Standards (1993) were set forth to provide qualified educational interpreters for these students. These were not random standards that were created; these are detailed, essential curricular topics to be implemented as a full and robust program. Yet, individuals who have graduated from a formal interpreter training program and are working in K-12 settings have expressed how unprepared they feel for interpreting in an educational setting in this study and others (Fitzmaurice, 2017; Jones et al., 1997; Walker & Shaw, 2011; Yarger, 2001). Thus, interpreter training programs must offer high-quality, specialized training and provide pre-service interpreters foundational content knowledge and performance skills necessary to obtain a 4.0 or higher on the

EIPA, creating sufficiently prepared educational interpreters who can provide support to D/HH students in K-12 educational environments.

The field needs to change its view on educational interpreting and understand that an educational environment is not a place of "practice," but instead an environment that demands the most qualified educational interpreters who are not only skilled in a visual language but who possess a strong foundational knowledge of all of the curricular areas presented in the Model Standards (1993). Additionally, those individuals providing instruction and guidance in formal training programs may not realize that there is a need for specific training in educational interpreting. Interpreter training programs were originally designed to teach individuals how to interpret for Deaf/deaf adults (Fant, 1990), not children, and the landscape of educational interpreting continues to remain unchanged (Dahl & Wilcox, 1990; Hutter & Pagliaro, 2017).

It is recommended that staff and coordinators of interpreter training programs begin discussions to put together a task force on how to develop and dedicate programs specific to educational settings in their home state and across the United States. These discussions should include individuals from LEAs and SEAs who can provide additional direction in terms of needs and programming. Staff and coordinators of programs should collaborate with neighboring states that do not have training programs to establish distance learning opportunities to fulfill the need for educational interpreters.

Additionally, colleges and universities with training programs need to recruit individuals with the necessary qualifications to teach courses in K-12 interpreting. Not only is it of the utmost importance to provide the recommended formal educational

interpreter training, but it is also just as important to have those providing the instruction have educational backgrounds to represent this unique interpreting specialization. One would not hire an individual with a higher education background in educational interpreting to teach legal interpreting, just as one should not hire an individual with a higher education background in legal interpreting to teach educational interpreting. This means leadership programs focusing doctoral-level students on educational interpreting is needed.

One option to help with raising the preparation of in-service educational interpreters is the development of an in-service Educational Interpreter Certificate. This certificate would be available for all working educational interpreters across the United States. The program would provide working educational interpreters high-quality training and curriculum embedded with professional standards, and the foundational knowledge needed for working educational interpreters to obtain the recommended 4.0 on the EIPA.

Implications for State and Local Education Agencies

State and local education agencies should work together to create state standards for the recruitment of qualified staff to fill the needs of local districts. Despite the lack of educational interpreter training programs and the lack of preparation sign language interpreters receive in educational settings, sign language interpreters continue to be hired and placed in positions to provide access to the general education curriculum for D/HH students. It is strongly encouraged that SEAs and LEAs work together to seek out peer-reviewed research and locate experts in the field of educational interpreting for guidance in creating standards and developing a hiring process for K-12 interpreter recruitment.

Recruitment should include documentation of graduation from an interpreter training program with a specialization in educational interpreting or graduation from an educational interpreter training program. The sign language interpreter should have at least a 4.0 or above on their EIPA, along with passing the EIPA Written portion. These recommendations follow the Deaf Education Consultants of State Education Agencies (DECSEA) efforts on creating state employment standards (Johnson et al., 2018). The SEA and LEA should neither accept nor substitute a Registry of Interpreters for the Deaf Certification for the EIPA. Before a teacher can gain employment with a local district, the teacher must pass a test specific to their content area of study. This requirement should be parallel for K-12 interpreters.

The EIPA is the only assessment that evaluates interpreters' skills specific to K-12 educational settings. Although an interpreter with a RID Certification has been acknowledged as having an acceptable general skillset to provide interpreting services to D/HH adults, it does not guarantee that an interpreter is competent in K-12 interpreting with D/HH children/youth in educational settings. It is erroneous for SEAs and LEAs to accept RID Certification as an equal or alternative evaluation to the EIPA.

In practice, the sign language interpreter the LEA hires is part of the IEP team and should be treated as such. Administrators and staff should take the time to understand the role of the K-12 interpreter and their responsibility as a related services provider, as documented in IDEA (2004). The IEP is a legal document and must be followed. An LEA cannot expect a D/HH student to be successful if the K-12 interpreter providing the

interpreting services does not know what the student's goals are. It is recommended that the administrators and staff at LEAs include K-12 interpreters in the IEP process. Additionally, SEAs' special education monitoring divisions should be reviewing IEP documentation from LEAs to ensure compliance measures are in place and that the IEP is being implemented with fidelity, including access to the curriculum through the educational interpreter. Periodic evaluations of in-service educational interpreters are necessary. SEAs must set and follow appropriately high state standards for educational interpreters, as a quality K-12 interpreter can best support academic achievement for D/HH students.

It is also recommended that SEAs and LEAs work together with interpreter training programs about local needs for K-12 interpreters. The SEA and LEAs can work together with their state's formal interpreter training program or a neighboring state formal training program to create educational interpreting preparation that will serve the population of D/HH students. Everyone must be involved in working towards the same goal to remedy the lack of qualified K-12 interpreters, which in turn may be adversely impacting D/HH students across the United States.

The results and implications stated here is not a call to action, but rather a cry for equality for D/HH students. The lack of prepared sign language interpreters working in educational settings continues to plague the educational system. It is nothing less than a tragedy and should be treated as such.

Limitations of the Study

There are several limitations to the present study. First, as is the case with survey design, this study placed reliance on self-reported data from participants and assumes those participants to be truthful and to have understood the questions. To reduce this limitation, the survey in this study was vetted by multiple experts in the field of educational interpreting. The methodology used to develop the survey followed multiple steps and insights from those experts to increase internal and external validity. Furthermore, survey items used terminology as it applies to the field of educational interpreting. While the survey was vetted through a cognitive focus group with experts in the field to try and ensure participants would be conversant (Groves et al., 2009), responses should be considered with caution, as the majority of respondents had not received formal preparation in educational interpreting and may not have understood the terminology.

Another limitation of the study has to do with determining an interpreter training program's focus. The question asked respondents to provide the focus of their training program, thus collecting the respondent's view of the program, not the program's actual focus. This produced some inconsistencies. For example, some participants reported the focus of their program as educational, yet they also reported their program offering no or few courses focused on K-12 interpreting, which is unlikely in a true educational interpreting training program. Perhaps these participants did not know how to respond to that survey item or did not understand the difference between community and educational

settings. A definition of "focus" should have been added to the survey item for additional clarification.

Finally, it is unknown whether the participants were from urban, suburban, or rural communities. The survey was distributed via email and social media avenues, which could have made it more difficult for an educational interpreter who works in a rural area to access the survey due to spotty Internet access or no internet access.

Future Directions

The present study leads to initial findings of educational interpreters' training, perceptions on preparation, and interpreter evaluation scores. Thus, the following are three suggestions for future directions in the field that extend the findings from the present study, providing a more robust landscape of preparation for educational interpreters.

First, future research should carefully analyze curricula from interpreter training programs, especially those offering specialization in educational interpreting and those labeled as full educational interpreter training programs. By conducting a curricula analysis using the framework of the Model Standards (1993) and dissecting each course to determine how much of the curriculum applies to educational interpreting, the field can gain a more accurate depiction of how current programs fit within the framework of the Model Standards (1993). An analysis of curricula could provide the field with what is working and what is not working, along with best practices and possibly evidence-based practices. Without this information, the field does not have a complete picture of the formal training being implemented for educational interpreters, and whether formal

training programs exist that produce a quality educational interpreter, as outlined in the theoretical framework.

Once a solid analysis of curricula has been completed, a case study should be conducted on those graduates working in an educational environment, from both types of programs (i.e., community and educational), where the curricula were analyzed. The case study would entail the researcher conducting observations of the educational interpreter during their normal daily activities. Additionally, individual interviews and focus groups would be conducted with the educational interpreter, teachers, administrators, hearing students, and D/HH student(s). This case study could provide a deeper understanding of the everyday encounters and challenges an interpreter working in an educational setting experience's, and how that interpreter solves problems and navigates the environment based on their prior formal interpreter training.

Finally, it is suggested that a committee be convened to re-evaluate the Model Standards (1993) to reflect current evidence-based best practices in the field of educational interpreting. This committee could meet at the annual Council for Exceptional Children (CEC). In this gathering place, preparation standards are created to help define the profession of special education (CEC, 2020). Updating the Model Standards (1993) to reflect the most current research will help to advance the profession of educational interpreting and support interpreter training programs in implementing research-based curricula standards into their programs, ultimately creating an alignment of systems.

Conclusion

The Model Standards (1993) were a result of a call to action by parents, teachers, administrators, higher education professionals, and national organizations. After 4 years of research, the Model Standards (1993) were to provide guidance to LEAs for recruitment and to support interpreter training programs in the creation of educational interpreter training programs. Despite the work that was conducted, the landscape remains unchanged. Sign language interpreters currently working as K-12 interpreters in educational settings are not prepared to take on this specialized role. Not only are important curriculum areas not being met, but educational interpreters' evaluation scores also continue to fall below the recommended level of 4.0, and they report feeling unprepared for interpreting in educational settings. The framework for this study suggests the following three areas, high-quality training, professional standards, and valid assessment are of great importance in creating a quality educational interpreter able to provide services to D/HH students in an educational environment. Based on the framework of this study, there is a lack of alignment between these three areas. It is of utmost importance that SEAs, LEAs, and interpreter training programs start communicating with one another to identify needs and streamline efforts. Training programs entirely focused on educational interpreting must be developed; we cannot continue to offer one or two surface-level courses on K-12 interpreting. More research on educational interpreting needs to be conducted. The field needs to gain momentum and get on a forward trajectory for the sake of D/HH students. Daily, D/HH students sit in a classroom with their hearing peers, intending to gain access to the general education

curriculum via a sign language interpreter. Unfortunately, this scenario may not be happening due to the lack of preparation for educational interpreters. The field must begin to provide high-quality training embedded with professional standards to pre-service interpreters, that will provide pre-service interpreters the foundational theory and practice to obtain the recommended 4.0 on the EIPA and a pass on the Written portion of the EIPA. Thus, creating a quality educational interpreter able to provide interpreting services in an educational environment, enabling the D/HH student to receive educational benefit during his/her/their academic journey.

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APPENDIX A

CONSENT TO PARTICIPATE

Dear Friend:

Thank you for participating in this short survey.

This survey is for research purposes. I am investigating the pre-service preparation and perceptions of sign language interpreters currently working in K-12 educational settings for my dissertation. This survey is not connected to any Interpreter Training Program. It is simply to better understand curricula being provided in Interpreter Training Programs. My goal is to share the results so that Interpreter Training Programs can better meet the needs of deaf/hard-of-hearing students in the K-12 educational setting. Your name will NOT be used in the results, nor will there be any identifiable information within the survey that could be linked to you.

The survey should take just 15-20 minutes. In appreciation of your time, after you have completed the survey, you will have the opportunity to enter your name into a drawing for 1 of 3 $50 Amazon Gift Cards. Your name will not be connected in any way to your responses.

Please complete the survey by April 19th.

Thanks again!

Kimberly F. Hutter, M.Ed., Ed: K-12
kfhutter@uncg.edu
Specialized Educational Services
The University of North Carolina at Greensboro

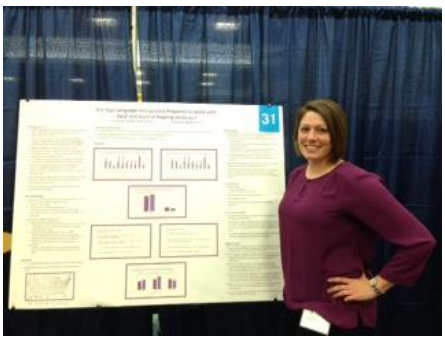
Claudia M. Pagliaro, Ph.D. (Faculty Advisor)
cmpaglia@uncg.edu
Specialized Educational Services
The University of North Carolina at Greensboro

If you have any concerns about your rights, how you are being treated, concerns or complaints about this project or benefits or risks associated with being in this study, please contact the Office of Research Integrity at UNCG toll-free at (855)-251-2351.

APPENDIX B

EMAIL SURVEY INVITATION

Hello! We may have met somewhere along our travels, as I have been involved in the field of educational interpreting since 1999! My name is Kimberly Hutter, and I am asking you to take some time out of your day (15-20 minutes to be exact), to let your voice be heard regarding the formal interpreter preparation you have received! At this moment, I am in the process of undertaking one of the biggest projects I have ever worked on, my dissertation study.



CLICK HERE TO TAKE THE SURVEY & SHARE THIS EMAIL WITH ALL INTERPRETERS YOU KNOW!!!

YOUR responses to this survey will be used to inform the field of Interpreting, with the goal of improving services for deaf and hard of hearing students across the United States! To show my appreciation of your time, after you have completed the full survey, you have the choice to enter a drawing to win one of three $50 gift cards to Amazon!!! Your responses and drawing information are completely anonymous.

CLICK HERE TO TAKE THE SURVEY AND SHARE THIS EMAIL WITH ALL INTERPRETERS YOU KNOW!!!

Thank you for your time! If you have any questions, please email me at kfhutter@uncg.edu.

APPENDIX C

SURVEY

Educational Interpreter: Curricula, Evaluation, and Perceptions - Final

Dear Friend:

Thank you for participating in this short survey.

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The survey should take just 15-20 minutes. In appreciation of your time, after you have completed the survey, you will have the opportunity to enter your name into a drawing for one of three $50 Amazon Gift Cards. Your name will not be connected in any way to your responses.

Please complete the survey by <_____>

Thanks again!

Kimberly F. Hutter, M.Ed., Ed:K-12
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Q1 Are you currently working in a K-12 educational setting with deaf and/or hard-of-hearing students, providing interpreting services?

- ○ Yes (1)
- ○ No (2)

Skip To: Q3 If Are you currently working in a K-12 educational setting with deaf and/or hard-of-hearing students... = Yes

Q2 Within the past 5 years, have you worked in a K-12 educational setting with deaf and/or hard-of-hearing students, providing interpreting services?

- ○ Yes (1)
- ○ No (2)

Skip To: End of Survey If Within the past 5 years, have you worked in a K-12 educational setting with deaf and/or hard-of-h... = No

Q3 Please select your primary current job title or the primary job title you had when you worked in an educational setting. If it is not listed, please type it into the "other" box.

- ○ Educational Interpreter (1)
- ○ Sign Language Interpreter (2)
- ○ Interpreter (3)
- ○ ASL Interpreter (4)
- ○ Language Facilitator (5)
- ○ Signing Aide (6)
- ○ I do not know/no title (7)
- ○ Other (8) _____

Q4 How many years have you worked providing interpreting services to deaf and/or hard-of-hearing students in an educational setting?

- ○ Less than 1 year (1)
- ○ 1 year (2)
- ○ 2 years (3)
- ○ 3-5 years (4)
- ○ 6-10 years (5)
- ○ 11-15 years (6)
- ○ 16-20 years (7)
- ○ 21 or more years (8)

Q5 What is the percentage of time you spend/spent in each of the following settings providing interpreting services for deaf and/or hard-of-hearing students? (answer must equal 100)

_____ Preschool - Kindergarten (1)
_____ Elementary School (1st-5th grades) (2)
_____ Middle School (6th-8th grades) (3)
_____ High School (9th - 12th grades) (4)

Q6 Have you had formal training from an Interpreter Training Program/Educational Interpreter Training Program?

- ○ Yes (1)
- ○ No (2)

Skip To: Q26 If Have you had formal training from an Interpreter Training Program/Educational Interpreter Trainin... = No

Q7 What training program did you attend? If you do not find your program, please select "other" in the drop-down list.

▼ American River College (1) ... Other (116)

Skip To: Q8 If What training program did you attend? If you do not find your program, please select "other" in t... = Other

Display This Question:
If What training program did you attend? If you do not find your program, please select "other" in t... = Other

Q8 Please type in the college/university/school you attended for your training program.

_____

Q9 What is the highest level you have completed in an Interpreter Training Program/Educational Interpreter Training Program? If the highest level you completed is NOT listed, please select “other” and write in your highest level.

- ○ Certificate (1)
- ○ Associate Degree (2)
- ○ Bachelor Degree (3)
- ○ Masters Degree (4)
- ○ Doctoral Degree (5)
- ○ Other (6) _____

Q10 Was your training program primarily focused on community settings for D/HH adults or educational settings for D/HH students?

- ○ Community focused (1)
- ○ Educational focused (2)

Q11 The following section focuses on formal sign language interpreting assessments and/or evaluations. Please answer: a) whether you have taken each; b) how many times you have taken the assessment/evaluation; and c) your most recent score if applicable (remember, ALL information is anonymous):

Q12 Have you taken the performance portion of the Educational Interpreter Performance Assessment (EIPA)?

- ○ Yes (1)
- ○ No (2)

Skip To: Q17 If Have you taken the performance portion of the Educational Interpreter Performance Assessment (EIPA)? = No

Q13 How many times have you taken the performance portion of the EIPA?

- ○ 1 time (1)
- ○ 2 times (2)
- ○ 3 times (3)
- ○ 4 times (4)
- ○ 5 or more times (5)

Skip To: Q15 If How many times have you taken the performance portion of the EIPA? = 1 time

Q14 What is the **primary** reason for retaking the performance portion of the EIPA?

- ○ Training Program requirements of school/university/college (1)
- ○ Needed to obtain a higher score for a job (2)
- ○ Wanted to obtain a higher score (4)
- ○ Other (3) _____

Q15 Please provide your most recent score (e.g., 3.0, 3.5, etc.).

_____

Q16 Did you or do you hold your Ed:K-12 granted by the Registry of Interpreters for the Deaf (RID)?

- ○ Yes (1)
- ○ No (2)

Q17 Have you taken the performance portion of the Texas Board for Evaluation of Interpreters (BEI)?

- ○ Yes (1)
- ○ No (2)

Skip To: Q21 If Have you taken the performance portion of the Texas Board for Evaluation of Interpreters (BEI)? = No

Q18 How many times have you taken the performance portion of the BEI?

- ○ 1 time (1)
- ○ 2 times (2)
- ○ 3 times (3)
- ○ 4 times (4)
- ○ 5 or more times (5)

Skip To: Q20 If How many times have you taken the performance portion of the BEI? = 1 time

Q19 What is/was the **primary** reason for retaking the performance portion of the BEI?

- ○ Training Program requirements of school/university/college (1)
- ○ Did not previously pass (4)
- ○ Other (3) _____

Q20 Please provide the most recent level you achieved (i.e., Basic, Advance, etc.). If the level you achieved is not listed, please select "other" and type it in the box.

- ○ Basic (1)
- ○ Advanced (2)
- ○ Master (3)
- ○ Did not pass (4)
- ○ Other (5) _____

Q21 Do you hold a certification previously/currently offered through the Registry of Interpreters for the Deaf (RID)? (Ed:K-12 is NOT included).

- ○ Yes (1)
- ○ No (2)

Skip To: Q23 If Do you hold a certification previously/currently offered through the Registry of Interpreters for... = Yes

Q22 Have you taken an assessment/evaluation with the goal of gaining certification through RID?

- ○ Yes (1)
- ○ No (2)

Skip To Q26 If Have you taken an assessment/evaluation with the goal of gaining certification through RID? = No

Q23 How many times have you taken an assessment/evaluation to gain RID certification?

- ○ 1 time (1)
- ○ 2 times (2)
- ○ 3 times (3)
- ○ 4 times (4)
- ○ 5 or more times (5)

Skip To: Q25 If How many times have you taken an assessment/evaluation to gain RID certification? = 1 time

Q24 What is/was the **primary** reason for retaking the performance assessment/evaluation to gain RID certification?

- ○ Training Program requirements of school/university/college (1)
- ○ Did not previously pass (2)
- ○ Other (3) _____

Q25 Please provide the most **recent** certification you received through RID. If the certification you obtained is not listed, please select "other" and type it in the box.

- ○ National Interpreter Certification (1)
- ○ NIC Advanced (2)
- ○ NIC Master (3)
- ○ Certificate of interpretation (4)
- ○ Certificate of Transliteration (5)
- ○ Comprehensive Skills Certificate (6)
- ○ NAD III (Generalist) (7)
- ○ NAD IV (Advanced) (8)
- ○ NAD V (Master) (9)
- ○ Ed: K-12 (10)
- ○ Did not pass (11)
- ○ Other (12) _____

Q26 The following section focuses on formal sign language interpreting assessments and/or evaluations. Please answer: a) whether you have taken each; b) how many times you have taken the assessment/evaluation; and c) your most recent score if applicable (remember, ALL information is anonymous):

Q27 Have you taken the performance portion of the Educational Interpreter Performance Assessment (EIPA)?

- ○ Yes (1)
- ○ No (2)

Skip To: Q32 If Have you taken the performance portion of the Educational Interpreter Performance Assessment (EIPA)? = No

Q28 How many times have you taken the performance portion of the EIPA?

- ○ 1 time (1)
- ○ 2 times (2)
- ○ 3 times (3)
- ○ 4 times (4)
- ○ 5 or more times (5)

Skip To: Q30 If How many times have you taken the performance portion of the EIPA? = 1 time

Q29 What is/was the **primary** reason for retaking the performance portion of the EIPA?

- ○ Program requirements of school/university/college (1)
- ○ Needed to obtain a higher score for a job (4)
- ○ Wanted to obtain a higher score (2)
- ○ Other (3) _____

Q30 Please provide your most recent score (i.e., 2.0, 2.3, etc.).

_____

Q31 Did you or do you hold your Ed:K-12 granted by the Registry of Interpreters for the Deaf (RID)?

- ○ Yes (1)
- ○ No (2)

Q32 Have you taken the performance portion of the Texas Board for Evaluation of Interpreters (BEI)?

- ○ Yes (1)
- ○ No (2)

Skip To: Q36 If Have you taken the performance portion of the Texas Board for Evaluation of Interpreters (BEI)? = No

Q33 How many times have you taken the performance portion of the BEI?

- 1 time (1)
- 2 times (2)
- 3 times (3)
- 4 times (4)
- 5 or more times (5)

Skip To: Q35 If How many times have you taken the performance portion of the BEI? = 1 time

Q34 What is/was the **primary** reason for retaking the performance portion of the BEI?

- Program requirements of School/University/College (1)
- Did not previously pass (2)
- Other (3) _____

Q35 Please provide the most recent level you achieved (i.e., Basic, Advance, etc.). If the level you achieved is not listed, please select "other" and type it in the box.

- Basic (1)
- Advanced (2)
- Master (3)
- Did not pass (4)
- Other (5) _____

Q36 Do you hold a certification previously/currently offered through the Registry of Interpreters for the Deaf (RID)? (Ed:K-12 is NOT included).

- Yes (1)
- No (2)

Skip To: Q38 If Have you taken an assessment/evaluation with the goal of gaining certification through RID? = No

Q37 Do you hold a certification previously/currently offered through the Registry of Interpreters for the Deaf (RID)? (Ed:K-12 is NOT included).

- ○ Yes (1)
- ○ No (2)

Q38 How many times have you taken an assessment/evaluation to gain RID certification?

- ○ 1 time (1)
- ○ 2 times (2)
- ○ 3 times (3)
- ○ 4 times (4)
- ○ 5 or more times (5)

Skip To: Q40 If How many times have you taken an assessment/evaluation to gain RID certification? = 1 time

Q39 What is/was the **primary** reason for retaking the performance assessment/evaluation to gain RID certification?

- ○ Program requirements of School/University/College (1)
- ○ Did not previously pass (2)
- ○ Other (3) _____

Q40 Please provide the most **recent** certification you received through RID. If the certification you obtained is not listed, please select "other" and type it in the box.

- ○ National Interpreter Certification (1)
- ○ NIC Advanced (2)
- ○ NIC Master (3)
- ○ Certificate of interpretation (4)
- ○ Certificate of Transliteration (5)
- ○ Comprehensive Skills Certificate (6)
- ○ NAD III (Generalist) (7)
- ○ NAD IV (Advanced) (8)
- ○ NAD V (Master) (9)
- ○ Ed: K-12 (10)
- ○ Did not pass (11)
- ○ Other (12) _____

Q41 Would you like to enter the drawing for a chance to win 1 of 3 $50 Amazon Gift Cards?

Your name will not be connected in any way to your responses or to your entry for the Amazon Gift Card.

- ○ Yes (1)
- ○ No (2)

Q42 How many courses in your interpreter training program were specific to interpreting for students in K-12 settings?

- [ ] None (1)
- [ ] 1 course (2)
- [ ] 2 courses (3)
- [ ] 3 courses (4)
- [ ] More than 4 courses (5)

Q43
The following questions will ask you to report how much of a specified content area were **taught** in your interpreter training program. Definitions of each area are provided.

Please respond to the following items using the four-point scale below.

Q44 **Foundations in Education and Deafness**

	None at all (1)	A little (2)	A lot (3)	A great deal (4)
Communication: Cross culture communication with deaf-hearing and/or multi-ethnic/multicultural, communication modalities used by deaf persons: American Sign Language, Manually Coded English, Pidgin Sign English, etc. (1)	○	○	○	○
Hearing loss: Knowledge of hearing loss definitions, etiologies, social and cultural conditions; audiological assessment, use of assistive technology, etc. (2)	○	○	○	○
Deaf and hard of hearing persons in society: Deafness, history, culture, community organizations and/or agencies providing services to D/HH, etc. (3)	○	○	○	○
Human development: Psychological, social and language stages, how learning occurs, behavior patterns, language acquisition, childhood deafness and development, etc. (4)	○	○	○	○
Education: Philosophies, organizational structures, educational trends, and educational psychology. (5)	○	○	○	○
Special Education: Disability categories, educational services, public laws (i.e., IDEA, 504, ADA, etc.), and parent involvement. (6)	○	○	○	○
Education of deaf and hard of hearing students: History, philosophies, techniques, various types of programs, educational placement, laws affecting education and placement of student, etc. (7)	○	○	○	○
Major curriculum areas: Vocabulary, concepts, and content used in elementary and secondary school settings, vocational settings, etc. (8)	○	○	○	○
Interpersonal relations: Behavior in the workplace, professionalism, conflict resolution, working with administration, colleagues, students, parents, and others. (9)	○	○	○	○

Q45 **Educational Interpreting**

	None at all (1)	A little (2)	A lot (3)	A great deal (4)
Roles and responsibilities: Roles at different age/grade level in a variety of ***educational settings.*** (1)	○	○	○	○
Multidisciplinary team: Knowledge of the role and responsibilities of members of the team and how an ***educational interpreter*** functions within that team. (2)	○	○	○	○
Ethical codes and standards: Ethics specific to ***educational interpreting***, including confidentiality and professional behavior. (3)	○	○	○	○
Student development: Advocating for student independence and use of communication. (4)	○	○	○	○
Educational support services: Tutoring techniques, notetaking, use of visuals, etc. (5)	○	○	○	○
Orientation to deafness: Referral procedures relating to deafness, information about where to learn ASL and about deafness for staff and members of community, advocating for D/HH student, etc. (6)	○	○	○	○
Communication comprehension: Monitoring student understanding in the classroom. (7)	○	○	○	○
Professional development: Plan your program for professional development for continuous improvement of job-related skills. (8)	○	○	○	○

Q46 **Educational Interpreting Skills, Receptive and Expressive**

MCE - Manually Coded English
PSE - Pidgin Signed English

	None at all (1)	A little (2)	A lot (3)	A great deal (4)
In a variety of *educational settings:* Interpret from ASL to spoken English and spoken English to ASL. (1)	○	○	○	○
In a variety of *educational settings.* Transliterate from spoken English to MCE and MCE to spoken English. (2)	○	○	○	○
In a variety of *educational settings.* Transliterate from spoken English to PSE and PSE to spoken English. (3)	○	○	○	○

Q47 **Practicum experience:** Did you participate in an internship/practicum in a *K-12 educational setting*?

- ○ Yes (1)
- ○ No (2)

Skip To Q50 If Practicum experience: Did you participate in an internship/practicum in a K-12 educational setting? = No

Q48 How many hours per day was your internship/practicum?

- ○ 0-2 hours (1)
- ○ 3-5 hours (2)
- ○ 6-8 hours (3)

Q49 How many weeks was your internship/practicum?

- ○ 0-4 weeks (1)
- ○ 5-8 weeks (2)
- ○ 9-12 weeks (3)
- ○ 13 or more weeks (4)

Q50

The following questions will ask you to reflect on your initial interpreter training program and how it prepared you for working in an educational setting.

Please respond to the following items using the four-point scale below.

Q51 Please complete the following sentence for each area. **"I feel my interpreter training program prepared me to..."**

	Strongly disagree (1)	Somewhat disagree (2)	Somewhat agree (3)	Strongly agree (4)
Communication: Communicate in two or more modalities (ASL, MCE, PSE, Cued speech, etc.) (1)	○	○	○	○
Hearing Loss: Provide information on audiological assessments, assistive technology, and the etiology of hearing loss. (2)	○	○	○	○
Education: Identify issues and trends at varying ***educational levels.*** (3)	○	○	○	○
Special Education: Identify and speak about disability categories, IDEA, 504, and other ***educational laws/policies.*** (4)	○	○	○	○
Deaf Education: Identify and apply techniques in ***educating D/HH students,*** laws which affect student placement, and support services. (5)	○	○	○	○

Q52 Please provide any comments reflective of the previous content areas.

Q53 Please complete the following sentence for each area. **"I feel my interpreter training program prepared me to..."**

	Strongly disagree (1)	Somewhat disagree (2)	Somewhat agree (3)	Strongly agree (4)
Role and Responsibilities: Understand my role as it applies to IDEA and support D/HH students at different age/grade levels and different ***educational settings***. (1)	○	○	○	○
Multidisciplinary Team: Work within a team environment and collaborate with members of the ***educational team*** (general education teacher, special education teacher, administration, speech pathologist, etc.) (2)	○	○	○	○
Ethical Codes and Standards: Apply the ***Educational Interpreter Code of Professional Conduct.*** (3)	○	○	○	○
Student Development: Encourage student independence and support student's communication skills. (4)	○	○	○	○
Educational Support Services: Provide tutoring, notetaking, use of visuals, and other ***educational interpreting strategies.*** (5)	○	○	○	○
Individualized Education Program (IEP): Develop and implement the IEP and attend the IEP meeting. (6)	○	○	○	○

Q54 Please provide any comments reflective of the previous content areas.

Q55 Would you like to enter the drawing for a chance to win 1 of 3 $50 Amazon Gift Cards?

Your name will not be connected in any way to your responses or to your entry for the Amazon Gift Card.

- ○ Yes (1)
- ○ No (2)