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E-Mentoring an Educator in a State School for the Deaf: An Action Research Study

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E-Mentoring an Educator in a State School for the Deaf:

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by

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weekends by himself as I pursued this degree and rarely complained. Thank you, from

the bottom of my heart.

Abstract

  The purpose of this qualitative action research study was to explore the benefits and challenges of e-mentoring an adult learner in a rural state school for the deaf that taught children with hearing loss to listen and speak. This school lacked the benefit of a spoken language programs for deaf children. This study focused on e-mentoring the Lead Teacher/SLP, in order to enhance her understanding of language development in children with hearing loss and improve her ability to use diagnostic teaching, in order to implement strategies that would allow the children in this specialized classroom to continue to develop spoken language. Through use of synchronous and asynchronous e-mentoring, I assisted the mentee as she developed a plan specifically focused on providing her with the skills needed to lead/direct the program independently, in order for it to continue successfully.

  The mentee and supervisory/administrative staff were participants of this study. The mentee participated in the e-mentoring process twice each month, for 30-45 minutes per session, for one academic school year. The mentee typically guided the topic of the e-mentoring session by asking for assistance in a particular instructional area. On alternate weeks, I was in contact with the mentee via email, text, and/or phone. After e-mentoring, I completed a journal entry with my thoughts about the session and the mentee responded to questions about the e-mentoring experience. At the conclusion of the academic year, I conducted a focus group with the supervisors and administrators of the spoken language program asking for input about this new program. Secondary data were collected from vocabulary and concept tests on the children attending the program using. Results from the journaling and responses to questions and focus group were

coded and analyzed for emerging themes. One major themes was Change, with

subthemes of opportunities, e-mentoring the spoken language program, progress of the

children, perceptions of the program, increase in enrollment, and scheduling. Other

major themes included Andragogy and e-mentoring, Teaching Strategies, and

Technology. The results of this study may be important to administrative personnel in

state schools for the deaf, interested in initiating a spoken language classroom.

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Chapter One: Introduction

This action research study was developed to explore the benefits and challenges of e-mentoring an adult learner in a rural state school for the deaf that taught children with hearing loss to listen and speak. At the time of this writing, the rural areas lacked the benefit of spoken language programs for deaf children, because there were few professionals skilled in teaching spoken language. As a result, the use of e-mentoring was initiated and developed, for the purpose of helping professionals create a spoken language program for children with hearing loss in an underserved area of the country. Over the course of this study period, the professionals involved included three Speech-Language Pathologists (SLPs), a teacher working on her master's in special education, and a teaching assistant. The establishment of a spoken language program or auditory-oral preschool classroom in a state school for the deaf was a unique approach for teaching spoken language to children with hearing loss.

State schools for the deaf traditionally taught American Sign Language (ASL) to children who were deaf and/or hard of hearing. In these programs all teaching staff used ASL at all times throughout the day, when communicating with students with hearing loss and when communicating with adults with typical hearing. Most state schools for the deaf used ASL only, and a limited number of these programs had some component in which spoken language was used.

Prior to the initiation of this action research study, I (the researcher) engaged in assisting the state school for the deaf with its spoken language program, to both implement and improve the spoken language preschool program. The main instructor in this new spoken language program, who I knew for many years, asked me to assist her in

the development of the program. Her family and younger sister moved to St. Louis, so she could attend a school for the deaf that had successfully taught many deaf children listening and spoken language. I was employed at that school as a teacher of the deaf, department head, principal, and college professor teaching future teachers of the deaf. Given my years of experience with deaf education, I earned the trust and confidence of my colleagues. As a result, I was approached by the main instructor, who was employed by the state school for the deaf, to help start the program. At her request for consultation and advice, I volunteered to assist this instructor and did not accept any compensation for mentoring.

At the initiation of the study, I helped make improvements to the students' daily schedule, consulted with the Lead Teacher, who also was a SLP, and made recommendations for teaching strategies and teaching materials. This action research study focused on e-mentoring the Lead Teacher/SLP in order to enhance her understanding of language development in children with hearing loss and improve her ability to use diagnostic teaching in order to implement strategies that would allow the children in this specialized classroom to continue to develop spoken language. Through use of synchronous and asynchronous e-mentoring, I assisted the mentee, as she developed a plan specifically focused on providing her with the skills needed to lead/direct the program independently, in order for it to continue successfully.

E-mentoring included all types of electronic communication available at the time of the study. This e-technology included Smart Phone texting, Skype, Face Time, and phone calls. Web-Ex and VSee were two platforms available and considered secure. E-

mentoring appeared to be a solution to the lack of support and appropriate education for children in these distant locations.

The results of this study may be important to administrative personnel in state schools for the deaf who are interested in initiating a spoken language classroom. There may exist a group of motivated parents of children with hearing loss who may find this information important to influence educators in their geographic area to develop a local spoken language program. The findings of this study also may be important to legislators and other stakeholders interested in helping children with hearing loss learn to talk.

Background of the Program

The Progressive Program for the Deaf (PPD, pseudonym) was located in a rural area of a southern state, founded in the 1800s. It was a well-established state school for the deaf and, in fact, the state school was the largest employer in the city. Until the commencement of this program, the teaching method used was ASL, and most adults and children used ASL to communicate with each other. The capacity of children with hearing loss to learn spoken language had improved significantly over the past several decades, preceding this study, due to the improvement in technology of hearing devices, such as digital hearing aids and cochlear implants. Technology crept into the world of deaf education as hearing aids evolved over decades, because they were then programmable, allowing each hearing aid to be programmed to the specificity of the person using it, in order to provide that person with maximum access to speech. More and more children were getting cochlear implants and the staff from the state school began hearing from parents about this technology and wondered if a spoken language program could be made available to the children. The state school learned that children

could benefit from this technology and may learn to speak more easily. The

administrators in the school asked themselves, "Is there a need for more educational

options for the children we serve with hearing loss?"

This state school for the deaf considered the creation of a spoken language option

for the preschool program for several years, but funding was not available to support this

pursuit. In October 2011, the school's upper administration decided to begin seriously

pursuing this goal, in order to provide more educational options for rural or underserved

families in the state. Likewise, financial issues were alleviated when the school acquired

the funds for this new endeavor.

Traditional, auditory-verbal therapy - "a specialized therapy designed to teach a

child to use his residual hearing provided understanding speech and learning to talk"

(Stith, n.d., para 1) was offered in a city over one hour away from the state school

providing the student with hearing loss one-to-two-hours of therapy per week. There was

also an auditory-verbal part-time school located in the city that operated three days per

week for three hours each day. While these options were appropriate for some children

with hearing loss, some of the children in this underserved location needed a more

intensive program. The parents and administration decided to implement a full-day

program, five days each week, for these children with hearing loss, so they could have an

opportunity to learn spoken language.

The preschool program began in the spring of 2012, with five children with

hearing loss at the state school between the ages of three years, zero months and four

years, ten months. Of those initial students, four received cochlear implants and one

wore hearing aids on both ears. During the spring semester 2012, the teaching staff

consisted of one teacher, who functioned as a SLP and lead teacher in the class with one

teacher aide assisting. Although the Lead Teacher/SLP was a competent clinician, she

had no experience working as a classroom teacher and only one year of experience

working with children with hearing loss. Even though this professional had conducted

speech therapy in small groups of two-to-three children, she did not have the education

directed toward teaching this population.

In general, the first group of children with hearing loss served by this program

included students who received cochlear implants and hearing aids after the age of 24

months, and these students had limited success in spoken language instruction prior to

their arrival at the state school.

Table 1

Demographics of Children in Spoken Language Programs

	Age hearing loss identified	Age child received cochlear implant	Age child received hearing aid
Child 1	after 18 months	after 2 years	
Child 2	after 18 months	after 2 years	
Child 3	after 18 months	after 2 years	
Child 4	after 18 months	Not applicable	after 2 years
Child 5	6 months	4 years, 10 months	

As referenced in Table 1, four of the students had their hearing loss identified

after 18 months-of-age, and three of the cochlear implant users received their implants

after two years-of-age. The single hearing aid user received his first hearing aid after two

years-of-age, as well. One student received her cochlear implant right before enrollment

in the program (four years, ten months), and she had no prior consistent hearing aid use

or listening/spoken language services. The auditory-verbal program dismissed three of

the students, due to a failure to progress in the methodology or from limited attendance.

In the fall of 2012, the speech pathologist in charge of the spoken language

program contacted me to begin mentoring her. Initially, I made a visit to the program and

the e-mentoring process began shortly thereafter. During the first years of this process, e-

mentoring did not occur on a scheduled basis, but rather when the Lead Teacher/SLP felt,

she needed help. Upon the initiation of this study, the e-mentoring occurred on a

scheduled basis with phone or text conferencing on weeks when no e-mentoring

occurred. In addition, the use of andragogical theory, the art and science of helping

adults learn, was initiated with this professional as the e-mentoring continued during the

2014-2015 school year. When this study was initiated in September 2015, the number of

children in the listening and spoken language class had grown to ten students, with two

other students waiting to enroll.

Purpose of the Study

The purpose of this action research study was to solve a problem that emerged

from a practitioner's concern. There were no resources or experts available in a rural

area of a southern state to teach children with hearing loss how to listen and speak —

only resources for helping deaf students learn sign language. The use of e-mentoring was

initiated and continued to be developed for the purpose of helping deaf education

teachers and speech pathologists develop a spoken language program for children with

hearing loss in an underserved area of the country through the development of these

spoken language classes.

Rationale

This action research study manifested after observing a gap in the literature related to e-mentoring a start-up listening and spoken language program for deaf children in distant underserved areas in the country. While some programs opened to educate children with hearing loss in cities around the United States (Oral Deaf Ed, 2012), many areas in the country continued to lack access to spoken language deaf education preschools. Many researchers agreed that experienced teaching staff was lacking. "Presently, there is a world-wide shortage of professionals qualified to serve children, who are deaf and hard of hearing and their families, who are seeking a listening and spoken language outcome" (DeMoss, Clem, and Wilson, 2012, p. 329).

Technology could provide solutions in this 21st century of complex learning needs. According to Fleming, Brown and Houston (2013), videoconferencing evolved and was available for distance learning in devices, such as FaceTime, Skype, ooVoo and WebEx. Other appropriate technology for educators in rural locations could be text messages, webinars, e-meetings, smart phones, YouTube videos, and iPads, among other devices. Some of these technologies were available in synchronous and asynchronous delivery models. With the use of this electronic technology, the researcher provided e-mentoring and examined some technological tools appropriate for this educational situation.

An increase in early screening and laws, providing greater support for the disabled, also contributed to an awareness of and need for improved deaf education. Newborn hearing screening, the Federal mandate that all newborns be screened for hearing loss at birth, identified greater than 95% of children born with hearing loss

(National Institute of Health, 2010, para. 13). It was a goal of newborn hearing screening

to identify children who have hearing loss shortly after birth and begin early intervention

services soon after identification (National Institute of Health, 2010, para. 2). The

Individuals with Disabilities Education Act (U.S. Department of Education, 2013) set

forth individual rights and "maintains the basic premise that education programs must be

customized to address each special student's unique needs" (Northern & Downs, 2014, p.

483). The law allowed families with deaf children to request a spoken language program

for their children, as an appropriate education. However, even when parents requested a

specific methodology, such as a spoken language, programs may not have been available

in the child's school district or appropriate personnel may not have been available, who

had the appropriate training to teach listening and spoken language to a child with

hearing loss. Many deaf educators and SLPs who provided services to children with

hearing loss received their education prior to universal newborn hearing screening and

prior to the availability of 21st century technology (Marge & Marge, 2005). In addition, it

was my experience that many young professionals in speech-language pathology had

minimal experience teaching young deaf children spoken language during their collegiate

training.

   The PPD, a pseudonym, was in a state school for the deaf where virtually all

children, teachers, and staff used ASL. According to an administrator of the program,

parents had been requesting a spoken language option for their preschool children for

several years (Administrator, PPD, personal communication, October 2012). No other

spoken language option was available in this rural area of the state. After studying the

need for an oral preschool for deaf children, school administration determined that

children would benefit from a listening and spoken language program within the state school. The administrators developed a three-year plan to support a listening and spoken language program at PPD. Within the initial plan, the Listening and Spoken Language program hired a speech pathologist, an audiologist, and a temporary teacher aide to run the program. This program opened its doors in March 2012.

A collaborative relationship was initiated between the Moog Center for Deaf Education, where I was employed, and PPD. The Moog Center had been educating young deaf children to listen and talk for over 20 years. The state school's spoken language teaching staff lacked experience in directly instructing young children with hearing loss to listen and talk. I initiated e-mentoring with the staff in the fall of 2012, at the request of PPD. In the fall of 2014, a formal e-mentoring program was initiated using regularly scheduled e-meetings and using andragogical principles.

Research Questions

I investigated the following research questions for this action research study.

> **RQ 1**: What is the experience of e-mentoring for the mentor and
>
> mentee engaged in a distance start-up spoken language program
>
> for deaf children at a state school in a rural setting, including the
>
> benefits and challenges?
>
> The two sub-questions are:
>
>> a) What are the benefits of e-mentoring?
>>
>> b) What are the challenges of e-mentoring?
>
> **RQ 2**: How do andragogical principles apply to e-mentoring?

RQ 3: How, if at all, has e-mentoring the teaching staff increased spoken language outcomes with the deaf children in relation to receptive and expressive vocabulary scores and in relation to basic concepts?

Limitations

A limitation was that the sample size of this study was small (less than 10) due to the limited number of educators employed at the Listening and Spoken Language Program at PPD. Other limitations of this study included the methodology of the study, the context in which the study occurred, and the specificity of the research population. Another limitation was that only one educator requested mentoring when the study commenced, so this action research project is limited to one participant. Finally, a limitation is that this action research project did not guarantee transfer of the theory of e-mentoring to other state schools settings in rural communities, and may be difficult to replicate, as each state school education setting was comprised of unique individuals who may or may not welcome a spoken language program for children with hearing loss.

Definition of Terms

Adult learning.

The art and science of helping adults learn. Its primary principle is the desire, potential and ability for self-directedness on the part of the learner. Other principles included perceiving the learner's experience as a resource for learning, seeing developmental tasks of social rules as crucial in activating the need and readiness for learning. (Henschke, 1998, para. 11)

Asynchronous transmissions. For the purpose of this study, asynchronous transmissions was defined as the transmissions that are saved and viewed at a later time by the mentor.

Auditory/Oral program. This was defined as programs that "capitalize on the child's hearing to the maximum extent possible for teaching spoken language and provide specific instruction designed to accelerate the acquisition of language throughout the day" (Moog, 2007, pp. 131-132). Children using this method of communication maximized the use of residual hearing and used speech reading, when necessary, to enhance their understanding of language.

Auditory-Verbal Therapy. This was a "specialized type of therapy designed to teach a child to use the hearing provided by the hearing aid or cochlear implant for understanding speech and learning to talk" (Stith, n.d., para 1).

Cochlear implant. A cochlear implant was a device that provided direct electrical stimulation to the auditory (hearing) nerve in the inner ear. Children and adults with severe to profound hearing loss who could not be helped with hearing aids may be helped with cochlear implants (American Speech-Language-Hearing Association [ASHA], 2014, para. 1).

Deaf child. This term also referred to a child with hearing loss.

> The partial or extreme loss of hearing, or inability for a person to receive information through hearing/listening without the assistance of hearing technology. Any degree of deafness, from mild to profound, had the potential to impact a child's language, communication, and academic development without proper intervention. (Alexander Graham Bell Association, 2013, para. 1)

E-learning. This term was defined as the process of providing formal and informal learning, mentoring, training activities, and events through the use of all electronic media, such as Skype, e-mail, video-conferencing, FaceTime, cell phone, computer technology, etc.

E-mentoring. This was "a computer mediated, mutually beneficial relationship between a mentor and a protégé which provides learning, advising, encouraging, promoting, and modeling, that is often boundaryless, egalitarian, and qualitatively different than traditional face-to-face mentoring" (Bierema & Merriam, 2002, p. 214).

Expressive One-Word Picture Vocabulary Test. This was defined as a single-word expressive vocabulary test that assessed the vocabulary skills of children and adults from 2 years, 6 months through adulthood (Brownell, 2010a).

Receptive One-Word Picture Vocabulary Test. This test was defined as a single-word receptive vocabulary test that assessed the receptive vocabulary skills of children and adults from 2 years through adulthood (Brownell, 2010b).

Rural. For the purposes of this study, rural America was described as areas that had counties that included some combination of open countryside and small towns, of fewer than 2,500 people.

Spoken language. For the purposes of this study, I used spoken language, oral language, and auditory-oral communication interchangeably. These terms indicated that children with hearing loss were learning to listen and talk with strategies and techniques designed to enhance their listening and speaking abilities.

Synchronous transmissions. For the purposes of this study, synchronous transmissions was defined as transmissions viewed in real-time.

Test of Basic Concepts-Receptive. This test evaluated the receptive acquisition of basic concepts of a typically developing child from three-to-eleven years-of-age (Bracken, 2006).

Total Communication: This was a method of communication "in which communication is accomplished by incorporating all means including the simultaneous use of auditory input, speech, and sign with fingerspelling along with natural gestures" (Northern & Downs, 2014, p. 508).

Underserved areas. For the purposes of this study, I defined this area as having limited or no access to spoken language programs to educate children with hearing loss.

Summary

Results from this study may prove useful in solving the practitioner's concern of educating young deaf children in remote and distant locations. Applying andragogy to distance technology and e-mentoring may address this concern and bring listening and spoken language to distant underserved areas. The implementation of andragogical principles and e-mentoring would allow professionals to learn strategies and techniques for teaching spoken language to children with hearing loss.

Chapter Two: The Literature Review

Introduction

Andragogy, the art and science of adult learning, was written about for years by authors, such as Knowles (1970, 1980, 1984, 1995) and Henschke (1998, 2013). E-mentoring developed in years more recent to this writing, as the availability of the internet and technology grew substantially. Very few researchers studied the connection between andragogy and e-mentoring. To study these two topics, other related topics needed to be investigated, such as mentoring, e-mentoring, andragogy, leadership and deaf education. Finally, as described in Chapter Five, literature about the integration of andragogy and e-mentoring was investigated.

Mentoring

Mentoring is a topic that was discussed for centuries. The word 'mentor' was a term coined by the Greeks in the 12th century. Homer discussed mentoring in his book, *Odyssey*. King Odysseus went to the Trojan War and "entrusted the education of his son, Telemachus, to a wise and learned man named Mentor" (as cited in Siegle, 2003, p. 51). There were mentor/pairs described in the history of literature, including such people as Socrates and Plato, Hayden and Beethoven, and Freud and Jung. Mentoring could be defined as a basic form of human development where one person devotes time, energy and personal expertise in assisting the growth and skill of another person (Donaldson, Ensher, & Grant-Vallone, 2000). Therefore, mentors offered, "content sophistication that would not be accessible from traditional resources" (Siegle, 2001, p. 51). In other words, the mentor offered a more in-depth training in a topic than might be gathered from the traditional sources available to the mentee.

Green and Puetzer (2002) described a mentor as a colleague who has more experience in a particular area of expertise Rombeau (2010) further defined the mentor as

a wise, experienced advisor and trusted friend. Mentoring provides increased clinical and research productivity resulting in career advancement for the mentee and enormous personal gratification to the mentor. Mentors are personally committed to both personal and professional successes of the mentee. (p. 92)

The mentor can work with a colleague or mentee who has less experience. The ultimate goal of this study's mentor and mentee relationship was to achieve a productive relationship, so the mentee becomes a competent professional. Thus, mentoring was described as a "traditional method of passing knowledge and skills on from an established professional to a junior or new member of the field or discipline" (Akin & Hilbun, 2007, para 2).

Zachary and Fischler (2009) defined mentoring in the following way: "Good mentoring was a reciprocal learning relationship in which mentor and mentee agreed to a partnership, where they worked collaboratively toward achievement of mutually defined goals that develop a mentee's skills, knowledge and/or thinking." (p. 2). The definition was based on sound adult-learning principles and practices.

The concept of a more experienced individual working with a less experienced person was a theme throughout the definitions. According to Haggard, Dougherty, Turban, and Wilbanks (2011), mentoring contained three main characteristics: reciprocity, developmental advantages, and consistent and regular interactions over time (p. 292).

Mentors performed a variety of services for the mentee. Mentors spent extra effort listening attentively, explaining concepts, inspiring, sharing their own life experiences, making phone calls on the mentee's behalf, arranging observations of people, loaning materials, editing the mentee's documents, coaching on tasks and projects, providing positive and corrective feedback, protecting, and giving other assistance (Emory University, 2015, para. 3).

Experts at Emory University (n.d., 2015) continued to explain that mentoring was different from coaching in that the focus was on developing a long-term relationship in the mentee's life. Green and Puetzer (2002) proposed the mentee could develop into a proficient professional by having the mentor and mentee begin with a plan. The mentees "[assessed] their learning orientation, learning needs, [planned] their learning experiences, and [implemented] the assignment selection" (Greene & Puetzer, 2002, p. 69) so the mentee was studying the information she wanted to know. The authors went on to say that after mentoring, there needed to be an evaluation of the mentorship by both the mentee and the mentor.

A study conducted by Morrison, Perigoe, and Bernstein (2010) concentrated on surveying mentors who were Listening and Spoken Language Specialists, who were professionals who worked with children who were deaf or hard of hearing and their families. The 64 participants, who represented auditory verbal therapists world-wide, responded to questions related to demographic characteristics, and the delivery of their mentoring practice, as well as challenges and solutions faced by them as mentors. Mentors who responded to the study had, on average, more than eight years of experience.   Results of the survey indicated the mentors wanted the mentee to gain

independence in her ability to apply auditory-verbal principals and techniques. In addition, the mentor indicated a need to expand collaboration opportunities with other mentors.

In a study on the retention of new teaching staff and the performance of teachers in school, Rockoff (2008) examined the impact of a mentoring program adopted by New York City schools. Detailed data from this program indicated that one important variable was knowledge of how the school operated. This knowledge enhanced the mentoring retention of the staff. In addition, evidence showed that students achieved higher reading and math scores when their teachers received more hours of mentoring, supporting the idea that teaching skills could improve when the mentee received an increase in the number of hours of mentoring.

Characteristics of mentors. Further research suggested the mentor and mentee were able to develop a dynamic relationship if the mentor possessed certain characteristics. Rose, Rukstalis and Schuckit (2005) found that the mentor needed to make him/herself available for the mentee. This was likely to require additional planning and energy, so the two people could connect with each other in a timely manner, but this interaction would help develop the relationship.

According to the American Speech-Language-Hearing Association (ASHA) *Mentoring Manual* (2005), the mentor filled several roles. She served as a coach or advisor to the mentee. In this role, the mentor gave advice, provided guidance and feedback, and shared ideas. It stated that sharing information helped to ensure success in the mentoring process (ASHA, 2005, p. 8).

Roles of the mentor. First, the mentor served as a source of support to the mentee. The mentee may need a "sounding board" when discussing ideas and/or expressing his/her concern about the choice of careers and provide information regarding opportunities for the mentee (ASHA, 2005, p. 8). The mentor also could provide support to the mentee on personal issues, if necessary and appropriate (ASHA, 2005, p. 8).

Second, a responsibility of the mentor was to identify resources that might be helpful to the mentee, which enhanced both her personal development, as well as career growth. By providing these resources, the mentor was able to grow in unforeseen areas or strengthen knowledge in areas of interest. The mentor, as a resource person, could "expand the mentee's network of contacts" (ASHA Mentoring Manual, 2005, p. 8).

Third, the mentor could become a champion for the mentee. By doing so, the mentor might advocate for the mentee, if the occasion presented itself. When championing the mentee, the mentor might find himself or herself in a position to increase the visibility for that person (ASHA, 2005, p. 8). For some mentees, this increased visibility opened doors to additional opportunities for growth or collaboration (Emory University, 2015, p. 1).

Fourth, according to ASHA's *Mentoring Manual*, the mentor might play the "devil's advocate" which could help the mentee think though some issues that are presented (ASHA, 2005, p. 9). The discussion that occurred after playing the devil's advocate could be very insightful for the mentee (ASHA, 2005, p. 9). It was helpful for the mentor to challenge the thinking of her mentee.

The mentor needed to focus his/her undivided attention on the mentee when they were together. By focusing on the mentee, it was possible to develop a solid relationship.

This relationship could occur in the beginning of the mentoring process when the mentor shared her background with the mentee and described why she chose the career path that she chose (Emory University, 2015, p. 1). She also could share some of her successes and failures with the mentee so the mentor would feel comfortable sharing similar information (ASHA, 2005).

To be an effective mentor, Kanaskie (2006) stated that the mentor needed to exhibit characteristics, such as patience, knowledge, enthusiasm, and respect. When the mentor actively listened when the mentee was upset, she may be able to alleviate some of the distress the mentee was exhibiting. If the mentor had the characteristics of patience, knowledge, enthusiasm and respect, then she would develop trust and good communication. The mentee who had a strong commitment to the mentoring process and to his/her career would likely be successful in this relationship. The mentee who had a strong self-identity made the mentoring process work well.

Roles and responsibilities of the mentee. ASHA suggested topics that would be appropriate for the mentor to address if the mentee worked in an educational setting (Tucker, 2013). The following were the topics that could be covered during a mentoring session.

1) Ask questions about procedures related to the organization, whom to contact in an organization or procedures for billing.

2) Ask questions regarding a treatment approach or a tool used in assessment.

3) Ask for clarification when receiving a parent complaint or questions that would make the mentee uncomfortable.

4) Ask for assistance in writing/editing an Individualized Educational Plan (IEP).

5) Ask for help regarding the scheduling process.

6) Ask for assistance if an ethical issue arises.

7) Ask for assistance when formulating parent communication.

8) Ask to discuss a specific communication problem or disorder, tests materials, or where particular references can be found. (p. 28)

E-mentoring

With the advent of electronic communication and advanced technologies, the progression of face-to-face mentoring evolved, in some cases, into electronic mentoring, commonly referred to as e-mentoring. Because technology could be used in all aspects of life, a computer-mediated communication system or e-mentoring became the means of communication with some mentors and mentees (Ensher, Heun, & Blanchard, 2003).

E-mentoring [was] defined by Thompson, Jeffries, and Topping (2010) as:

A relationship that [was] established between a more senior and/or experienced individual (mentor) and a lesser skilled or experienced individual (mentee or protégé), primarily using electronic communications, and as intended to grow the skills, knowledge, confidence, and cultural understanding of the protégé to help him or her succeed (p. 305).

Akin and Hilbun (2007) added to the definition of e-mentoring by stating that the mentor and mentee were independent of geography or scheduling conflicts. According to these authors, e-mentoring became a need when online teaching became a reality. E-mentoring also was referred to as cyber-mentoring, telementoring, online mentoring, virtual mentoring, or iMentoring (Adams & Crews, 2004; Muller, 2009). The distinctive aspect of e-mentoring was that technology was utilized to counsel and direct a mentee.

Houston (2014) went on to explain that e-mentoring could be synchronous or

asynchronous. It was stated, "e-mentoring pairs collaborate virtually via online file

sharing and cloud sharing" (Houston, 2014, p. 213).

Table 2

Guidelines for Mentoring Success

Suggestion	Result
Know when communication will take place and how it will occur	Know how often mentoring will take place and if by e-mail, phone or facetime
Establish frequent contact between mentor and mentee	Relationship develops between mentor and mentee
Communication between mentor and mentee should be kept confidential	Trust develops between mentor and mentee
Build a trusting relationship in the beginning of the mentorship	Trust continues to develop
Respect views of the mentee or mentor	Good relationship can develop
Make certain to follow-up and get information, if it is requested	Action can take place
Respond to mentees questions in a timely manner	Mentee may feel rejected if a response is not provided in a timely manner
Learn the strengths and weaknesses of the mentee	Mentor can offer assistance in weaker areas
Provide information and resources for the mentee	Mentee exposed to articles and information
Be appreciative of help offered	Learn mentors' strengths and seek advice in those areas
Maintain flexibility	When flexible, the mentoring experience can be enjoyed

Note. ASHA Mentoring Journal, 2005

ASHA (2005) presented suggestions for ensuring a successful mentoring or e-

mentoring experience (pp. 6-7). The suggestions made by ASHA were relevant if the

relationship occurred face-to-face or through distance technology. Houston (2014)

contended that the "core of the relationship and professional expectations must remain

the same—built on trust and mutually defined goals and objectives" (p. 217). The

suggestions on Table 2, by the ASHA *Mentoring Journal* (2005) helped establish a

successful relationship. Houston (2014) explained that the suggestions from ASHA

occurred across most mentoring and supervisory relationships as well as those performed

through use of distance technology.

Additionally, a study by Murphy (2011) on e-mentoring examined working

professionals who were paired with students in management. These students questioned

the relevance of course content, learned how topics studied related to practice, and

developed rapport. Results of the study indicated that when a student was paired with a

professional with whom she felt compatible, the mentee believed she had more support.

When the mentee felt more supported, and then more interaction occurred within this

dyad. Blended mentoring, described as e-mail plus talking on the phone, resulted in

positive outcomes for both participants.

Benefits of e-mentoring. The benefits of e-mentoring were described by several

authors. There has been "unprecedented growth and technological advances associated

with both the personal computer and the Internet" (Panos, Panos, Cox, Roby, &

Matheson, 2002). This allowed the mentor to observe lessons and communicate with the

mentee in different locations.

Akin and Hilbun (2007), Shrestha, May, Edirisinga, Burke, and Linsey (2010),

Thompson et al. (2010), Hamilton and Scandura (2003) and Rowland (2012) described

10 benefits to e-mentoring. The first benefit of e-mentoring was the flexibility it afforded

both the mentor and mentee. Because there was no need to be in the same location, the e-mentoring allowed the participants "freedom from place and time constraints" (Akin & Hilbun, 2007, para 3). A second benefit of e-mentoring was that the pairing of the mentor and mentee could come from anywhere. There were no constraints on who was chosen in the mentor-mentee relationship based on the location. Single and Single (2005) believed there may be an increased trust from the mentee since the mentor was from a different location. Thus, she had no direct impact on the future employment or promotion of the mentee.

Shrestha et al. (2010) described scheduling as a third benefit to e-mentoring. It was easier to fit the e-mentoring into the schedules of the individuals participating, because of the flexibility and accessibility of technology. Fourth, because e-mentoring may be asynchronous, the timing of the mentoring did not need to fit into a specific schedule, but could be accomplished when convenient for the mentor and mentee. Fifth, there could be an impersonal relationship between the mentor and mentee, as well as neutrality in the interactions, since the two participants were not in the same location.   It appeared to be easier to manage the expectations and/or demands of the mentee when e-mentoring.

Thompson et al. (2010) explained the unique relationship created via technology as the sixth benefit of e-mentoring. Mentoring via electronic means often facilitated the development of supportive relationships. This occurred because electronic communication hid many social cues. Paloff and Pratt (1999) stated that the distinctions between individuals of different socio-economic status were also masked by technology. The lack of face-to-face contact caused the mentor and mentee to have little distraction

"by social games and [they] can disagree without raised emotions" (Shrestha, May, Edirisinga, Burke, & Linsey, 2010, p. 118). Often the participants felt more comfortable contributing to the discussion.

E-mail was utilized as part of the technology of e-mentoring, and likewise considered the seventh benefit of e-mentoring. This method of communication gave the author of an e-mail time to construct the message by allowing time to think through the message that needed to be conveyed. The recipient of the e-mail also had time to think about the appropriate wording of the response (Paloff & Pratt, 1999). Rowland (2012) suggested that printed communication, such as text and e-mail, could be enhanced by the use of emoticons, such as gestures and smiley faces. These symbols "can often make ambiguous messages clearer, when individuals can detect the seriousness or sarcasm in the message" (Rowland, 2012, p. 6). Rowland (2012) explained that if the language of the printed message was unclear, trust issues could develop in this virtual environment (pp. 6-7).

E-mentoring also allowed for further employment opportunities in the rural or remote setting (Wood, Miller, & Hargrove, p. 174). An eighth benefit of e-mentoring was that the mentee may be allowed opportunities to work in one of these settings and fill those hard-to-fill jobs. The onsite mentor was not required, because distance technology allowed for e-mentoring.

A ninth benefit of e-mentoring, according to Rowland (2012), involved the "absence of body language" (p. 13). Some body language and other visual cues became more important than the language used during the interactions (Hamilton & Scandura, 2003, p 389). Such researchers in the field went on to explain, "The lack of face-to-face

interaction emphasizes the rapport dynamic of communication over the power dynamic"
(Hamilton & Scandura, 2003, p. 397).

When there were gender issues, "E-mentoring was one way to minimize the
professional gap many women face" (Rowland, 2012, p. 7). E-mentoring in the world of
management allowed women to accomplish more in the workplace. E-mentoring women
allowed the opportunity to appeal to a more experienced professional for support,
reassurance, and encouragement, a tenth benefit.

During this study, in helping to design an e-mentoring program for the mentee or
Lead Teacher/SLP of the spoken language program at PPD, I (the researcher) wanted to
use as many of the benefits of e-mentoring as possible. The ability to use all types of
technology to communicate allowed the mentee flexibility and she received information
from me, as the mentor, in a timely manner. I was able to text, e-mail, or call the mentee
to respond to any question or need that might arise. The e-mentoring also allowed the
mentee time to reflect on the mentoring from a session and then decide what topic she
wanted to pursue in the following session.

Challenges of e-mentoring. Just as there were benefits to e-mentoring, there
were challenges, as well. Overall, six e-mentoring challenges were identified in the
literature. The first challenge, stated by Houston (2014), was that technological issues
could negatively impact the mentor-mentee relationship when utilizing distance
technology (p. 229). He explained that dropped calls or frozen screens on such platforms
as Skype or Facetime caused the mentor and mentee to need to make a new connection.
If they were familiar with the technology, it became easier to navigate these issues.

A second challenge occurred when there was no structure in the e-mentoring process. In other words, the mentoring should be organized in advance and planning should be completed for each session. Third, if there was a lack of support from the administration and no advance planning, then the process of e-mentoring may not be successful (Single & Muller, 1999). It was important that the educational culture support the e-mentoring, so the mentor had the backing of the administration in the school.

A fourth concern expressed by mentors was that thoughtful communication may not be accomplished in e-mentoring. The mentors explained that the electronic communication was sometimes ambiguous. Shrestha et al. (2009) stated that electronic messages were found to be unclear when transferring the information to the recipient. This was best rectified by a face-to-face meeting of the mentor and mentee.

A fifth concern stated by Hamilton and Scandura (2003) was that the mentor and mentee could have difficulty managing the electronic communication. When electronic problems occurred, an e-mentoring session may be missed, due to lack of ability to find a solution to the problem. The electronic communication system needed to be working efficiently, but if problems occurred, the mentor and mentee needed troubleshooting techniques to get past the issues.

A sixth concern stated by some beginning level educators was the difficulty the supervisor or mentor may have when trying to explain a particular teaching technique (Carlin, Milan, & Carlin, 2012, p. 31). The mentee might prefer that the technique be demonstrated in a face-to-face meeting. The authors went on to say that a hybrid approach may be beneficial. In a hybrid method, the mentor or supervisor would incorporate a combination of face-to-face mentoring and distance and e-mentoring.

Described in this section were both benefits and challenges to the e-mentoring experience. I used this knowledge as I planned the e-mentoring experience. When planning to e-mentor the Lead Teacher/SLP, I also wanted to include some andragogical assumptions and principles in this experience. These concepts are described in the next section.

Andragogy

The term "andragogy" was used for many years to describe adult learning. This word, derived from the Greek language, means "man-leading" and was differentiated from the term pedagogy, referring to "child learning" (Chinnasamy, 2013, p. 2836). A German educator by the name of Knapp coined the term *andragogy* in 1833 (as cited in Henschke, 2011), but the term was only used for a short time. In the year 1921, Rosenstock referred to andragogy in a report and stated that adult learners required special teachers who used special methods to instruct them (as cited in Nottingham Andragogy Group, 1983). Knowles (1970), an American educator, developed an adult learning theory and defined the word "andragogy" as the art and science of helping adults learn (p. 8). There were six assumptions and eight processes that summarized the adult learner.

In 1980, Knowles described his six assumptions regarding the adult learner:

 # 1. Adult learners have a need to know. Zachary (2012) described this as adults seem to learn best when they are actively involved in the process of planning and implementing their learning.

 # 2. Adult learners are self-directed. As a learner matures and has a well-developed self-concept, the adult learner should be treated with respect. Because of this,

the teacher or trainer in the session or class should serve as a facilitator in the learning

process (Galbraith & Fouch, 2007, p. 36).

> **# 3.** The experience is important to the adult learner. Adult learners bring
experience to the learning process and environment. As the maturity of the adult
developed, his/her experiences became greater and thus, becomes a resource for the
others in the learning environment, according to Knowles (1980). Students could learn
from each other in group assignments by sharing of their collective experiences and
knowledge.

> **# 4.** Adults have a readiness to learn. It often occurred that an experience or
situation caused the adult learner to develop a need to acquire new knowledge. Adults
had more energy to learn when the goals of learning focused on then-current needs, rather
than goals that applied to the future (Houde, 2006, p. 94).

> **# 5.** Adults have an orientation to learning. Adult learners had an emphasis on
learning and used this emphasis in a problem-solving environment. After solving the
problem, the adult wanted to immediately apply the new learning to his/her world

> **# 6.** Adults have a motivation to learn. Adult learners were motivated by internal
factors such as wanting to get a more fulfilling job. While the adult learner was likely to
be somewhat motivated by external factors such as obtaining a better job and higher
salary or improving the quality of life, the most important motivating factors would be
internal such as job satisfaction or quality of life

Knowles (1984, 1995) described a second portion of the andragogical model that

became known as the Process Elements of Andragogy. After the Process Elements were

described in Knowles' book, he added to the information in 1992 and 1995 by describing

the andragogical approach that needed to be used so that the elements could be adhered to

by the facilitator.

Table 3

Process Elements of Pedagogy and Andragogy

Element	Pedagogy Approach	Andragogical Approach
Preparing Learners	Minimal	Provide information Prepare for participation Help develop realistic expectations Begin thinking about content
Climate	Tense, low trust Formal, cold, aloof Authority-oriented Competitive, judgmental	Relaxed, trusting Mutually Respectful Informal, warm Collaborative, supportive
Planning	Primarily by teacher	Mutually by learners and facilitators
Diagnosis of Needs	Primarily by teacher	By mutual assessment
Setting of Objectives	Primarily by teacher	By mutual assessment
Designing Learning Plan	Teacher's content planned Course syllabus Logical sequence	Learning contracts Learning projects Sequenced by readiness
Leaning Activities	Transmittal techniques Assigned Readings	Inquiry projects Independent study Experiential techniques
Evaluation	By teacher Norm-referenced (on a curve) With grades	Collected evidence validated by peers, facilitators, and experts Criterion-referenced

Knowles (1995)

Each of these elements in Table 3 were used in the current study, when working

with the spoken language program to enhance independence and confidence with the staff

at the school for the deaf. Setting the climate, the second of eight processes, described by

Knowles, Holton, and Swanson (2005) included both the physical climate and the

psychological climate. The physical climate was important so the classroom became

conducive for learning. It was beneficial to arrange the desks and chairs into a circle or

semi-circle, so there was a better exchange of information among the students and

facilitators. However, setting the appropriate psychological climate was considered even

more important than the physical climate. As cited by Knowles, et. al., 2005), the

facilitator should encourage the following seven psychological elements when a class

was held:

 # 1. A climate of mutual respect. Knowles (1995) believed that the development

of this respectful relationship was critical. Students were more willing and open to

learning when they felt respected. They did not like to be ignored or talked down to in

the classroom. They were willing to share ideas when they felt that their ideas we valued

(p. 6).

 # 2. A climate of collaboration. Knowles (1995) believed that the development of

collaboration was important. It was best if the students in the classroom were willing to

work with each other because their peers were often the most valuable resources in the

learning process.

 # 3. A climate of mutual trust. Knowles (1995) explained that a climate of mutual

trust should be developed. This trust relationship between the facilitator and student

enhanced the learning in the classroom. When these two parts of the equation

(facilitators and learners) trusted each other, then the learning environment was improved.

 # 4. A climate of support. Knowles (1995) advocated that students learned more when they felt supported by the facilitator, rather than feeling judged. Knowles (1995) stated that he supported the students "with an unqualified positive regard, empathizing with their problems or worries, and defining my role as that of helper" (p. 7).

 # 5. A climate of openness and authenticity. Knowles (1995) promoted openness so the students felt free to express their thoughts and ideas in an open and welcoming environment. They were more likely to be open to learning new information and might even risk trying a unique behavior or skills if they did not feel threatened (p. 7).

 # 6. A climate of pleasure. Knowles (1995) believed that the students in the classroom should feel satisfaction and enjoyment when learning. When the experience was pleasurable, people had a greater chance of reaching their full potential. He believed that education should be fun.

 # 7. A climate of humanness. Knowles (1995) thought that learning was a human activity and if the students felt they were treated well and as human beings, then it was expected that the student would learn. He believed that the setting of the class must be comfortable with good ventilation, have refreshments available, and provide frequent breaks.

In this study, as a mentor, I wanted to establish a good psychological climate when I was e-mentoring. I hoped the learning would be an open process, developing mutual respect and trust. I wanted the mentee treated with humanness. In addition, I wanted the learning experience to be pleasurable.

Knowles (1995) described the third process element as involving the learner in the mutual planning process. Knowles (1995) stated, "People tend to feel committed to any decision in proportion to the extent to which they have participated in making it" (p. 7). Students seemed to be uncommitted when they felt decisions were made for them. Knowles (1995) advocated for developing a process plan. In this plan he would come to the first class prepared, but wanted the students to know they could have input into the planning process.

The fourth process element was encouraging the students to diagnose their own specific learning needs. He encouraged the facilitator to have the learners meet in small groups and discuss what they would like to learn. Each small group would then have one speaker who would share the thoughts and learning needs of each person in the group. He stated that learners would then be able to have some awareness of what the class wanted to learn.

The fifth process element was diagnosing the learning needs of the student and developing appropriate learning objectives. Since the learner had previously identified what knowledge he would like to acquire, he could then translate the information into learning objectives that were measurable (Henschke, 2013, p. 6).

The sixth process element was designing the learning experience. After writing the learning objectives, the facilitator and the learner identified appropriate resources to accomplish each objective and "the most effective strategies for utilizing these resources" (Henschke, 2013, p. 6). Knowles (1995) believed that to assess this process was to determine how intensely the learners were involved in the process of planning the learning experiences.

The seventh process element was to help adult learners complete their learning plans and conduct the learning. At this point, Knowles et al. (2005) recommended developing a learning contract. These contracts were a valuable tool that helped the learner structure his learning for the semester. The learning contract also stated how the learner continued to learn on his own.

The final process element was the evaluation that determined the extent to which the learner achieved his objectives. The learner decided how he liked the learning to be evaluated and determined if he accomplished each objective.

The learning contract. Adult learners tended to learn new information naturally and were exceedingly self-directing. When "adults [learned] on their own initiative, they [learned] more deeply and permanently than what they learn by being taught" (Knowles et al., 2005, p. 265). Tough (1999) continued by stating:

> Our goal is to get people to learn and yet to do that, we sort of force them to do all these particular steps. If we just free them up, what we find is that people learn more and they learn more enthusiastically. (p. 11)

Knowles et al. (2005), and Tough (1999) contended that the learner acquired more information when provided with the independence to do so. One way to guide the learner was to develop a learning contract

Learning contracts helped the learner blend her needs and expectations with those of the facilitator. By participating in the development of a learning contract, the learner diagnosed his learning needs, formulated the objectives, identified resources to accomplish those objectives, chose strategies and evaluated her accomplishments.

(Knowles et al., 2005, p. 266). Table 4 outlines the key items in an organized learning

contract.

Table 4

Learning Contract

Learning Objectives	Learning Resources and Strategies	Target Date for Completion	Evidence of Accomplishment of Objectives	Criteria/Means for Validation

Note:

Likewise, Knowles et al. (2005) gave a further description of each item essential to the

learning contract, as well as how the contract could be used.

 Diagnosed the learning needs/writing objectives. The learner can determine

needs on her own or with the help of friends or colleagues or expert sources. Knowles et

al., (2005) stated that "a competency can be thought of as the ability to do something at

some level of proficiency; it is usually composed of knowledge, understanding, skill,

attitude and values" (p. 267). After determining the competency, the learner determined

the gap between current knowledge and knowledge she would like to acquire upon

completion of the tasks. The learning needs that were diagnosed should to be written in

terms of objectives, and according to Knowles et al. (2005), the objectives should be

written in terms of what will be learned, not what will be done.

 Specified learning resources and strategies. In the second column, the learner

stated how she would accomplish each objective. The materials that were used as well as

people who might be contacted to help achieve this goal should be listed. In addition, the

strategies, techniques, and tools to be used needed be listed.

Specified evidence of accomplishment of objective. The learner described what evidence would be gathered, allowing the facilitator to know the degree to which the objective might be achieved.

Specified how the evidence was validated. For each objective, the learner needed to specify what benchmarks or standards would be used to determine if the objective was met. For knowledge objectives, the learner might use comprehension as validation. For skill objectives, the standard might be the precision to which the objective was met.

Review the contract with facilitator. After the completion of the learning contract, the learner should share the contract with friends or facilitators to determine if the information was appropriate.

Carry out the contract and provide evidence of accomplishment. The information on the contract was to be completed. If the learner would like to revise the contract, it was recommended to revise it as needed.

Evaluate the learning. The learner can ask the facilitator to examine the evidence and verify if the data obtained was adequate.

The learning contract was an effective way to challenge the learner to establish want she wanted to accomplish over a designated time period. With the use of this contract, a mentor and mentee established the mentee's needs and evaluated if those needs were met. Because the learning contract could be amended, especially if other information was needed, then the contract was a living document to help the mentee acquire the necessary information.

Knowles (1970, 1980, 1984, 1995) wrote extensively on the theories and principles of andragogy and the adult learner. Other researchers studied andragogy and

its use with different populations of adult learners. The results of the studies were mixed, with one study showing no benefit to andragogy and the other study showing minimal benefit to andragogy.

Rosenblum and Darkenwald (1983) conducted a study exploring whether andragogical principles were a more effective tool for supervisory training of nurses. The study set up an experimental group that used adult learning theory in the planning of instruction. The control group was instructed with typical teaching. There were 28 nursing supervisors randomly assigned to each group. Subsequently, 26 support service supervisors completed the same experiment. The results of the study showed no meaningful difference between the experimental and control groups in the amount of learning that took place and with the overall satisfaction. However, the control group scored slightly higher in learning.

In similar research on the topic, Thoms and Klein (1994) studied hospital managers and the use of andragogical principles. They assigned 71 hospital managers into four groups. Each supervisory group participated in eight, three-hour training programs. The authors performed 15-minute interviews regarding the participation level of each of the students in the two experimental groups. Results indicated that the students in the experimental group, using andragogy, had higher levels of participation, but no differences occurred in the degree of learning or transfer of information among the four groups or the transfer of information.

Other studies, conducted using a similar research design, discovered the use of andragogical principles produced more learning than the traditional methods of learning. Cole and Glass (1977) conducted an experimental design using a pre-test and post-test

with a control group. The participants of the study included 18 employees from North

Carolina who participated in a Patient Care training program. The experimental group,

using andragogical principles, participated in pre-course diagnosis, as well as planning

and design of the course. The control group took the course, established by the first

group, several months later. Learning achievement and attitudes about the program were

assessed. When the study was completed, the post-test indicated that the group using the

andragogical principles showed more learning, but this advantage did not last after the

first month. There were no differences in the attitudes of all participants about the

learning. However, the andragogical group had a better attitude regarding the overall

course.

In summary, Knowles (1970, 1980, 1984, 1995) set forth a variety of assumptions

and process elements that would be appropriate to use when working with an adult

learner. The research was somewhat controversial on this topic, because of minimal

evidence-based research testing on Knowles' theories. Of the studies discussed, some

found no difference in the result when andragogical techniques were used and others

found a slight improvement in attitude when implementing andragogy with the adult

learner.

Andragogy and E-Mentoring

The research on the topics of e-mentoring using andragogical techniques was

limited in the field of deaf education. DeMoss, Clem, and Wilson (2012) described the

need for more professionals who have training in listening and spoken language

instruction. They contended, "The use of technology is considered a practical tool to

enhance the mentoring process and meet the needs of both mentors and aspiring listening and spoken language professionals" (DeMoss et al. 2012, p. 334).

DeMoss et al. (2012) also asserted there were options for the mentor and mentee to use technology to communicate across distances in both a synchronous and an asynchronous manner. The authors also stated that e-mentoring could become a "learner-centered approach rather than a traditional instructor-centered approach" (DeMoss et al. 2012, p. 334). When the learner-centered approach was used, it was possible to incorporate the andragogical processes and assumptions.

In summary, there was very little research on the use of andragogy and e-mentoring, especially in the field of deaf education. Some leaders in the field of deaf education were advocating for more e-mentoring of auditory-verbal specialists, but the use of e-mentoring in deaf education classrooms continued to be limited. An article by Smith (2010) contended, "There is an extreme lack of qualified professional trained specifically to provide support for a listening and spoken language outcome" (p. 24). The need for e-mentoring was recommended (DeMoss et al., 2012) to increase the number of listening and spoken language therapists and teachers available to this population of children.

The History of Deaf Education

The education of deaf children was traced back to the first century. There were people who believed deaf children could and should learn spoken language and those who believed deaf children should only use sign language. The emotional disagreement between these two philosophies, teaching sign language versus oralism or spoken

language, continued in the education of deaf children for 200 years (Northern & Downs, 2014).

> Although strong feelings can be elicited among educators of the deaf, and the two
> definitive camps still exist exhorting the value of manual communication versus
> auditory-oral communication, conventional wisdom prevails and supports the
> viewport that all means of communication are of value to deaf and hard-of-
> hearing individuals. (Northern & Downs, 2014, p. 513)

This section describes the development of both spoken language and sign language from an historical perspective.

Aristotle was one of the first to write about educating deaf children. Aristotle placed strong emphasis on "using speech or spoken language as the primary vehicle for conveying thought and therefore as the chief medium for education" (as cited in Davis & Silverman, 1970, p. 375). Aristotle made the following observation:

> There was a relationship between a child who is born deaf and dumbness since the
> deaf could not speak or comprehend information from others, they were relatively
> incapable of instruction, and furthermore, that the deaf were less capable of
> instruction than the blind (as cited in Davis & Silverman, 1970, p. 375).

Aristotle explained in 355 BC that children who were born deaf were incapable of developing normal thoughts and concepts. It was likely that the derogatory use of 'dumbness' in modern slang, suggested an inferior intellect and possibly had its roots in the supposed mental capacity of the deaf. This thought process wielded powerful influence on the legal and civil status of a deaf individual.

Spoken language. In 1591, Alberti, a physician from Germany, wrote a book about deafness called, *Discourse on Deafness and Speechlessness*. In this book, he stated that deaf people were rational and very capable of thought, even though they may not have any speech. He explained that deaf individuals could read messages and read lips, even though they were unable to hear (as cited in Van Cleve & Crouch, 1989). In addition, in the 16th century a Benedictine monk by the name of Pedro Ponce de Leon believed in teaching spoken language to the deaf. He tutored children of Spanish nobility, who were deaf and hard-of-hearing, in oral speech and language (as cited in Van Cleve & Crouch, 1989). In Spain, the first book about teaching deaf children, *Summary of the Letters and the Art of Teaching Speech to the Mute*, was written by Bonet (1620). Bonet's (1620) students were taught using speech production and language that was supplemented with the manual alphabet and some sign language. The teaching of deaf children became enlightened and the educational philosophy began to promote spoken language for the deaf (as cited in Van Cleve & Crouch, 1989).

In the 18th century, Heinicke, of Germany, began tutoring a deaf student, using the manual alphabet when instructing the deaf child. The book, *The Speaking Deaf,* by Amman (as cited in Berke, 2016, pp. 1-2) inspired Heinicke's philosophy of teaching deaf children. Because of Heinicke's success in teaching this deaf child, he soon was presented with many more deaf students to teach. He began teaching speech and lip reading by having the deaf child feel his throat to help to produce the sounds. He felt that learning spoken language was essential for the development of the thought process. Heinicke wrote about teaching spoken language and named this method he used, 'oralism.' According to Davis and Silverman (1970), by the end of the 18th century, it

was apparent that deaf children were able to speak, and it was the responsibility of society to provide the appropriate instruction for this population of students. It was at this time that Heinicke began the first public oral school for deaf children in Germany and was credited with developing the foundation of oral deaf education.

At the end of the 1800s, support was growing for the use of oralism in the instruction of children with hearing loss. The first schools for oralism or spoken language were known as The New York Institution for the Improved Instruction of Deaf Mutes and the Clarke Institution for Deaf Mutes, which subsequently became known as the Clarke School for Hearing and Speech (Rodda & Grove, 2013, p. 26).

Another main figure in the history of deaf education was Alexander Graham Bell, the founder of the Volta Bureau in Washington, D.C. His goal was to study deafness in children. He "elevated speech to the status of a science" (as cited in Davis & Silverman, 1970, p. 37). Leading figures in deaf education met in 1880 at the Milan Conference and it was decided that schools for children with hearing loss throughout the entire world should ban the use of sign language and only use the oral approach for instruction.

In the late 19th century, a physician, Max Goldstein, went to Europe and became interested in Urbantschitch's work with deaf children. He focused using oral instruction to teach deaf children by stimulating the remaining auditory sense to help with teaching deaf children. Goldstein brought this theory back to the United States. Goldstein practiced teaching children using auditory stimulation in a therapy setting, but decided to begin a school for the deaf, which became the Central Institute for the Deaf in St. Louis, Missouri. In addition, "early oralism/auditory stimulation was developed at the Clarke School for the Deaf in Northampton, Massachusetts in the early 1800s" (Northern &

Downs, 2014, p. 510). The use of sign language was discouraged and deaf children were fit with hearing aids, and the children learned to listen to a variety of sounds. Schools opened around the United States with this philosophy used listening and spoken language as their method of education for young deaf children.

In the 1970s a movement started in the United States to teach deaf children using Total Communication (using speaking and sign language simultaneously). This movement had limited success, and spoken language came back into popularity when the cochlear implant was introduced to children with hearing loss in the 1980s. "The idea of providing hearing to profoundly deaf patients by artificially stimulating the sensory system [had] progressed from a futuristic possibility to a reality (Northern & Downs, 2014, p. 464). As the technology of cochlear implants continued to improve, more and more parents were choosing oral communication for their child's education.

> No other development during the past century has had such an enormous impact on the habilitation of infants and young children with profound deafness. The goal of the cochlear implant in young children is to facilitate the development of spoken language and to provide sufficient hearing for better understanding of speech. (Northern & Downs, 2014, p. 464).

American Sign Language. During this same time, the roots of sign language began in Europe. In 1750, a French priest, De l'Epee, taught two children who were deaf (Northern & Downs, 2014, p. 513). De l'Epee used fingerspelling, or a sign alphabet, to instruct the children, but added the language of gestures to his educational methodology. In 1760, De l'Epee opened the Royal Institution of Deaf and Mutes in Paris and published, *Instruction of Deaf and Dumb by Means of Methodical Signs* (as cited in

Berke, 2016, p. 5). De l'Epee was credited with the development of an early form of sign language, contributing to the development of ASL.

In 1815, an American by the name of Gallaudet was introduced to a young girl with hearing loss named Alice Cogswell (Northern & Downs, 2014, p. 513). Gallaudet was taken by Alice's deafness and her 'mutism.' Because Alice had no place to attend school, Gallaudet travelled to Europe to learn the methods of teaching sign language to deaf children. Sicard welcomed Gallaudet to his school to learn De l'Epee's system of sign language. Gallaudet then returned to America with a young deaf teacher named Laurent Clerc and they opened the American School for the Deaf in Hartford, Connecticut in 1817, formerly known as the American Asylum for the Education of Instruction of the Deaf and Dumb. The school was replicated many times throughout the United States. Using De l'Epee's natural gestures and fingerspelling, the present day version of ASL evolved (Northern & Downs, 2014).

Gallaudet's educational vision for deaf children passed to his son, Edward Miner Gallaudet. He established Gallaudet College in 1864, the first college for deaf students (Northern & Downs, 2014, p. 514). One hundred years later the National Technical Institute for the Deaf, affiliated with Rochester Institute for the Deaf, opened in New York.

The founder of the use of sign language, De l'Epee, and the 'father' of oral communication, Heinicke, "disagreed about the merits of signs and 'oralism' as methods of instruction" (Davis & Silverman, 1970, p. 377). They each believed the methodology they championed was the most effective to teach language to the deaf child. This battle

between sign language and spoken language continued to rage since that time until the then-current day.

Many studies were completed that investigated whether children were more successful in reading and language if they communicated with spoken language or sign language. Moog and Geers (2003) studied 181 eight-to-nine year old children with hearing loss who wore cochlear implants. These children were educated in two different settings. Half of the children were enrolled in programs focusing on listening and spoken language, and the other half were enrolled in programs using Total Communication, a method of communication using auditory input, speech, and sign language simultaneously. A battery of tests were administered in the areas of speech perception, speech production, spoken language, and reading, with several different tests evaluating each area. (Moog & Geers, 2003, p. 121S). Results indicated the children who received good hearing benefit from their cochlear implants were also the children who achieved good reading and language skills, as well as intelligible speech. According to the Moog and Geers (2003) study, other factors contributing to better post-implant outcomes included higher intelligence, smaller family size, higher socio-economic status, and the female gender.

Another study by Svirsky, Robbins, Kirk, Pisoni, and Miyamoto (2000) focused on the language development of profoundly deaf children with cochlear implants. These deaf children were evaluated approximately four months before receiving their cochlear implants and then again at 6, 12, 18, 24, and 30 months post-implantation, using the *Reynell Developmental Language Scales* (Reynell) (Reynell & Huntley, 1985). The Reynell, a standardized test used widely to evaluate a variety of language skills, was

standardized on children with normal hearing between the ages of one and seven years.

The test was administered in the child's preferred method of communication, whether

spoken language or Total Communication. Results indicated that the development of

language in a child with a cochlear implant progressed at approximately the same rate as

the development of language in a child who hears normally. Although the children using

Total Communication and children using oral communication both developed a

knowledge of the English syntax system nearly at the same rate, the children instructed in

oral communication, had better listening skills and more intelligible speech.

Summary

In this chapter, a number of topics were studied, including mentoring, e-

mentoring, andragogy, deaf education, and the interaction of andragogy and e-mentoring

While much has been written and studied on mentoring, the use of e-mentoring in

occupations, such as nursing, became evident in the literature as technology improved.

Using andragogical principles, e-mentoring of a deaf educator in a state school for the

deaf had not been yet been examined. In the Chapters Three, Four, and Five, the value of

e-mentoring with the use of andragogical principles in an underserved area of the country

is be explored.

Chapter Three: Methodology

Introduction

In Chapter Three, the methodology for conducting this action research study is described. The population used in the study, the sample selection, the instrumentation, procedures, and data analysis measures are described in detail. This study used qualitative analysis to identify emerging themes that responded to each of the research questions. Secondary data from the routine oral vocabulary and concept testing of the participants is described in narrative form.

The purpose of this study was to solve a problem that emerged from a practitioner's concern; there were no resources or experts available in a rural area of a state to teach children with hearing loss how to listen and speak — only resources for helping deaf students learn sign language. This study was developed to analyze the e-mentoring process using andragogical principles during the development of a spoken language program for children with hearing loss, in an underserved area of the country. The establishment of an auditory-oral preschool classroom in a state school for the deaf was a unique approach for teaching children with hearing loss.

Research Questions

This researcher investigated the following Research Questions for this action research study.

RQ 1: What is the experience of e-mentoring for the mentor and

mentee engaged in a distance start-up spoken language program

for deaf children at a state school in a rural setting, including the

benefits and challenges?

The two sub-questions are:

    a) What are the benefits of e-mentoring?

    b) What are the challenges of e-mentoring?

RQ 2: How do andragogical principles apply to e-mentoring?

RQ 3: How, if at all, has e-mentoring the teaching staff increased spoken language outcomes with the deaf children in relation to receptive and expressive vocabulary scores and in relation to basic concepts?

Action Research

A qualitative action research plan was designed to study the feasibility of e-mentoring a professional who began a spoken language program in a state school for the deaf, which used ASL to communicate and instruct the children enrolled in the school. The goal of the study was to e-mentor the Lead Teacher/SLP to support improvement of instruction and help this individual develop further leadership skills in her role as the main teacher in the spoken language program.

I (the researcher) decided to use an action research method to conduct this research project. Fraenkel, Wallen, and Hyun (2012) stated that action research is "designed to solve a problem or obtain information in order to inform local information" (p. 589). Fraenkel et al. (2012) described two basic assumptions about action research. First, it was assumed that the individuals involved in the research were committed to improving their performance. The second assumption was that the teachers were interested in engaging in research to identify issues in the program and analyze ways to improve it.

There are two types of action research: Practical action research and participatory action research. Practical action research was typically designed to solve a specific problem and resulted in the development of an action plan and the next steps to follow so the program would continue to grow. The second type of action research is participatory. Participatory action research attempted to "empower individuals and groups to improve their lives and to bring about social change at some level---school, community, or society" (Fraenkel, Wallen, & Hyun, 2015. p. 589). Fraenkel et al. (2015) emphasized that the research needed to be recognized as a problem by the researcher and by the key stakeholders in the school. Berg (2001) described the researcher's role in the following way, "The researcher is a partner with the study population: thus, this type of research is considerably more value-laden than other more traditional roles and endeavors" (p. 182). I engaged in participatory action research for this study.

Subjects

There were two participants -- the mentee and the mentor -- in this action research project on e-mentoring. The participant (referred to as the mentee) requested e-mentoring as a means of improving instruction and helping her gain confidence in her abilities as a leader in the program. No other teacher, SLP, or teaching assistant from the PPD requested mentoring.

I had a long-term relationship with the mentee. I had known her since she was a child. The mentee moved to St. Louis so her sister, who had a profound hearing loss, could receive a cochlear implant and attend a school that taught spoken language. The mentee was very involved with her sister's education and assisted her mother in teaching her spoken language at home. When the mentee was deciding about her future career,

she decided to go to college to learn how to teach children with hearing loss to listen and talk. The mentee obtained a degree in speech pathology at University of Georgia and received her master's degree from University of Florida in speech pathology. Although she received an excellent education, she had only one practicum experience with children with hearing loss. She completed a pediatric clinical rotation at a hospital with an SLP who said that she specialized in auditory-verbal education, but she did not have the official certification granted through the Alexander Graham Bell Association. During that practicum rotation, the mentee observed this therapist working with one toddler and one school-aged child with hearing loss. Because she did not participate in any of the therapy, her experience in direct child therapy with children with hearing loss was limited.

The mentee worked with this population of children in her first job at the state school for the deaf. During her first year at the school, she did speech therapy with some children in the state school and was able to work with a few young children who had recently received cochlear implants. Although these were good experiences, the mentee felt she needed guidance in attempting to begin a small spoken language program at the state school. The mentee contacted me in the fall of 2012 to begin to mentor her while she was working in the new listening and spoken language program at the PPD. I did not have any relationship with the administration at the PPD or with the supervisors, speech pathologists, or audiologists.

Some of the initial challenges with the program were solved with the assistance of the administrators and key stakeholders. The challenges and solutions are listed in this chart in Table 5.

Table 5

Challenges and Solutions to the Listening and Spoken Language Program

Challenges	Solutions
The listening and spoken language located in building with others signing	The listening and spoken language program moved program to its own building
Students needed spoken language immersion	"Specials" time with signing students/staff reduced; students eat lunch in listening and spoken language building
Students needed optimal access to sound	Classrooms fitted with sound field systems and new double paned windows/acoustic curtain
Listening and spoken language staff needed collaboration and support staff needed collaboration and support	Established monthly listening and spoken language committee meetings and weekly direct service staff meetings established
More staff needed	Permanent aide and permanent teaching position added (3 full time staff)
Staff needed quality training	Collaboration established with Moog Center for e-mentoring

At the start, the program was located in a building where all students and adults

were using sign language to communicate, with the exception of this class of children

interacting with the mentee. The solution to the challenge was that within a few months,

the LSL committee determined that the class needed to be in a separate building, so the

children could be fully-immersed in spoken language throughout the day. Second, the

mentee believed the specials' time, including recess, art, and music, should be held in a

separate space, so all of were using spoken language. This group of children did eat lunch

with the entire school. A third challenge the children faced was listening in the building

in which the spoken language classrooms were housed. This group of students needed to

have optimal access to sound. The solution to this challenge was that the classrooms

were fitted with sound field systems. These systems were used in classrooms to amplify

the teacher's voice above the classroom noise, to help children with hearing loss hear the

teacher's message. In addition, new double-paned windows and acoustic curtains were installed. Fourth, because the listening and spoken language program was an oral communication program in a state school for the deaf, which was a traditional sign language program, the new program needed collaboration and support from others. The committee in the PPD decided to hold monthly meetings to address problems and hold weekly direct-service staff meetings. In that way, issues facing the program were addressed in a timely manner. Finally, the program began to grow and more staff were needed. This went to the committee and a permanent aide and teaching position were added. Finally, the mentee knew she needed more training in deaf education, so she contacted the Moog Center and the mentor for additional training.

The sample size of this study was small (less than 10) due to the limited number of educators employed in the Listening and Spoken Language Program at PPD, the methodology of the study, the context in which the study would occur, and the specificity of the research population. Typically, Listening and Spoken Language Programs had a small number of students and educators. The Moog Center for Deaf Education was involved in starting eight new preschool programs for children with hearing loss throughout the United States, in large cities, to educate these young children with hearing loss. These programs typically opened with six-to-12 students and at least three teachers of the deaf and/or speech pathologists (J. Moog, personal communication, Moog Center for Deaf Education, November 2014). This was a purposive sample, since I decided on the number of participants based on Moog's prior experience (Fraenkel et al., 2015, p. 101).

All research was conducted via distance technology between the PPD and the Moog Center for Deaf Education. The PPD was a state school for the deaf that offered comprehensive services, including education and rehabilitation, for deaf students, deaf-blind students, blind students, and multiply-handicapped students. The school was founded in 1858 by a medical doctor, who expressed the desire to educate his brother in sign language. Since its inception, PPD provided sign language services to more than 22,000 infants, toddlers, children, young adults, and even seniors, with hearing problems. The Moog Center for Deaf Education was a private school that taught young children with hearing loss to listen and talk for over 20 years.

There were eight participants invited to attend the focus group at the conclusion of the study, and all eight participants accepted. Administrators, supervisors, directors, speech pathologists, audiologists, and other key individuals were recruited for the focus group. These individuals worked with and/or were instrumental in developing the Listening and Spoken Language Program at the PPD. The mentee was not included in the focus group, because I believed there was potential for bias if the mentee was a participant in the focus group. It was anticipated that there could be a feeling of coercion if the mentee were to attend. Responses from the participants in the focus group may have been less biased with the exclusion of the mentee.

Secondary data were collected from the eight children in the Listening and Spoken Language Program at PPD. The secondary data were collected on the vocabulary and basic concept knowledge from the children with hearing loss, who attended the program. These evaluations were part of the routine testing completed by the speech

pathologists at PPD. The results of the secondary data were analyzed and presented as a

narrative.

Instrumentation

Seven instruments were used to complete this research. Five of the instruments

used collected primary data, and two of the instruments collected the secondary data.

The primary instruments related to mentoring and the secondary data related to the

progress the children made in the development of their receptive and expressive

vocabulary skills.

Zachary developed the first instrument, the Mentoring Work Plan, (as cited in

Zachary & Fishler, 2009, p. 152, Appendix B). This form, similar to a learning contract,

included the leaning goals for the mentee, specific objectives to achieve this goal, steps to

completion, learning opportunities that the mentee would like to experience, and the

Target Date of completion. The purpose of this Mentoring Work Plan was to identify the

special areas that would be the focus of the mentoring sessions between the mentor and

the mentee. The mentee was asked to complete this plan and discuss it with me. The

mentee listed the following areas of need on the Mentoring Work Plan (Table 6), to

improve her practice of teaching children with hearing loss, including developing a

greater knowledge in the areas of speech, language, and auditory skill development.

Table 6

Mentoring Work Plan

Learning Goals			Success Criteria
Objectives	Learning Tasks and Processes	Resources	Target Date

Note: Zachary, (2012).

The mentee completed The Mentoring Partnership Check-In form twice during academic school year. The purpose of this checklist was to identify any areas of concern that were present or may have arisen during the nine months of mentoring and to make certain that the relationship between the mentor and the mentee stayed on track. It was important to develop and maintain a trusting relationship during the mentorship, and the checklist helped to identify any areas in which improvement could be made.

The third instrument, the journal questions (Appendix C) from Zachary's (2012) book, was completed after each mentoring session. Included on this form were a series of five questions to help the mentee reflect upon the session. The mentee was encouraged to think about the session and summarize some of the lessons learned. The mentee was asked to list other questions she had or other areas of concern that she may want addressed.

The fourth instrument used was journaling. The purpose of journaling was to "help focus my attention on the work of mentoring" (Zachary & Fishler, 2009. p 81). Zachary and Fishler (2009) went on to say, "When you make regular time to reflect in your journal, it creates a continuous placeholder for where you are in the relationship and points to the sweet spots of connection" (p. 81).

The fifth instrument developed for this study was a set of the questions to be asked during a focus group (Appendix D). At the conclusions of the mentoring year, I conducted a focus group. The purpose of the questions asked of the focus group was to examine how administrators, supervisors, and key personnel working at the state school for the deaf perceived the listening and spoken language program.

The mentee collected secondary data on the development of receptive and expressive spoken language vocabulary skills. The collection of this data provided information about the development of vocabulary and language skills of the children whom the mentee was teaching, while being mentored. By examining this secondary data on basic concepts and vocabulary development, I was able to assess the progress the children during the study period using objective measures. The PPD granted me permission to conduct this research.

Procedures

This e-mentoring project was a Qualitative Methodology study that used an Action Research design. The procedures followed in this study are described in the section entitled, Procedures. I met with the mentee via distance technology on a regular basis to discuss the needs of the mentee. A variety of data measures were used to assess the application of the mentoring relationship. I used assessment tools from Zachary's model for mentoring, which were described in the book, *The Mentee's Guide, Facilitating Effective Learning Relationships* (as cited in Zachary & Fishler, 2009). Questions, written for the focus group, related directly to the new listening and spoken language program at the state school, the PPD.

In August 2014, I received written permission via the mentee from the PPD to participate in the mentoring program. The identity of the school and mentee were kept confidential. I received Institutional Review Board approval to conduct the study in September 2014. Subsequently, the mentee signed a permission form to participate in this research, as did the parents of the children who were in the classroom while the mentoring occurred.

I e-mailed a copy of the Mentoring Work Plan to the mentee, so she had time to think about what her goals and objectives would be for the academic year of mentoring. On this form, the mentee established what she would do to achieve her goals and how she would evaluate when the goals were met. The Mentoring Work Plan was similar to a learning contract. I then met with the mentee via distance technology to discuss the information. The mentee then made a copy of this form for herself and e-mailed the final copy of the form to me.

A Mentoring Partnership Check-In form (Appendix A) was used as a check-in "to ensure that the needs of the mentoring partners are being met" (Zachary, 2012, p. 169). It was suggested that the partnership between the mentor and mentee be evaluated by completing this form that included information about communication, commitment to the mentoring process, feedback, and relevance of the session. By asking the mentee what was particularly beneficial and what was least helpful, the mentoring process could improve. I used this form as a formative and summative evaluation.

The mentee and I scheduled sessions twice monthly for e-mentoring. These e-mentoring sessions were at least one-half hour in length and focused on facilitating her implementation of instruction. On the alternate weeks, the mentee contacted me via e-mail, text messaging, or telephone calls, to ask questions and update me on any issues she was facing. For example, the mentee contacted me when one of the children in her class seemed to be regressing. She and I discussed ideas about how to engage the child to help him continue to develop his spoken language skills. In addition to the scheduled sessions, the mentee was encouraged to contact me at any time, if she had a question that needed an answer. I let her know that I was open to this communication at any time.

Likewise, we established an agenda for each meeting. The mentee guided this agenda by informing me what she would like me to observe, while she was teaching the children with hearing loss in her classroom. The mentee was seated on a child-sized chair at a small child-sized table, and the children were seated in small chairs across the table from the mentee. The technology was situated so I could see the children, the mentee, and the materials on my computer. During each session, the mentee conducted at least three different activities with three different sets of materials. I was able to see how the mentee was implementing lessons, how materials were being used, and how the children were responding. The mentee heard my suggestions and asked questions during the half-hour e-mentoring session.

After each mentoring session, the mentee was asked to respond to five questions, known as the Journal Entry, first published in *The Mentee's Guide, Making Mentoring Work for You* (Zachary & Fishler, 2009). The mentee completed this form within 24 hours, after the mentoring session, and e-mailed the information to me. The mentee was encouraged to offer any additional information about the mentoring session that might not be covered by the scope of the questions. These reflections allowed me to respond to her comments and specific questions.

After each mentoring session, I kept a journal about the mentoring experience. The journal entries included reflections about the session, thoughts of what could be accomplished in future sessions, and concerns I might have. If applicable, I included information after the mentee completed the five questions from the Journal Entry form.

The researcher kept a detailed log of all e-mentoring sessions and all other contact between mentor and mentee. This log included the date, the contact, the reason for the

contact, and the nature of the discussion. This became a quick reminder of potential

topics that may need to be covered in future e-mentoring sessions.

At the conclusion of the academic year of mentoring, in May 2015, I conducted a

focus group with the administrators from the PPD. I traveled to the southern state where

the state school for the deaf was located and arranged to meet with the administrators at

an agreed-upon time. The focus group was held in a large room at a building on the

school campus. Participants sat in comfortable chairs around a large table. A series of

questions were asked of the administrators and key stakeholders, and they were

encouraged to respond to these questions (Appendix C). The questions posed to the key

members of the staff were related to mentoring and the Listening and Spoken Language

Program at the school. The focus group was video-recorded, both by videotape and on an

iPad. I transcribed the recording after returning to my home.

Secondary data were collected using the results of a receptive and expressive

vocabulary test and a test of basic concepts administered by the mentee. The *Expressive*

One-Word Picture Vocabulary Test (EOWPVT) was an expressive vocabulary test

published by Pearson (Brownell, 2010a). On this test, the child was shown a picture that

she was expected to label. In addition, the mentee administered The *Receptive One-Word*

Picture Vocabulary Test (ROWPVT), a receptive vocabulary test, published by Pearson

(Brownell, 2010b). On the ROWPVT, the examiner said a word and the child pointed to

the picture that illustrated the word. The *Bracken Test of Basic Concepts - Receptive*

(Bracken, 2006) also was administered. This testing was completed routinely as a part of

each child's yearly educational evaluation. Results of this data are described as a

narrative.

I used pseudonyms for the mentee and secondary participants to ensure anonymity of participants. The participants in the focus group remained anonymous. The confidentiality of the school was maintained also by using a pseudonym.

Data Analysis

An inductive approach was used to analyze the data obtained from this study. Categorizing of both strategies and narratives was used when analyzing the data. As suggested by Maxwell (2013, p. 105), recordings from the focus group were listened to and transcribed. I made notes or memos to myself to help develop the emerging themes. After listening and transcribing the information from the transcript, I coded for emerging themes.

The primary data obtained from the Mentoring Work Plan, the Mentorship Partner Check-In and Learning Contract were described as a narrative. The secondary data obtained from vocabulary tests also were described as a narrative.

Internal and External Validity

Maxwell (2013) explained that validity was" controversial in qualitative research" (p. 122). This author continued to state, "a key concept for validity is thus the validity threat: a way you might be wrong" (p. 123). Internal validity means, "Any the relationship observed between two or more variables should be unambiguous as to what it means rather than something else" (Fraenkel et al., 2015, p. 167). A threat to internal validity might be my bias that most children with hearing loss can learn spoken language.

Summary

This study used qualitative data to explore the experience of e-mentoring an educator at a start-up spoken language program at a state school for the deaf in a rural

area of the country that was underserved by spoken language programs for children with

hearing loss. These data also were used to describe the benefits and challenges of

distance learning or e-mentoring in a school setting. Results of the qualitative analysis

also explored the perceptions of administrators in the state school regarding the spoken

language program. Secondary data analysis was used to describe, in narrative, the

progress in spoken vocabulary development in the children who attended the program

during the academic year of e-mentoring.

Chapter Four: Results

In Chapter Four, the results of this action research study — exploring the benefits and challenges of e-mentoring an adult learner in a rural community program that taught children with hearing loss to listen and talk — were described. Open coding was used to organize the qualitative data and reveal common themes within the program evaluation. The major themes that emerged were Change, Teaching Strategies, Technology, the Future, and Andragogy and E-mentoring. Under the theme of Change, several subthemes materialized including opportunities, e-mentoring the spoken language program, progress of the children, enrollment, options and doubts, and scheduling. The benefits and challenges of these themes were described, if appropriate, by the comments from all the participants of the action research study.

There were three groups of participants investigated in this qualitative project. One of the participants in this study was the mentee who served as the Lead Teacher/SLP of the program. Another group of participants included the administrators and key stakeholders in the spoken language program, who participated in a focus group. I (the researcher) completed journal entries after each session, as the third participant in the study. Test results from the children in the listening and spoken language program made up the secondary data described in narrative form.

Research Questions

This researcher investigated the following Research Questions for this action research study.

RQ 1: What is the experience of e-mentoring for the mentor and

mentee engaged in a distance start-up spoken language program

for deaf children at a state school in a rural setting, including the

benefits and challenges?

The two sub-questions are:

a) What are the benefits of e-mentoring?

b) What are the challenges of e-mentoring?

RQ 2: How do andragogical principles apply to e-mentoring?

RQ 3: How, if at all, has e-mentoring the teaching staff increased spoken

language outcomes with the deaf children in relation to receptive and expressive

vocabulary scores and in relation to basic concepts?

E-mentoring

E-mentoring the Lead Teacher/SLP in the spoken language program was

instrumental in the success of the spoken language program. One of the key stakeholders

in the program stated, "I'm very open to the concept of e-mentoring." She continued,

"You communicated probably more often, more frequently in a more thorough fashion,

than you would have done had you had [the mentee] right there and for once a week. So

to me it just makes more sense." She went on to say, "I don't think it would work as well

if you didn't have the right component parts." She continued with this thought by stating,

"I have learned that it is important who is involved. Somebody like me has to be here,

somebody like you has to be in your role, and somebody like [the mentee] has to be in

her role." The mentee's e-mentoring experience was, therefore described as positive and

noted the importance of frequent communication.

Change

The theme of change was discussed by all of the participants in the study of the listening and spoken language program at the state school, related to a variety of areas. Change occurred in the following areas: opportunities for the deaf child, the emergence of the spoken language program, the progress of the made by the children, the perception of the program by administrators, teachers and parents, the increase in enrollment in the school, and scheduling the children's language and speech lessons. Each group of participants described how the subject of change impacted both e-mentoring an adult learner and the spoken language program.

Opportunities. One administrator suggested that change occurred when opportunities for developing spoken language became available for children with hearing loss. She stated, "The best part is that we have opened up a whole new opportunity for parents and students." Another administrator said that the spoken language program was "one of the best things that has happened to our school in the five years I have been there." She explained, "We serve [the students with hearing loss] in a good program. This program may be the best option so the children can meet their potential." She continued to explain that the program "opened parents' eyes about other options," and "it's not an all or nothing program, it's everything."

E-mentoring the Spoken Language Program. Through the e-mentoring process, the spoken language program was able to continue and improve. The mentee stated, "Without [e-mentoring], we would not have a [spoken language program]." An administrator stated, "We're the first school to [open a spoken language program in a state school]." She continued to explain, "Before we started mentoring, the mentee was

new in that method and she has learned so much from you." Another key stakeholder

said, "When you Skype, it is so helpful that you are able to see the child and give us

specific recommendations on what to do with that child."

A key administrator involved in the program further explained:

I know that [the spoken language program] is prototypical and I realized then and

even before we started that, it is something that not many schools for the deaf had

done so for me it was very important that it be successful. My view of success

was having the kind of person as a teacher with the kinds of support in place with

a speech path and the teaching staff and you in place. I felt that was the best

chance of success we could have.

She went on to state, "And I would hope that this would be something that there would be

a spinoff to other areas." Comments provided by the mentee and one administration

support the e-mentoring process. The mentee stated, "Without [e-mentoring], we would

not have a [spoken language program].

Progress of children. The use of e-mentoring offered changes to the program at

PPD that the staff discussed. When describing the children in the spoken language

program, one administrator explained, "I think it's the gains they have made. I'm very

impressed a lot of them have made a year's progress in a year's time or more." A

colleague of the administrator said, "It is unusual to see in us, especially those kids that

come to us with no language." She continued, "This has impressed me . . . it makes us

look at other things which is a good thing." One stakeholder noticed a distinct change in

the children in the program. "I tried to imagine what those particular kids would be like

if they had not had that program. Some of them were hurting so bad. They did not have

any language and they tried and failed in other approaches." She went to explain, "Some

of them just waited until they went to kindergarten. Because of the mild loss, they have

been terribly behind. You can just project from here how their education would have

gone." She continued with this thought:

> Seeing these kids in the beginning when they came and the ones that are going to
>
> graduate, it's amazing that their lives have changed, of course, drastically. And
>
> even the ones who have gone on to [the sign language program], their auditory
>
> centers of their brains have been opened up and they can assign meaning to sound
>
> now.

Perception of program. A key stakeholder asserted, "The program and its

successes have forced us or given us an opportunity to look at the structure of our ASL

program." The administrator noticed changes in the way teachers and administrators

were thinking. "It's impacted the ideas we have . . . trying to find the best option.

Sometimes the parents had to make hard choices." The other change that has occurred

was, "We have kids here now that would have never even thought about coming to PPD."

She continued, "It's opening up understanding of what we really are. And it's made us

look at some things, too. We're being open to everyone's needs."

Change also occurred in the perception of the state school, PPD. It was stated,

"We had quite a reputation to overcome." Another administrator added that the outside

world thought, "You send those poor little deaf kids to the institution." One participant

continued, "[The deaf children] stop talking. They only sign. They won't communicate

with me anymore." It also was said, "And that was the reputation outside of the city.

This is our first snowball; it [has] opened up – and it has changed us a lot."

Increase in enrollment. One administrator discussed changes in the focus of the school:

> Our biggest goal has always been recruitment – trying to find kids that need us so they can meet their full potential. This is the first time we've ever worked with students to transition them back into public schools. It's a complete role reversal for us. It has brought about ideas in support of outreach. [The spoken language program] supported these types of thing.

Another change in the program was the increase in the number of children trying to enroll in the spoken language program at PPD. A participant stated, "All of a sudden all these kids are coming out of the woodwork and they had to come to grips with we cannot fix everybody and [the children] might be too old." She continued to explain, "We were at a point last year, from this age on; please don't bring them for a tour because their families really like it. We have to dial it back to the very young children." An administrator added to the discussion. "It's an Individualized Education Plan (IEP) decision. Placement. So we don't really say that they can't or that they can. We are giving our best guess, our best evaluation of what that child individually needs."

Decision making – options and doubts. Another change discussed was having the option of recommending the sign language program or the spoken language program for the children attending PPD. With this additional program option available, the decision-making process for appropriate program placement was a new challenge for families and staff. It was explained that:

> We have a couple of students right now that the parents would like to see in spoken language. I think for the staff that is a very hard thing because we feel like

we're making decision about the children that are going to be with them for a

lifetime. All of the decisions are well-thought out though, and meticulously

talked about and detailed out as to what is best for the student and not for this

student.

When discussing whether a child should enroll in a sign language class or in a spoken

language class, she asserted that there is "nothing wrong with anybody's opinion to get to

offer that family a whole buffet of choices." However, she went on to state:

It's hard for us when we are talking about a four-year old or five-year old. And

that means for the rest of their life. Because we have been in this for a

long enough time to know that it means for the rest of their life and the effect that

has on their entire future. And that's hard. I find a lot of responsibility when

making those decisions for those children.

Another administrator explained, "It's a great thing that we have both programs,

but it's also hard when it's a kid who's really on the fence." She continued, "I see that as

a struggle for our staff to be part of making those big decisions for families." However, it

was stated, "whenever there is a child who is very obviously in the wrong place,

everybody speaks up. They're not making the progress we would expect, so they get

moved to the other program. It goes both ways."

One administrator explained that some of the sign language teachers

were fearful of change. However, "Once the teachers who objected figured out that we

were not asking them to change what they do; they did not feel as threatened. We were

just offering another program, in addition." Another administrator continued, "They

were worried about children maybe being mistreated in some way. Not being allowed

access to sign language might damage them because they wouldn't have any other way to communicate." Because the opinions changed over the course of the year, one participant stated, "Maybe I just have rose-colored glasses on, but I think we are over the biggest of the hurdles and moving forward" in the spoken language program.

Another administrator discussed the overall impressions of e-mentoring and the listening and spoken language program. She stated, "Not everybody is convinced, but everybody is tolerant. And they see the benefits of the program and it's hard to argue with that. They also see that we have kids that we would not normally have." She went on to say, "These kids and parents believe in us now and the word is spreading."

Both positive and negative changes were identified as common themes throughout focus groups, mentee comments and journal entries. Positive changes that occurred during the e-mentoring program implementation were evident in increased opportunities, progress of the students, enrollment, and perceptions. Participants of the study also elaborated on the challenges from change within scheduling and decision-making options

Scheduling. Another change that occurred in the listening and spoken language program was with the children's daily schedule. Before the e-mentoring began, children had been taught in larger groups of six-to-eight children. All children worked on the same subject at the same time, regardless of their language level. A new schedule was developed that offered the children opportunities to work in small groups with another child of similar speech, language, or listening ability. A participant explained, "For us to be on . . . such a tight schedule…that was innovative. To us that was a whole new way of dealing with the students." She continued, "Maybe doing the rotations. It helped with

discipline so much. The scheduling, that was at first a hurdle, but now it's just what they do in spoken language."

The mentee also identified a larger scheduling concern of being the only staff member trained to provide instruction in this new program, while trying to meet each child's unique needs. "The biggest challenge I have ahead of me with these four [children] is preparing two of the children for the mainstream." She also explained, "Deciding where to include the two new children we are expecting within the next three months as they enroll in the program." She continued this thought by stating the difficulty she as having trying to give "each child the instruction they need with a limited staff."

The mentee expressed concern over time constraints in the schedule. She said that she needed more "time providing them opportunities to independently generate new and practiced language structures." When discussing another child, the mentee stated, "I don't want to 'give up' on spoken language with [this child], but I don't know if we have the time or resources to give them as much individual attention," as they need to learn to talk.

At times, the mentee stated her concerns with the number of children being served and the limited staff assigned to the program. She asserted that the "biggest challenge ahead of me continues to be planning seven appropriate, well-crafted syntax lessons (in addition to my speech and auditory training lessons)." She also felt unsure of "achieving a balance between these lower language students with the support and prompting that they need." The children had "widely varied listening and spoken language skills."

When working with children at a wide variety of language levels, the schedule became more difficult to adjust.

There were challenges related to the scheduling of the children with speech and language instruction, as well as the scheduling of the mentoring session. Scheduling changes were made during the academic year of e-mentoring to meet the needs of the children. After we brainstormed about a change in the schedule, the mentee stated, "I will try this for a while to make sure that the change is in the best interest of the children before I make an official change to the schedule." She stated at a later date, "The biggest challenge ahead of me right now for these children is related to placement."

Teaching Strategies

The mentoring process helped the mentee with her instructional skills for the children with hearing loss in the spoken language program. She stated, "The most important work we did today was to continue to fine tune my teaching skills." The mentee also stated that she "learned a valuable strategy during my lesson" and gathered knowledge of "two very practical things" during the e-mentoring session. The mentee said that the mentor "laid out a step-by-step plan for how to [teach a language lesson], which [she] always appreciated." Later the mentee contended, "Making those changes increased the child's success during the lesson instantly." She stated that she had "written down several of the suggestions that the mentor gave [her] as well as the next steps for a few groups on my lesson plans this week." Thinking ahead for the planning of lessons seemed to help the mentee. She continued that she will "incorporate all of the little strategies that she has learned from the mentee as [she] continues to provide speech development lessons."

At a later e-mentoring session, I noted that the mentee explained she was going to "focus on two-word combinations with Child C because he could not understand or produce three-word sentences." I remarked in my journal that the mentee was really thinking about where the children were functioning in their language development and how to proceed in each child's lesson. "Her analysis of where to go was on track."

The mentee explained that when working with Child D, she hoped that she had planned the lesson correctly. She went on to say, "If I have planned my lesson well, then I will feel like I have learned what to do with children like Child D," who possess only beginning language skills.

Technology

There are a number of benefits and challenges faced when using technology in the e-mentoring process. When using Skype or Facetime, the mentee stated, "You are able to see [the teaching] in action and did not have to describe it over the phone." I explained that it was "helpful to me as the mentor to be able to see the child and see the teaching." Because of this technology, changes in the teaching "can be implemented a lot quicker." One administrator stated, "[The mentee] had grown so much," because of the availability of this technology. I wrote in my journal, "The technology in e-mentoring has benefitted me as a mentor. It makes an enormous difference when I can see what is going on in the classroom." The mentee commented, "You are able to give immediate feedback rather than waiting a long time for a face-to-face visit."

There were a number of technology issues that occurred during the academic year of e-mentoring. In my journal, I reflected one morning on the challenges faced with the e-tools being used. "The signal was intermittent so it was difficult to have a cohesive

mentoring session." Also, dropped calls occurred on at least five occasions, believed to

be because of the internet usage at the time of the session. On another occasion, Skype

did not connect, but I was able to contact the mentee via Facetime. When there was

difficulty connecting or when there was a disconnection during the session, I would

contact the mentee via text, email, or by a phone call to try to decide on a method to solve

the problem.

The Future

The key stakeholders and administrators discussed the future of e-mentoring the

mentee in spoken language program at PPD. One participant said, "I could see e-

mentoring growing to include programs at our regional centers, because not many people

are going to send their child up her at three year [of age]." She continued to expand upon

the thought:

> I see this as a program and the e-mentoring becoming a bigger and bigger part of
>
> it – not only the spoken language program, but video-conferencing through
>
> sending classes out. We send out ASL classes now with an ASL teacher in public
>
> schools. This just opens up possibilities. We don't even know where this is
>
> going yet. It's so open and exciting.

Another statement was made about the school being a model for e-ementoring and

the spoken language program. "We go to different conferences and present. It's not a

pilot program anymore. It's a model program. Other schools are constantly asking us

"What have you done?" She continued, "Lots of programs have cochlear implant

programs, but nobody has taken it to this level and has proven data driven success. Yes,

we're a model program."

When discussing the impact of e-mentoring, it was stated, "E-mentoring helps to bring the data to a point that proves that not only is the program viable, but the students are learning and the parent are understanding, and these kids have choices that they never would have had." She continued to expand upon the point. "So e-mentoring is part of the pilot program. I don't know if it is the initiator of it, but it has become an important part of the pilot program."

Later this administrator asserted the following:

E-mentoring is a huge part of us being a model program. And it's showing. We don't want to stop in one place. We're not satisfied. We're going to take it to the next level. It may not have started that way, but it sure has become an elemental part of the program

Another participant wondered if combining face-to-face mentoring and e-mentoring would strengthen the process. "What we are seeing happen with telepractice and anything that is done through e-tools, so to speak . . . that it's very successful, but do you have to have some one-on-one and some facetime contact?"

Andragogical principles used in e-mentoring. Andragogical techniques were applied during each of the e-mentoring sessions. There was a focus on using the assumptions and process elements, as I worked with the mentee. The principle that adult learners had a need to know was evident as the mentee developed her Mentoring Work Plan**.** In this plan, she identified the topics she wanted to study during academic year in which she was the mentored. The first topic or objective described by the mentee was to increase her "knowledge in prioritizing and selecting sentence types and syntactic elements from the Teacher Assessment of Spoken Language (TASL)," a language

curriculum developed at the Moog Center, to teach language to the students with hearing loss in her class. She identified the learning tasks and processes to accomplish this objective. She stated she would review the TASL rating form with me and discuss lesson planning and rational for the planning with me. This objective was completed by the end of April 2015.

A second learning goal was to increase her "understanding, planning and executing speech lessons." The learning tasks and processes were to read a speech manual, The Teacher's Assessment of Speech Production (Birath 2015), a speech curriculum developed at the Moog Center, and review all plans with me. These tasks were completed by April 2015. A third objective was to increase her "understanding and planning of lessons in auditory skill development." She wanted to read information on auditory skill development and observe sessions with this topic as the focus of the lesson. She completed this objective by April 2015.

The mentee also demonstrated a readiness to learn, the second assumption by Knowles (2005). She stated that she was "grateful to have learned how to teach vocabulary to an older child." The mentee also explained that the "most important work we did today was planning for the next few lessons." As the school year progressed, the mentee stated that she felt "much more confident in my ability to teach syntax than I ever have before."

The mentee displayed an orientation to learning, another one of Knowles' (2005) six assumptions. She wanted to apply the newly acquired skills in speech or language immediately with the other children in the class. The mentee explained that she would, "Continue to incorporate all of the little strategies that I have learned . . . as I continue to

provide speech development lessons." An administrator explained that the e-mentoring addressed "the specific needs of a child or children in a quick and efficient manner." It was possible to individualize instruction during the e- mentoring sessions to meet the needs of each student.

In addition to using the assumptions of andragogy, I incorporated the process element, setting the climate, when mentoring. I established a climate of mutual respect and asserted during the e-mentoring, "I wanted the mentor to feel comfortable and respected as we continued the mentoring process." The mentee seemed willing to candidly explain her thought process in the statement, "I really wanted to show my mentor how much Child A had improved and I also wanted to get some feedback for how to continue to provide the appropriate prompting." The sharing of information was a two-way process between mentor and mentee.

A climate of collaboration was established during the e-mentoring process. The mentee shared her knowledge and expertise after a mentoring session with the other staff members in the listening and spoken language program. The mentee explained, "I was happy to know that I am doing some things right with her (i.e. incorporating a variety of strategies to get her to look at me when I talk to her)."

Finally, I tried to develop a climate of mutual trust during the e-mentoring process. With suggestions from me as the mentor, the mentee was able to progress to the next level of competence in teaching deaf children spoken language. She stated, "I continue to maintain a balance between following a prescribed protocol and exercising my clinical judgment to move on." I explained, "I wanted to respect and trust the mentee's request, so I was ready to Skype/Facetime" at the time she requested.

The Mentoring Partnership Check-In (Appendix A) developed by Zachary (2012) was completed during the academic year of mentoring. The mentee completed the form in October 2014 and in March 2015 to assess the mentor and mentee relationship and to assess if the partnership was on track. On the first evaluation, the mentee checked the following skills as 'always' accomplished. The mentee and I always notified each other if we could not meet, communicated schedule changes, eliminated outside influence, had clear communication, had relevant session, and safeguarded confidentiality. She checked 'most of the time' on the checklist for meeting regularly, checking on the overall goals, and providing two-way feedback. By the conclusion of the mentoring process, all skills on the mentoring partnership checklist were 'always' accomplished.

Secondary Data

The children with hearing loss who attended the listening and spoken language program were tested annually on the development of their receptive and expressive vocabulary skills and on basic concept development. The ROWPVT (Brownell, 2010b) was used to measure single-word receptive vocabulary and the EOWPVT (Brownell, 2010a) was used to measure single-word expressive vocabulary. The receptive portion of the Bracken Test of Basic Concepts (Bracken, 2006) administered to knowledge of basic concepts, receptively. Scores are reported in Table 7 in standard scores (average range 85 - 115).

Table 7

Standard Scores on the ROWPVT

	August 2014 Standard Scores	April 2015 Standard Scores
Child A	60	70
Child B	71	71
Child C	74	79
Child D	77	82
Child E	82	83
Child F	89	96
Child G	100	109
Child H	104	114

Nine students began the school year in the listening and spoken program, but one student withdrew and enrolled in the sign language program. During the nine months of the e-mentoring program, eight students made more than one year's progress in the nine-month academic school year on their receptive vocabulary knowledge. Likewise, seven of the students made more than a year's progress in a year's, 2014-2015, academic school year, with Child B making a year's progress during the academic school year.

In Table 8, the scores on the expressive vocabulary test are listed.

Table 8

Standard Scores on the EOWPVT

	August 2014 Standard Scores	April 2015 Standard Scores
Child A	55	77
Child B	60	73
Child C	61	69
Child D	64	72
Child E	69	74
Child F	86	102
Child G	105	112
Child H	112	117

All eight of students made more than one year's progress during the academic year on the expressive vocabulary measure. Following is a summary of the scores from the vocabulary tests

Table 9

Receptive and Expressive Vocabulary Summary

	August 2014- April 2015 Standard Scores
ROWPVT	7 of the 8 students made more than a year's progress in the academic year (9 months)
EOWPVT	All of the 8 students made more than a year's progress in the academic year (9 months)

Another test administered to the children attending the spoken language program was the *Bracken Test of Basic Concepts - Receptive* (Bracken, 2006), which assessed the child's knowledge concepts in the beginning of the year in August and at the end of the academic school year in April. Test scores are reported as standard scores (average range: 85 - 115) on Table 10. The Receptive School Readiness Composite (RSRC) scores are slightly higher than the the Receptive Total composite (RTC) scores. The RSRC score measured concepts the child should have acquired by kindergarten and the RTC score is derived from the administration of the entire test.

On the RSRC, seven of the eight children made more than a year's progress in the nine months of the nine-month academic year. On the RTC, six of the eight students made a year's growth during the academic school year.

Table 10

Standard Scores on Bracken Test of Basic Concepts - Receptive

	August 2014 Standard Scores	**April 2015 Standard Scores**
Child A	RTC: 54*	RTC: 60
	RSRC: 66 **	RSRC: 74
Child B	RTC: 51	RTC: 43
	RSRC: 67	RSRC: 50
Child C	RTC: 62	RTC: 61
	RSRC: 81	RSRC: 88
Child D	RTC: 57	RTC: 69
	RSRC: 68	RSRC: 90
Child E	RTC: 61	RTC: 68
	RSRC: 68	RSRC: 83
Child F	RTC: 76	RTC: 83
	RSRC: 96	RSRC: 98
Child G	RTC: 98	RTC: 112
	RSRC: 107	RSRC: 110
Child H	RTC: 107	RTC: 105
	RSRC: 93	RSRC: 104

*Receptive Total Composite (RTC)   **Receptive: School Readiness Composite (RSRC)

Summary

The qualitative results from the focus group, the mentee's reflection and the journaling were described in this chapter. After reviewing all of the information collected, the main emerging theme was the change in the thoughts of the administrators and teachers, and the change in the perception of a spoken language program. In addition to a description of the common themes extracted from the qualitative data, the use of e-mentoring using andragogical techniques was also described. Likewise, the secondary data of student vocabulary and concept growth was shown. In Chapter Five, the discussion of these results is described.

Chapter Five: Discussion and Reflections

The purpose of this study was to explore the benefits and challenges of e-mentoring an adult learner in a rural community program, who taught children with hearing loss to listen and speak. Research and literature existed that discussed the value of e-mentoring. DeMoss et al. (2012) contended, "The use of technology is considered a practical tool to enhance the mentoring process and meet the needs of both mentors and aspiring listening and spoken language professionals." (p. 334).

This study used a variety of andragogical techniques during the e-mentoring process. Based on the concluding evidence of this qualitative research study, the process of e-mentoring an adult learner helped establish a listening and spoken language classroom for teaching children with hearing loss at a state school for the deaf, where all adults and students used ASL to communicate. The experience was evaluated by the mentee, by the administrators and key stakeholders, and by me as the mentor. Results of these findings and responses to the research questions are presented in the context of emerging themes.

Research Questions

This researcher investigated the following Research Questions for this action research study.

RQ 1: What is the experience of e-mentoring for the mentor and mentee engaged in a distance start-up spoken language program for deaf children at a state school in a rural setting, including the benefits and challenges?

The two sub-questions are:

      a) What are the benefits of e-mentoring?

      b) What are the challenges of e-mentoring?

RQ 2: How do andragogical principles apply to e-mentoring?

RQ 3: How, if at all, has e-mentoring the teaching staff increased spoken language outcomes with the deaf children in relation to receptive and expressive vocabulary scores and in relation to basic concepts?

The responses to research questions RQ 1, RQ 2, and RQ 3 can be found in the emerging themes described in this chapter. The response to research question one is found in the theme of Change with the sub-themes of opportunities, e-mentoring, the spoken language program, progress of the children, perceptions of the program, increase in enrollment, and scheduling. The benefits of the program are described in the discussion of Change, Teaching Strategies, and Technology. The responses to the challenges faced with e-mentoring are presented in discussion related to themes and subthemes of Technology, Doubts and Options, Increase in Enrollment, and Scheduling. The data obtained from vocabulary and concept testing is presented in the section on Secondary Data.

Recommendations are offered for further study on e-mentoring new teachers of the deaf and speech pathologists in a similar setting. I (the researcher) discovered unintended results, including the changes that occurred within the spoken language program, the teaching skills of the mentee, and the attitudes and perceptions of the administrators and key stakeholders in the program. The use of the formative and summative evaluations with the mentee proved to be minimally beneficial in this research project.

Summary of Findings

Participants in this research project included the mentee from the listening and spoken language program at a state school for the deaf, the administrators and key stakeholders of the program, and me as the mentor. The formal e-mentoring process began in the fall of 2014. The mentor and mentee engaged in e-mentoring for at least one hour every other week. On the alternate weeks, the mentor and mentee contacted each other via phone, e-mail, or text to discuss any issues that may have arisen. After each mentoring session, the mentee responded to five questions (Appendix C) from Zachary and Fishler's (2009) book on mentoring, *The Mentee's Guide.* I wrote reflections in a journal after each contact with the mentee. The administrators and key stakeholders participated in a focus group at the conclusion of the academic year of e-mentoring.

Data collected from my journaling, responses to questions from the mentee, and the focus group comments indicated that it was possible to develop a listening and spoken language program at state school for the deaf, with the use of e-mentoring. Because many parents were choosing a spoken language option for their children with hearing loss, it may be appropriate for state schools to offer this communication option. It was important to have the support of the administration and key stakeholders, because they were able to provide assistance when the need arose. One of the key stakeholders expressed her approval of e-mentoring when she stated, "You communicated probably more often, more frequently in a more thorough fashion than you would have done had you had [the mentee] right there and for once a week. So to me [the e-mentoring] just makes more sense." She pointed out one the benefits of e-mentoring — communication. The mentee and I were able to communicate frequently because of the technology

available; that is, we were able to use a variety of devices and applications, voice calls,

text, e-mail, Facetime, and Skype. I was able to respond to the mentee's questions or

issues by one of these modes of communication within hours after the initial contact.

When a new teacher is working with a new student in a deaf education setting, she is

often presented with challenging teaching situations. With the help of a mentor, or as in

this case, an e-mentor, some of the difficult situations could be resolved quickly.

A number of themes emerged from the information provided by the mentee's

responses to questions, the mentor's journaling, and from the focus group. The main

emerging theme was Change with the subthemes of opportunities, e-mentoring the

spoken language program, progress of the children, perceptions of the program, increase

in enrollment, and scheduling. In addition to a description of the common themes

extracted from the qualitative data, the use of e-mentoring using andragogical techniques

was also described. Likewise, the secondary data of student vocabulary skills and

concept development were presented.

Change. Change was one of the prominent themes that emerged in this research

project. Changes occurred in the opportunities for the children, the communication

options at the PPD -- the listening and spoken language program--the progress of the

children, and in the thoughts and concerns of the staff and key stakeholders about

teaching spoken language to children with hearing loss. In addition, change occurred in

the organization of the schedule for the program.

Opportunities. Developing a successful program was important for the children

with hearing loss, who were served in the listening and spoken language program at a

state school for the deaf, so their communication needs were met. PPD had only taught

ASL as a means to communicate, in the past. It was groundbreaking that a state school, using only sign language since the mid-1800s was willing to support such a program. One administrator commented that the best part of the program "is that we have opened up a whole new opportunity for parents and students [so] . . . the children can meet their potential." From my perspective, this indicated that having the listening and spoken language program opened up the possibility for these students to use spoken language as their primary method of communicating with those around them. For children with hearing loss, this program provided a unique and special opportunity to learn to communicate with the general population that does not know sign language.

   E-mentoring a spoken language program. The mentee stated that the success of the spoken language program was due, in part, to e-mentoring. When she commented that without e-mentoring the program may not have succeeded, I believe she recognized the need for e-mentoring, and subsequently, I was able to teach her how to implement the strategies via e-mentoring. We were able to discuss any issues that may have arisen in the spoken language program via Facetime and then spoke on the phone to brainstorm ways to best help the children learn a particular skill. An administrator expressed gratefulness for the instructional knowledge the mentee gained through the e-mentoring process.

   It was evident from comments of the teaching staff that e-mentoring helped the entire staff know how to address an issue. This was expressed when one staff member stated, "It was helpful that you are able to see the child and give us specific recommendations on what to do with that child." It was my impression when the teachers were able to implement the recommendation I made and observe noticeable changes in

the success of a teaching strategy or in the success of a child, it was motivating to all involved. The mentee frequently expressed her appreciation of the knowledge gained from this e-mentoring experience. All the nuances of teaching speech, language, and auditory skills takes time to learn, especially learning how to teach children at different language levels.

Progress of children. Many of the staff, administrators, and key stakeholders found the progress the children made in the listening and spoken language program to be surprising. One administrator expressed her amazement that the children made more than a year's progress in a year's time. From my knowledge in the field of deaf education, most children with hearing loss enroll in a listening and spoken language program because they are behind in the areas of speech, language, auditory skill development, and academics. These children require intense and individualized instruction, so they can 'catch up' with their typically-developing peers. The goal for most auditory-oral programs was to help the children with hearing loss develop speech and language skills commensurate with their typically-developing age mates. According to the staff at PPD, the amount of progress made by the children in the spoken language program was unusual to find in the children attending PPD. This administrator said she was looking at the children and wondered what would have happened in their lives if they had not had the individualized teaching to meet their specific needs. Because the children worked in small homogeneous groups of two children, it was possible to adapt the instruction to meet their specific needs. It is my experience that when the instruction is tailored to meet the child's needs, it is possible for these children with hearing loss to make more and better progress.

Perception of the program. A notable change that occurred was the perception of the listening and spoken language program by the members of the community, the school staff, administrators, and key stakeholders in the program. The school and community at large believed all deaf children should use sign language to communicate. The idea of teaching spoken language to young children with hearing loss came under resistance from deaf individuals who lived in the same town as PPD. The mentee and key stakeholders explained that the use of sign language would continue for the majority of the children in the school, and the staff would be encouraged to continue the use of ASL. With these assurances, some of the opposition to the spoken language program diminished.

The perception of the program changed in other ways. One administrator explained, "We had quite a reputation to overcome." Another administrator added, "You send those poor little deaf kids to that institution . . . and the [deaf children] stop talking." Prior to the initiation and success of the spoken language program, some parents were fearful of sending their deaf children to the state school. According to a participant in the focus group, parents believed the result would be the total use of sign language to communicate and the disappearance of any spoken language that may have previously developed. From my perspective, the spoken language program helped to minimize this negative perception of PPD and break down some of the barriers between those who taught children sign language and those who taught spoken language. It appeared that parents of the children with hearing loss were more willing to consider their child's attendance at the state school, since learning to listen and speak was an option.

Increase in enrollment. An administrator explained one of her responsibilities was recruitment of students. Because PPD was a state school and therefore state-funded,

the number of children in the school was important to the administration. The

appropriated funds were allocated to provide services to a minimum number of students

with hearing loss. It is interesting to note that some state schools in the United States

closed because the number of students receiving services in the state schools dropped

significantly.

Since the onset of the listening and spoken language program at PPD, the number

of students enrolling in the program increased. One participant in the focus group stated,

"All of a sudden all these kids are coming out of the woodwork," so the number of

children in the school increased. With a bit of humor, one administrator suggested she

did not want to show new parents the spoken language program, because the parents were

choosing this option. From my perspective, it was exciting that the number of children

with hearing loss who wanted to enroll increased. However, it is important to explain to

all families that this is only one communication option and sign language may be

recommended in the future, especially if children are not making progress in the spoken

language program. It is therefore suggested that this message should be explained prior to

any child enrolling in the listening and spoken language program.

With the increase in enrollment came challenges to the quality of the listening and

spoken language program. The number of staff working with the children in the listening

and spoken language program was limited to the mentee as the Lead Teacher/SLP, a

teacher aide, and an early childhood teacher. With the number of children increasing in

the listening and spoken language program, suddenly there was not enough staff to meet

the individual needs of the children. Some staff at PPD were reassigned to the spoken

language program, but most of these teachers or SLPs had not worked with children with

hearing loss who used spoken language. In order to maintain the integrity of the

program, it is my recommendation that the number of children enrolling should be

limited until more appropriately trained staff are hired. It was extremely challenging and

frustrating to the mentee that the number of students continued to increase and she was

expected to accommodate the increased enrollment.

     Decision making — options and doubts. Although the administrators seemed to

support the program, the enthusiasm for the listening and spoken language program

varied among the administrators and was found to be a challenge for the teaching staff.

Many of the participants, who were instrumental in getting the program off the ground,

had only worked with deaf children using sign language. This new venture, promoting

spoken language and listening, was somewhat worrisome and foreign to them.

Eventually, most embraced the program, but often contended that sign language might be

a better avenue for these children.

     One of the statements made during the focus group indicated the distress some of

the key stakeholders faced when recommending the listening and spoken language

program to a family with a young child with hearing loss. She stated,

> It's hard for us when we are talking about a four-year-old or five-year-old.
>
> Because we have been in this for a long time . . . we know that it means for the
>
> rest of their life and the effect it has on the future . . . I find a lot of responsibility
>
> making those decisions for these children.

This focus group participant seemed to have very mixed feelings about the advice she

presented to the parents. There was trust for the program, but she had some reservations,

because she could not recommend the listening and spoken language program

unconditionally. An administrator explained that whenever a child seemed to be in the wrong program, sign language or spoken language, it was discussed in a staffing meeting, so the child could be placed in the appropriate program. The team approach was an important process within the study, in order to ensure the children with hearing loss were served in the program that best met their needs.

Scheduling. One part of the program that helped the children develop better spoken language skills was the change in the schedule implemented in the listening and spoken language program at PPD. When I first worked with teachers and students in the spoken language classroom, most of the children were taught in one large group consisting of five children with hearing loss. The children exhibited a wide variation in their speech and language skills, with some children using only a limited number of single words and other children speaking in short three-word utterances. It was virtually impossible to meet their individual needs without making changes to the schedule. One of the key philosophies, which I abided was, "The more children talk, the better they get at talking." Each child only had an opportunity to talk every fifth turn. There was time wasted while the children were sitting and waiting for a turn to talk.

Because the mentee agreed with this philosophy, she and I decided that a change in the overall schedule would give the children more opportunities to practice talking at a targeted level. It was decided to model the schedule after the program at the Moog Center for Deaf Education. In this schedule, the children received instruction for approximately half of the day, in small groups of two-to-three children, allowing for individualized instruction, and other parts of the day, the children were educated in slightly larger groups of eight children, in the Discovery Room. The children received

instruction in homogeneous groups, so the teacher was able to target instruction to meet their needs. The children in these small groups had more opportunities to practice their language and speech skills. Because of the small groups, the children were engaged almost all of the time, so there was less time spent with behavioral concerns. Also, the teacher knew exactly the level at which the PPD was functioning and could gear her objectives to the child.

During the remainder of the day, the children were educated in the Discovery Room, in a group of eight-to-ten children. This classroom was organized so the children could experience typical preschool activities, including circle time, centers, art, motor activities, and pre-academic activities. These larger groups gave the children with hearing loss opportunities to use spoken language to communicate with each other. Although attention was focused on language learning for these children in the larger groups, the classes were not as demanding in terms of spoken language production as the smaller group sessions.

Table 11 is an example of a typical schedule for a child at the Moog Center for Deaf Education, which the listening and spoken language program attempted to replicate. In this example schedule, there were three classroom teachers, who were certified teachers of the deaf, and a Discovery Room teacher, who was a certified early childhood specialist and assisted by a teacher aide. Each teacher of the deaf was assigned four-to-five children with hearing loss in her classroom, and she was responsible for teaching conversational language, structured language, speech, auditory skill development, and pre-academics. The children rotated every 25 to 30 minutes between the small group instruction from a teacher of the deaf and larger group instruction in the Discovery

Room. With this schedule, the children worked intensely in small groups in their

classroom at their language or auditory skill development level and then moved to the

Discovery Room to develop typical preschool skills. This back-and-forth movement

between the deaf education classroom and Discovery Room continued throughout the

day. In this sample schedule, Child E was highlighted to illustrate this child's schedule

throughout her school day.

Table 11

Sample Preschool Schedule

TEACHERS	TEACHER 1	TEACHER 2	TEACHER 3	DISCOVERY ROOM
8:30-8:40 Device Check	A, B, C, D	**E**, F, G, H	I, J, K, L	
8:40-9:05 Syntax	C, D	**E**, F	I, J	Circle/Choice: A, B, G, H, K, L
9:05-9:30 Syntax	A, B	G, H	K, L	Circle/Choice: C, D, **E**, F, I, J
9:30-9:50 Conv. Lang.	C, D	**E**, F	I, J	Music/Movement: A, B, D, G, H, K, L
9:50-10:10 Conv. Lang.	A, B	G, H	K, L	Music/Movement: C, D, **E**, F, I, J
10:10-10:30 Snack	A, B, C, D	**E**, F, G, H	I, J, K, L	
10:30-11:00 Recess	Staff Time	Staff Time	Staff Time	Recess: All
11:00-11:30 Sp./Aud. Tr.	C, D	**E**, H	J, L	Thematic Language: A, B, F, G, I, K
11:30-12:00 Sp./Aud. Tr.	A, B	F, G	K, I	Thematic Language: C, D, **E**, H, J, L
12:00-12:50 Lunch/Recess Lunch/Nap	Nap 12:30-1:30 A, B, C, F, K			Recess: D, **E**, G, H, I, J, L

Continued

Table 11 continued.

TEACHERS	TEACHER 1	TEACHER 2	TEACHER 3	DISCOVERY ROOM
12:50-1:00 Storytime				Storytime: D, **E**, G, H, I, J, L
1:00-1:30 Pre-Academics	D, H	**E**, G	I, J, L	
1:30-1:55 Experience	C, D	G, H	I, J	Pre-Academics: A, B, **E**, F, K, L
1:55-2:20 Experience	A, B	**E**, F	K, L	Pre-Academics: C, D, G, H, I, J
2:20-2:35 Charts	C, D	G, H	I, J	Recess/Choice: A, B, **E**, F, K, L
2:35-2:50 Charts	A, B	**E**, F	K, L	Recess/Choice: C, D, G, H, I, J
2:50-3:00 Get Ready to Go Home	A, B, C, D	**E**, F, G, H	I, J, K, L	

When the listening and spoken language program began with five children with hearing loss, it was possible to design a schedule similar to the Sample Schedule at the Moog Center. The children were able to work in small homogeneous groups and rotate in and out of the Discovery Room. Interestingly, this was a totally new way of organizing the schedule for the staff at PPD. Although there initially was some 'push-back' by administrators, the schedule worked and children began making better progress in their vocabulary and language skills.

By using this schedule, it allowed the children to receive the instruction required at the appropriate language level. From my experience in the field of deaf education, I believed that this type of scheduling increases the language outcomes of the students and, in fact,, this was the case in the listening and spoken language program. As was evidenced in the reporting of the supplementary data, the children in the listening and

spoken language program made over a year's progress in both receptive and expressive vocabulary growth and at least one year's growth in the development of basic concepts. However, it is important to recognize that this type of schedule required the appropriate number of staff to instruct the children with hearing loss in small homogeneous groups. One of the challenges expressed by the mentee was that the program continued to grow without adding more staff. At one point, the mentee was responsible for 11 children in her class. It is my opinion that in order to have a quality program, new staff needed to be hired, so the schedule could be adapted and the teaching could be appropriate for each child.

Teaching strategies. Although the mentee developed some appropriate teaching strategies, she needed to increase her techniques for instructing the deaf children in her class. After one mentoring session, the mentee stated, "Making those [instructional] changes increased the child's success during the lesson instantly." The mentee seemed to appreciate the teaching suggestions and gained confidence in her ability to work with this population of children with different language and vocabulary levels. As the mentee developed more teaching strategies, she was able to generalize information and applied it to other teaching situations. Throughout the academic year of e-mentoring, the mentee demonstrated growth in her abilities to teach speech, language, and auditory skills. I remarked in my journal that the mentee was really thinking about where the children were functioning in their language development and how to proceed in each child's lesson. "Her analysis of 'where to go' was on track." I was pleased with her independent thinking when she was planning and teaching.

Technology. Within the e-mentoring sessions, the technology utilized presented both benefits and challenges. I believed the mentee and I benefitted from the FaceTime or Skype sessions, as I was able to see the mentee and her students and observe the interaction between the two. As I stated in my journal, it was extremely beneficial to be able to see the child and observe the teaching. I believed that because of this technology, the mentee was able to implement changes in the teaching instantly. The mentee benefitted from the immediate feedback on a teaching session, which helped her have a successful teaching session and gain confidence in her teaching abilities.

However, at times the use of video technology presented challenges for the mentee and me during the academic year of e-mentoring. I commented in my journal, "The signal was intermittent so it was difficult to have a cohesive mentoring session." The mentee was fairly good at trouble shooting these situations, but on two occasions, it was necessary to rely on our iPhones to connect via FaceTime. Both the mentee and I were dedicated to the completion of these sessions, but there were some instances when we could only talk on the phone after school, because of the technology issues.

The future. The future of the e-mentoring at the state school was a topic discussed at length in the focus group. It seemed that, overall, the participants in the group looked favorably on the e-mentoring project. One administrator felt the e-mentoring program could be expanded to include the regional centers located around the state. Families of preschool deaf children were able to access the services of PPD at the regional centers without having to travel to the main location. She hoped that in the future satellite spoken language programs might open in the regional centers, and the teachers could receive e-mentoring to learn teaching strategies. These administrators

stated that e-mentoring opened up possibilities that had not been considered before.

Opening satellite programs was an exciting prospect; however, having qualified people to

provide the e-mentoring would be challenging. Because sign language was the

predominant communication mode for deaf individuals, very few professionals were

trained in listening and spoken language instruction, limiting available personnel to

mentor new, young teachers of the deaf.

A notable comment was that the listening and spoken language program had

become a model program, and it seemed that e-mentoring contributed to that. It was

explained, "We go to different conferences and present. The [spoken language program]

is not a pilot program anymore. It is a model program. Other schools are constantly

asking us, "What have you done?'" There seems to be great interest in this listening and

spoken language program and other professionals wondered if they could replicate the

program, utilizing e-mentoring. It was noted, "Nobody has taken it to this level and has

proven data success." The administrator explained that the success of the children was

validated by the test scores and by the ability of the children to communicate orally in the

classroom. Although the spoken language classroom at PPD looked like a model

program, I believed there needs to be a commitment to providing appropriate staff for the

program. If the children were not instructed in these small homogeneous groups, then the

prospect of having the children make the same amount of progress in language and

vocabulary is guarded.

Andragogy and e-mentoring. The use of andragogical techniques proved to be

quite beneficial in the e-mentoring process. First, the use of the Mentoring Work Plan

(Appendix B) helped the mentee decide what she would like to have as her focus for the

academic school year and helped me know what information she wanted to better understand. Not only did I know what information she needed to successfully teach this population of children, I also learned what should be the focus of any information sharing. She was highly motivated to acquire this information, so she could better understand the rationale behind any learning strategies.

Andragogical techniques were applied during each of the e-mentoring sessions. There was a focus on using the assumptions and process elements as I worked with the mentee. The principle that adult learners have a need to know was evident as the mentee developed her Mentoring Work Plan**.** In this plan, she identified the topics she wanted to study during the academic year in which she was mentored. The first topic or objective described by the mentee was to increase her "knowledge in prioritizing and selecting sentence types and syntactic elements from the Teacher Assessment of Spoken Language (TASL) (Moog & Biedenstein, 2010)," a language rating form developed at the Moog Center, to teach language to the students in her class.   She identified the learning tasks and processes to accomplish this objective. The mentee stated she would review the TASL rating form with me and discuss lesson planning and rationale for the planning with me. The focus of some of the mentoring sessions was spoken language instruction and how to use the TASL or the language rating form to plan further lessons. These lessons were developed from the objectives on the TASL. This objective was completed by the end of April 2015.

A second work plan goal was to increase her "understanding. planning, and executing speech lessons." The learning tasks and processes were to read the speech manual, *The Teacher's Assessment of Speech Production* (Birath, 2015), a speech

curriculum developed at the Moog Center, and review all speech lesson plans with me.

On several mentoring sessions, speech instruction was the focus of the session. By

reading the manual and implementing the suggestions I gave to the mentee, I was able to

observe improvement in each child's speech. These tasks were completed by April 2015.

A third goal was to increase her "understanding and planning of lessons in auditory skill

development." She wanted to read information on auditory skill development and

observe sessions, with this topic as the focus of the lesson. She completed this objective

by April 2015.

　　　　The mentee demonstrated a readiness to learn, Knowles' (2005) second

assumption. She stated she was "grateful to have learned how to teach vocabulary to an

older child." The mentee also explained that the "most important work we did today was

planning for the next few lessons." The mentee stated that she "learned a valuable

strategy during my lesson." As the school year progressed, the mentee stated that she felt

"much more confident in [her] ability to teach syntax than [she] ever did before."

　　　　The mentee displayed an orientation to learning, another one of Knowles' (2005)

six assumptions. She wanted to apply the newly-acquired skills in speech or language

immediately with the other children in the class. She stated that she "learned how to

further craft my lesson in such a way to provide every child with every opportunity to be

successful" and expressed her pleasure that she was instructing this special group of

children in the appropriate way (e.g. incorporating a variety of strategies to get her to

look at me when I talk to her). The mentee continued with this thought when stating that

she would, "Continue to incorporate all of the little strategies that I have learned . . . as I

continue to provide speech development lessons." It was rewarding to observe the

mentee gaining independence, observing the educational philosophy and implementation of the schedule. When looking at changing the organization of her schedule she explained, "I will try this for a while to make sure the change is in the best interest of the children, before I make an official change to the schedule." It is my impression she wanted to be certain the schedule change would benefit all of the children in the class. An administrator explained that the e-mentoring addressed "the specific needs of a child or children in a quick and efficient manner." It was possible to individualize instruction during the e-mentoring sessions to meet the needs of each student.

In addition to using the assumptions of andragogy, I incorporated the process element -- setting the climate -- when mentoring. I established a climate of mutual respect and asserted during the e-mentoring that "I wanted the mentor to feel comfortable and respected as we continued the mentoring process." The mentee seemed willing to candidly explain her thought process in her statement, "I really wanted to show my mentor how much Child A had improved and I also wanted to get some feedback for how to continue to provide the appropriate prompting." The sharing of information was a two-way process between the mentor and mentee.

A climate of collaboration was established throughout the e-mentoring process. The mentee was willing to share her knowledge and expertise after a mentoring session with the other staff members in the listening and spoken language program. A participant in the focus group stated, "When you Skype in her lessons, it is so helpful that you are able to see the child and give us specific recommendations on what to do with that child."

Finally, I tried to develop a climate of mutual trust. With suggestions from me as the mentor, the mentee was able to progress to the next level of competence in teaching

deaf children spoken language. She stated, "I continue to maintain a balance between following a prescribed protocol and exercising my clinical judgment to move on." I let the mentee know that I respected and trusted her opinion. If I ever needed to discuss the reason for a suggestion, the mentee was open to the ideas and willing to discuss her ideas.

Secondary Data

As part of the listening and spoken language routine testing protocol, data were collected annually on each child's receptive and expressive vocabulary skills and their knowledge of basic concepts. The mentee administered the vocabulary tests in the beginning of the school year and near the conclusion of the academic school year on the eight children who attended the listening and spoken language program full-time. A ninth child enrolled in the program, but it was determined that this child should transfer to the sign language program after three months, due to her lack of progress in spoken language. All testing was normed on typically- developing children, so the children were compared with children their age, who had typical hearing.
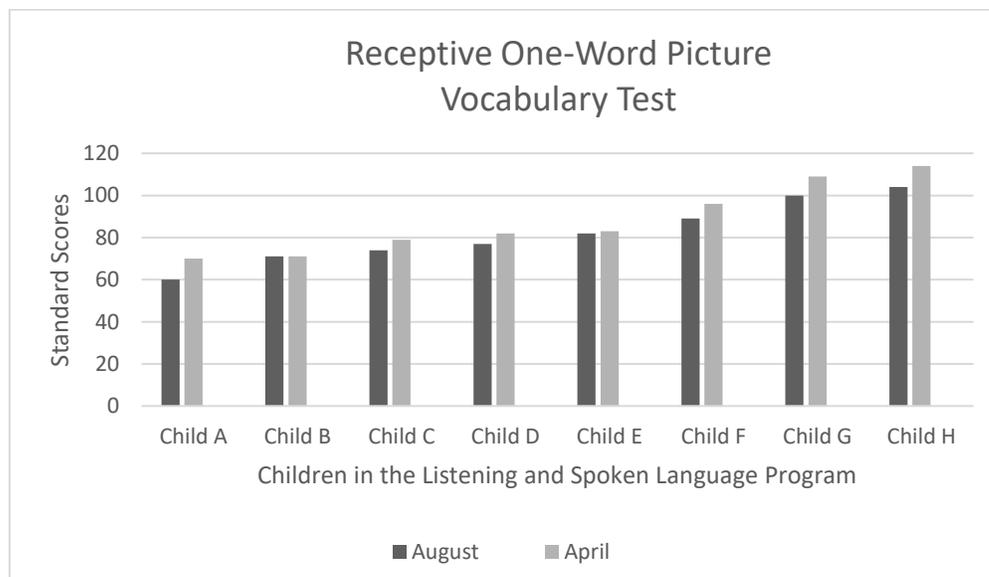

Figure 1: Fall and Spring receptive vocabulary scores.

On the ROWPVT, (Brownell, 2010b) used to measure the child's knowledge of receptive vocabulary, each of the eight children made at least a year's progress between August and April, the academic school year for the children in listening and spoken language program (see Figure 1).

The test scores reported as standard scores (average range is 85-115) indicate that Children F, G, and H scored within the average range. Children A, B, C, D, and E have receptive vocabulary scores below the average range when compared with their typically hearing age-mates. Overall, all eight of the children in the listening and spoken language program made a year's progress during the nine-month academic year.

Similar progress was made on the EOWPVT, (Brownell, 2010a) a test of expressive one-word vocabulary.

Expressive One-Word Picture Vocabulary Test

Child	August	April
Child A	55	77
Child B	60	73
Child C	61	69
Child D	64	72
Child E	69	74
Child F	86	102
Child G	105	112
Child H	112	117

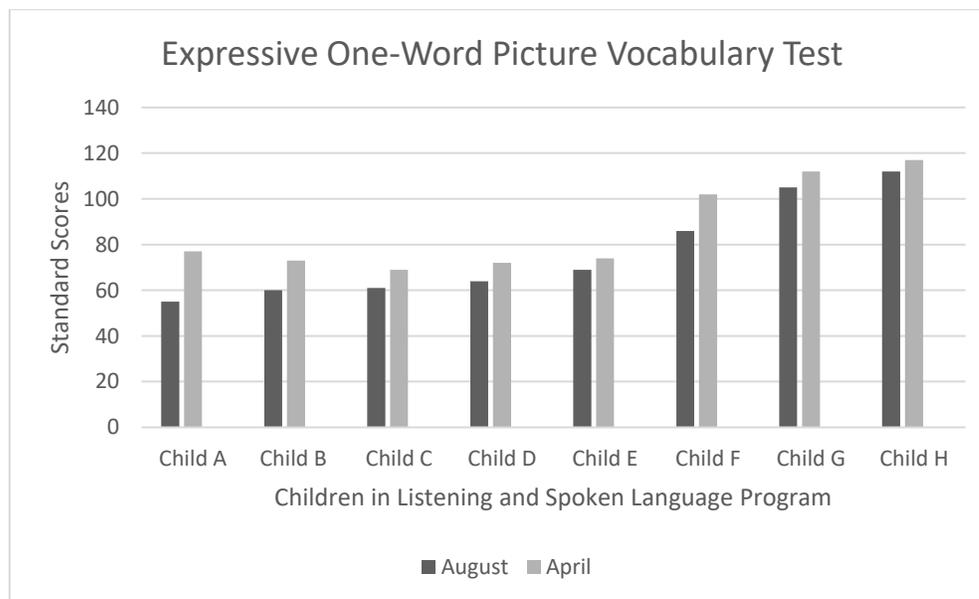Standard Scores — Children in Listening and Spoken Language Program

Figure 2: Fall and Spring expressive vocabulary scores.

On the expressive vocabulary test, the scores for the first five children illustrated in Figure 2 fell below the average range, with three children exhibiting scores within the

average range. It was noteworthy that each child made at least a year's progress in the

nine-month academic school year.

It is my experience that preschool children with hearing loss typically have

depressed receptive and expressive vocabulary scores. The direct teaching of vocabulary

has been shown to increase the scores of children with hearing loss, so it is possible to

have vocabulary skills commensurate with their typically-developing age mates. The

children in the listening and spoken language program were provided with daily

instruction in vocabulary development that has proven to benefit each student.

Instruction focused on single-word vocabulary was necessary for children with hearing

loss, so they will acquire the words needed to speak in phrases and sentences during
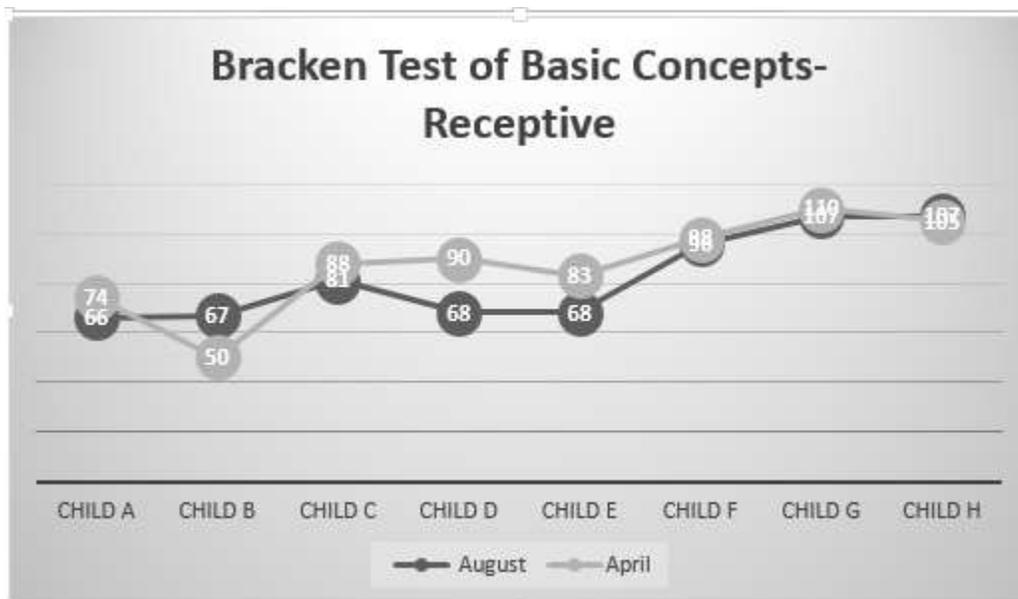
language lessons.

Figure 3: School Readiness Scores on the Bracken Test of Basic Concepts.

In addition to the vocabulary testing, the *Bracken Test of Basic Concepts*

(Bracken, 2006) was administered to assess each child's receptive knowledge of

concepts, such as *heavy*, *light shallow*, and *deep*. Two sets of scores are reported on the

Bracken Test of Basic Concepts. The scores under Receptive: School Readiness

Composite indicate the child's readiness for enrolling in kindergarten based (see Figure

3).

Scores on the *Bracken Test of Basic Concepts* indicate that by the end of the school year

five of the children attending the listening and spoken language program scored within

the average range (average range 85 - 115), indicating that five children developed the

knowledge of concepts similar to their typically-developing kindergarten age mates. Two

of the children scored significantly below the average range and required direct additional

instruction to acquire those concepts. The scores obtained on the administration of all

subtests are shown in Figure 4.

Bracken Total Composite Scores-
Receptive (RTC)

CHILD A   CHILD B   CHILD C   CHILD D   CHILD E   CHILD F   CHILD G   CHILD H

—◆— August   —•— April

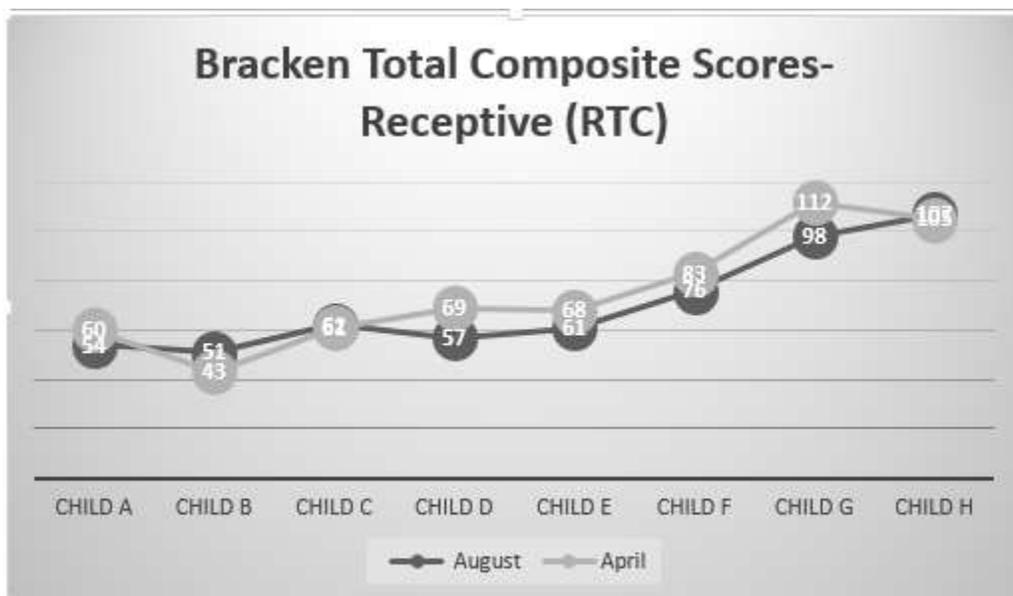*Figure 4*: Fall and Spring Bracken Scores on the total test.

When all subtests of this test were administered, only two of the children scored

within the average range (average range: 85 - 115), indicating that the children in the

listening and spoken language program continue to need direct instruction to develop the

basic concepts that other five- and six-year-old children have developed. It is my

experience that many children with hearing loss require explicit teaching of the concepts

necessary to acquire conceptual knowledge to succeed in school, for typically developing

children.

Personal Reflections

The use of e-mentoring a teacher in a spoken language program at a state school

for the deaf in a rural community was a positive experience. There were two main

reasons why this experience was positive and successful, and I believe, would help to

make any e-mentoring experience a good one. First, the setting for the e-mentoring

research study, the state school for the deaf -- turned out to be supportive of the

e-mentoring of the mentee. The administration wanted the program and the children in

the program to be successful. As these deaf children began using spoken language to

express themselves, the administration was pleased and discussed the program openly at

conferences and meetings. They referred to the program as a 'model' for other state

schools for the deaf.

Likewise, I believe the e-mentoring process was successful due to the mentee.

She exhibited enthusiasm and was highly motivated to help the deaf children in her class.

She was greatly interested in learning everything she could about teaching deaf children

to talk. The mentee asked many questions during the school year, which allowed me, as

the mentor, an opportunity to re-explain information I provided. In addition, she was

willing to brainstorm ideas with me as adjustments needed to be made to her groupings of

children and schedule. Lastly, the mentee was kind and compassionate with the families

of the children in her class, and she developed a strong, empathetic relationship with the

families. This may be due to the mentee growing up with a sister who had a profound

hearing loss and understanding the feelings of the family. She also understood the need

for direct, individualized instruction for this population of children.

There were areas of the study that could be improved upon. I wish I had

prepared more questions for the focus group. As I was conducting the focus group, I

tried to ask follow-up questions to draw out the participants' thoughts and feelings about

the program. However, I believe that more questions about the e-mentoring process

would have helped me as the facilitator of the group. In addition, I believe that with

more practice as the facilitator of a focus group, I would improve my ability to run such a

group.

Third, I would have liked to have interviewed a few other professionals at PPD.

In particular, I would have tried to interview the president of PPD. He may have had

particular insight to the community, administrator, and key stakeholders opinions of the

program, as well as the financial impact the program had on the school.

Fourth, I would like to have examined more test scores in the secondary data.

Test scores on the language development of the children would have been interesting to

evaluate. It would be interesting to examine whether the receptive and expressive

language score on the children followed the same pattern as the vocabulary scores.

Fifth, it would have been helpful to be able to use other platforms for viewing the

mentee while e-mentoring. Usually FaceTime was successful, but I wish I had been more

familiar with technology and could easily switch to another platform, if one did not work.

Because the state schools were typically in more rural locations, the internet connection

was not strong and the strength of the signal varied from day-to-day, during different

times of the day, and in different locations in the school building. This variable signal

caused challenges for e-mentoring using technology.

Recommendations for the program

There are some recommendations for PPD that may improve the functioning of

the listening and spoken language program. First, I believe that the number of children

admitted to the class needs to be limited until more staff are hired. It is extremely

difficult for the mentee to have more than six children in the class, without sacrificing the

quality of the education provided. I do not believe the children can make the same

progress in the listening and spoken language class, if the mentee is required to manage

11 children with hearing loss.

Second, when new staff are hired, they would benefit from e-mentoring to learn

the philosophy and teaching strategies used in the program. It is my experience that new

teachers of the deaf often need two years of mentoring to learn instructional methods for

teaching children with hearing loss to talk. Subjects, such as speech, language, auditory

skill development, and pre-academics taught to children with hearing loss require a

knowledgeable teacher, so the children are able to make adequate progress each year.

Third, counseling parents as they are enrolling in the listening and spoken

language program on the topics of spoken language and sign language is very important.

If a child were not succeeding in the spoken language program, then a move to the sign

language classroom would be good for that child. Explaining to parents the need for a

communication system, whether it is spoken language or sign, is imperative. As the

children with hearing loss approach kindergarten age, they will be learning academics,

such as reading and math. The children need a communication system to succeed in these areas.

Fourth, I would advise the staff from the spoken language program to enroll deaf children by age three. The younger the children are, the more time they have to acquire the speech and language skills necessary for a successful transition to a typical kindergarten class. Enrolling children at the age of five years makes it difficult for a child to be successful in the listening and spoken language program.

Finally, I would recommend the school consider having a first grade classroom for the children in the listening and spoken language program. For some of the children, an additional year of instruction may provide the child with adequate speech and language skills to be successful in a typical elementary school.

Recommendations for Future Research

Future research on e-mentoring might include the use of a hybrid approach to the mentoring. In this approach, the mentor would have a face-to-face meeting at the beginning of the school year at the school with the staff and observe the children. Observations of the direct instruction would be beneficial. A second observation and visit would occur later in the school year. Between the on-sight visits, the e-mentoring would take place. It would be interesting to study the benefits and challenges of the hybrid approach versus the e-mentoring, without a face-to-face observation of the program.

Similarly, it would be interesting to mentor several teachers from the same program. Analyzing the differences in the mentees' reactions to the mentoring would be beneficial, since each professional in the program may respond differently to the

mentoring process. Reflecting about this process, the differences in the mentees and the progress of the children would make an interesting study.

Conclusion

I conducted this qualitative action research project to explore the benefits and challenges of e-mentoring an adult learner in a rural state school for the deaf that teaches children with hearing loss to listen and speak. This was a unique program, because all other students and adults in the state school relied on sign language to communicate. I wanted to know if e-mentoring and communicating regularly with the mentee would help improve the listening and spoken language program at the state school. Data were gathered on this topic through my reflections in a journal, through responses to questions from the mentee, and through responses from administrators and key stakeholders who participated in a focus group. One of the main themes that emerged from this data was Change with the subthemes of opportunities, e-mentoring the spoken language program, progress of the children, perceptions of the program, increase in enrollment, and scheduling. Other major themes included Andragogy and e-mentoring, Technology, and the Future. Secondary data were gathered on the receptive and expressive vocabulary development and receptive knowledge of basic concepts of the children attending the listening and spoken language class. An analysis of this secondary data revealed that all of the children made at least a year's progress during the nine-month academic year in receptive and expressive vocabulary. In addition, seven-of-the-eight children made a year's progress in the development of receptive concepts.

Overall, the e-mentoring of an adult learner proved successful. Under the mentee's leadership of the program, most of the children with hearing loss in the listening

and spoken language program showed improvement in their language, vocabulary, speech, auditory skills, and pre-academics. The mentee and I communicated on a regular basis, mainly through FaceTime, Skype, text, e-mail, and phone calls. This frequent communication helped the mentee develop the skills needed to instruct the children. The administration and key stakeholders believed the listening and spoken language program at the state school evolved into a model program for teaching oral communication to children with hearing loss. Other state schools may wish to replicate the program to offer the children with hearing loss another communication option at their school.

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Appendix A

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EXERCISE 6.5

Mentoring Partnership Check-In

Complete this check-in periodically throughout your relationship to make sure your relationship stays on track and the trust level remains high. Discuss your results, and decide what you can do to improve your relationship.

Today's Date:	Never	Sometimes	Most of the Time	Always
We meet regularly.				
We do a good job of communicating schedule changes that may affect mentoring meetings.				
We notify one another if we cannot follow up or honor our commitments to each other.				
We eliminate outside influences and distractions when we meet.				
We check out our assumptions.				
Our communication is clear, and misunderstandings are infrequent.				
We check in with each other to make sure that we stay on track with the learning goals.				
We provide feedback regularly and make sure it is two-way.				
Our meetings are relevant, focused, and meaningful.				
We respectfully acknowledge and address conflict when it occurs.				
We are conscientious about safeguarding confidentiality.				

Appendix B

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EXERCISE 5.4

Mentoring Work Plan

Learning Goal(s)		Success Criteria	
Objectives	**Learning Tasks and Processes**	**Resources**	**Target Date**

Appendix C

Journal Questions
Date: _____

1. The most important work we did today.

2. The most valuable lesson.

3. How will I apply what I've learned?

4. What are the biggest challenges ahead for me?

5. What questions still remain for me?

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Appendix D

Possible Research Questions for Focus Group

1. Did you perceive any change in the Listening and Spoken Language Program after e-mentoring?

2. What was the best part of the Listening and Spoken Language Program?

3. What was the most difficult part of the Listening and Spoken Language Program?

4. What would you change about the Listening and Spoken Language Program?

5. What would you add to the e-mentoring program?

6. What would you eliminate from the e-mentoring program?

7. What have learned from starting the Listening and Spoken Language program?