

**DEAF INTERPRETERS:
EXPLORING THEIR PROCESSES OF INTERPRETING**

by

Eileen M. Forestal

DIONNE FELIX, PhD, Faculty Mentor and Chair

PHYLLIS CLAYTON, EdD, Committee Member

MARTINA J. BIENVENU, PhD, Committee Member

BARBARA BUTTS-WILLIAMS, PhD, Dean, School of Education

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Abstract

The thought processes of Deaf interpreters served as the research focus for this study. This longitudinal qualitative study was designed to assess the thought processes, using a three-phase research approach – a preliminary interview, Think Aloud Protocol, and a retro-debriefing interview to explore the strategies and recourses for effective interpretation. The Think Aloud Protocol was conducted with a given task in which the participants had to think aloud as they worked through the task. The preliminary interview gathered background information and experiences as interpreters and the retro-debriefing interview served a technique of collecting further thoughts after the Think Aloud Protocol activity and as a closure for the three-phase procedure. The entire study was videotaped and then translated from American Sign Language to English. A triangulation of the study explored the depths of the thought processes of six Deaf participants during the three-phase activity. Findings indicated results on best practices for strategies and resources for effective interpretation by Deaf interpreters.

Dedication

This dissertation is dedicated to my loving spouse, all my children and grandchildren who have given me (and still do) much joy. This dissertation is also dedicated to Deaf interpreters who are our “community interpreters,” to the hearing interpreters who support and work with Deaf interpreters, and to those who promote the work of Deaf interpreters.

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CHAPTER 1. INTRODUCTION

Introduction to the Problem

Deaf people are interpreting in diverse settings throughout the United States and internationally (Boudreault, 2005; Langholtz, 2004; Stone, 2005). Traditionally, Deaf people “have undertaken a variety of translation and interpreting roles” (Stone, 2007, p. 1) within the Deaf community for few centuries (Bauman, 2008; Stone, 2005). Only recently they have been recognized as Deaf interpreters as part of the interpreting profession as they are “brought in to work with hearing interpreters to provide optimal information access to Deaf individuals” (Langholtz, 2004, p. 17).

The years between 1965 and 1980 ushered in several laws and mandates made by the federal government, providing legal rights to services in employment and education for persons with disabilities (Bienvenu & Colonomos, 1990). In 1994, “legislation [of the Americans with Disabilities Act] mandated communication accessibility in legal and medical matters, promoting a greater demand for qualified Deaf interpreters” (Bienvenu & Colonomos, 1990, p. 69; Boudreault, 2005; Cokely, 2005). With this acknowledgment of such a need by Registry of Interpreters of the Deaf, a national organization of interpreters with its own certifying body, certification was offered to Deaf persons who passed the examination designed specifically for Deaf interpreters (Bienvenu & Colonomos, 1990; Forestal, 2005; Langholtz, 2004).

The requisite knowledge and skills for the certification added to the need for training of Deaf persons to qualify for the interpreting field and to build a repertoire of

interpreter educators to teach these Deaf persons (Forestal, 2005; Langholtz, 2004). The past 20 years or so had seen fluctuations in availability of workshops and training programs for Deaf interpreters. However, little or no research has been conducted to provide trainers with substantial methods, an insight of what steps Deaf interpreters do to ensure effective interpretation, or “a theoretical base to develop a core curriculum” (Forestal, 2005, p. 237; Cokely, 2005; Stone, 2005). This qualitative study sought to gain a distinctive perspective and a standard of what Deaf interpreters do in their work and how they process the vernaculars of languages to facilitate communication between hearing consumers, hearing interpreters, and Deaf consumers (Boudreault, 2005; Cokely, 2005; Forestal, 2005; Ressler, 1998).

Background of the Study

The field of English-American Sign Language (ASL) interpreters has experienced an evolution of Deaf persons working as interpreters in the last 30 years (Boudreault, 2005; Kegl, McKinley, & Reynolds, 2005; Ressler, 1998). The demand of Deaf interpreters had increased exponentially in the past 15 years, resulting in increasing numbers of Deaf interpreters recognized as professionals (Boudreault, 2005; Cerney, 2004; Cokely, 2005; Kegl, McKinley, & Reynolds, 2005). As a result, Deaf interpreters now practice in myriad settings, such as

courts, hospitals, work-related sites, training programs, conferences, theaters, and classrooms in Deaf schools and mainstream programs for Deaf children across the country, primarily in major cities. They work as translators from spoken or written English to American Sign Language, international sign language, or in a

gestural form.... They also work ... with Deaf-blind people, at international conferences and sport events such as World Games of the Deaf [now known as Deaflympics or International Games of the Deaf], using ASL or International Sign ... They are now almost everywhere in the field of interpreting with Deaf people and where ASL-English interpreting occurs. (Forestal, 2005, p. 235)

Deaf audience members attending certain conferences have indicated preferences of having Deaf interpreters working at these conferences to convey interpretation into their native language, ASL, most effectively matching the “register, affect, and cultural perspective” (Kegl, McKinley, & Reynolds, 2005, p. 16), which are critical components of an interpretation (Boudreault, 2005; Cerney, 2004). Seleskovitch (1978) pointed out that, for any conference with interpreters of spoken languages, the best practice was to procure those who would interpret into their native language. In this case, the native language of Deaf audiences is ASL.

In most situations, a Deaf interpreter works in tandem with a hearing interpreter to ensure that the clientele, especially Deaf consumers, receive “effective communication” (Boudreault, 2005, p. 326). In a Deaf-hearing interpreting team, the hearing interpreter listens to the spoken language, in this case, English, from a hearing consumer and interprets the message into ASL to the Deaf interpreter (DI). The DI then interprets the information into the language or communication system best understood by the Deaf consumer. Conversely, the DI conveys the message to the hearing interpreter, who subsequently interprets the information into spoken English for the consumer who hears (Boudreault, 2005; Cerney, 2004; Ressler, 1998). This process will depend on whether the interaction is monologic (such as keynote speech at a conference, lecture in a

classroom) or dialogic, in other words, in face-to-face discussions (Cerney, 2004; Cokely, 2005). Contingent on the Deaf consumer's preferences, linguistic and communication systems, the DI will incorporate different linguistic features and communicative strategies into his interpretation (Cokely, 2005). The linguistic, discourse, and cultural components of ASL contribute toward producing a "more cohesive and culturally appropriate ASL" (Cerney, 2004, p. 9; Boudreault, 2005; Stone, 2005). Communicative strategies may include gestural systems, writing, drawing, props, and communication modalities for Deaf-blind persons, International sign, or other signed languages (Boudreault, 2005; Cerney, 2004; Cokely, 2005; National Consortium of Interpreter Education Centers – Deaf Interpreting [NCIEC], 2009). Furthermore, DIs may interpret between ASL and other signed languages, such as Mexican Sign Language, Russian Sign Language, Quebec Sign Language, if they were fluent in these languages (Boudreault, 2005; Forestal, 2005).

With the recognition of the emergent profession of Deaf interpreters, the Registry of Interpreters for the Deaf (RID), a national organization with a certifying board, designed a certification examination for Deaf interpreters, and also developed a standard practice paper, *Use of Certified Deaf Interpreters*, in its efforts to validate and support Deaf interpreting as a viable profession (Boudreault, 2005; Cokely, 2005; Forestal, 2005: RID, 1997). The NCIEC-DI (2006), funded through the Rehabilitative Services Administration, adopted a mission statement that, "in a nutshell, is to improve access to interpreting services by underserved and at-risk Deaf adults and youths who do not benefit from traditional ASL-English interpreting services [and] to advance the practice and education of Deaf Interpreters" (p. 1). Additionally, development of competency in

interpreting for Deaf persons has been a primary goal within the field of interpreting and of the National Consortium of Interpreter Education Centers (2006).

The “growing demand for and presence of Deaf individuals working in a team with non-Deaf interpreters... in a range of dialogic interactions [for instance, in] mental health and medical settings” (Cokely, 2005, p. 19) and legal settings (Boudreault, 2005; Cerney, 2004) created a “shifting positionality” (p. 3) within the ASL-English interpreting profession. This shifting positionality led to a new paradigm shift towards working in Deaf-hearing interpreting teams and the need for research on Deaf persons working as interpreters and in teams (Boudreault, 2005; Cerney, 2004; Cokely, 2005; Kegl, McKinley, & Reynolds, 2005). Thus, hearing interpreters could no longer claim the position between the Deaf and hearing worlds as their own (Cokely, 2005). Since the RID’s inception in 1964, the professional hearing interpreter’s role had evolved to a point that created a gap between the Deaf community and the interpreting profession as a whole that led to an alienation of Deaf people and the Deaf community politically and socially from the profession (Cokely, 2005).

This paradigm shift within the interpreting community provided an opportunity for Deaf persons to work as interpreters along with hearing interpreters and be professionally involved with RID. The Deaf interpreters are striving to gain control of translating and interpreting for one another that had always been part of the Deaf community (Cokely, 2005). Deaf interpreters are moving towards to becoming, once again, “an integral part of Deaf life” (Boudreault, 2005, p. 323) and the interpreting community (Bartley & Stone, 2008; Bienvenu, 1991; Boudreault, 2005; Cokely, 2005; Stone, 2005).

Within the Deaf communities, Deaf people were very often involved as “ghost writers” (Bartley & Stone, 2008) for one another, translating letters, applications, resumes, and so forth; interpreting and facilitating interaction with Deaf-blind and foreign-born Deaf persons, and assisting fellow community members with communication during doctor visits, banking and minor court/legal matters (Bauman, 2008; Boudreault, 2005; Stone, 2005, 2007). Reciprocity always has been and still is a critical aspect of being part of the Deaf community. Certain Deaf people, who were known for their translating and interpreting skills, often assumed the role as a translator and interpreter (Bienvenu, 1991; Boudreault, 2005; Forestal, 2005; Ladd, 2003; Langholtz, 2004).

Statement of the Problem

The continued growth of the Deaf interpreting profession attracted attention of researchers. Ressler’s (1998) research focused on some aspects of the interpreting process occurring in a Deaf/hearing interpreter (HI) team during a staged lecture in spoken English and its subsequent interpretation into ASL. Cerney’s (2004) study examined the equivalency of the message conveyed from the hearing interpreter to the Deaf interpreter that was then interpreted to the Deaf audience.

In their conclusions, Ressler (1998) and Cerney (2004) asserted that further research on the processes of the Deaf-hearing interpreter team was needed. Ressler also recommended that more research was needed to explore how DIs function in their own interpreting processes, how they work in teams, and how the team dynamics affect their work in terms of interpersonal and intercultural relationships. In addition, Cerney

recommended that research focus on the skills and knowledge necessary for DIs to possess, especially what specific skills and knowledge were applied during their processing work. Cokely (2005) asserted that through the rudimentary research conducted thus far, it was apparent the DIs' strategies for interpreting were noticeably different from those used by hearing interpreters and very little is known about what they do as they work towards "facilitating communication" (p. 19).

It is not known what steps Deaf interpreters use in their work to ensure effective interpretation (Cokely, 2005; Forestal, 2005; Stone, 2005). Based on her research on Deaf interpreters, Ressler (1998) pointed out a need to explore what transpires in the mind of a DI during the process to analyze a text for an interpretation and how the DI initiates and works through the interpreting process for an equivalent message. Cerney (2004) substantiated this argument in his dissertation. To compound the problem, very little is known on whether current practices in interpreter education are applicable and effective for teaching Deaf persons as interpreters (Boudreault, 2005; Cokely, 2005; Winston, 2005). There is no known research on the education of Deaf persons as interpreters; hence, there is no means to determine the effectiveness of teaching approaches for DIs without an understanding of their thought processes (Cokely, 2005; Stone, 2005; Winston, 2005).

Purpose of the Study

The purpose of the Think Aloud Protocol as a qualitative research approach was to determine the steps that Deaf interpreters use in their work for effective interpretation. Use of Think Aloud Protocol (TAP) as a research tool provided some insight into the

steps used by DIs towards developing an overall effective interpretation for a specific audience from the interpreted source message via the hearing interpreter. TAP also provided a means to look into the thought patterns as the DIs work through their steps for an effective interpretation. A second objective was to explore the DIs' educational background, including how and why they got involved and continue their work as DIs through a preliminary interview with open-ended questions.

Rationale

Bartley and Stone (2008) indicated that “the expertise [of the Deaf interpreter] was not well understood” as there is “virtually no research that investigates what it is Deaf people actually do when they work with a non-Deaf colleague in facilitating communication” (Cokely, 2005, p. 19). Cokely asserted, “On the surface, it appears that the cognitive, linguistic, and communicative processes that are at work in such interactions are fundamentally different for Deaf people and for their non-Deaf teammates” (p. 19), which was corroborated by Boudreault (2005). Cokely surmised after several meetings with a group of DIs discussing their work that it was “clear that the linguistic and communicative strategies that [they] commonly employ are markedly different from what has become expected, conventional practice among non-Deaf interpreters” (p. 20). To reiterate, there is a vital “need to look into what Deaf interpreters understand about interpreting, what is entailed as a process of interpreting, and how they work with [different vernaculars of sign] languages and the processes related to interpreting” (Forestal, 2005, p. 257).

Research Questions

Based on the purpose and problem statements, this study asked the following questions: What steps do Deaf interpreters use in their work to ensure effective interpretation? What strategies and resources do Deaf interpreters use while working on the analysis for interpretation?

Significance of the Study

The goal of this research was to develop a rudimentary and clearer understanding of steps that the DI carries out for effective interpreting. Understanding these steps through their actions, challenges, and decisions that the DI might undertake during the task analysis was a crucial component in describing these processes. Information from the preliminary interview and insights into the thought processes of the DI offered a pathway for advancing further research and looking into the domains and competencies for interpreter education. The metacognitive statements, made by the Deaf interpreters during the TAP sessions, might lead to some predictors of teaching skill development and cognitive processing for interpreting, thus adding to the research literature that will enhance interpreter education for Deaf persons. Further, this became a first iteration of a “community-based model [that] has yet to be developed” for Deaf interpreters (Bartley & Stone, 2008).

Definition of Terms

The terms used in this study are defined in the following explanations:

Deaf/deaf. Deaf refers to a community of Deaf people who identify themselves with Deaf culture with its conventions and practices and use ASL as a primary means of communication; whereas the term, deaf (in its lowercase “d”), refers to the audiological condition of hearing loss or deafness with little or no connection to the culture of Deaf people (Mindess, 1999; Padden & Humphries, 2005).

Interpreting. This refers to an act or a process in which a spoken or signed language is rendered into another language at the same time as it is spoken or signed, such as from spoken English to ASL or vice versa (www.rid.org).

Retro-debriefing. Retro-debriefing is an interview that takes place after the Think Aloud Protocol activity. After completion of a given task in which the participants discussed their thoughts as they worked during TAP, the participants are asked to share their experiences and to recall their thoughts and what they learned; the objective of this type of debriefing is to glean further insight into the cognitive processes (Ericsson & Simon, 1993).

Think Aloud Protocol. This is a method of study in which participants are asked to articulate their thoughts as they work on a given or specific task with the main objective to get a glimpse of cognitive processes (Ericsson & Simon, 1993).

Translating. This refers to an act or a process of rendering a written or videotaped text into another language, for example. from written Spanish to written English or written English into ASL.

Assumptions and Limitations

The assumptions inherent in this study include the following:

1. It was assumed that the participants have adequate experience as Deaf interpreters to contribute to a better understanding of their interpreting processes.
2. Given the qualitative research, it was assumed that the participants will be willing to follow the instructions as set forth for the three steps planned for this study.
3. This study assumed that the research effectively represented the subjective findings from the participants. The study's potential biases were acknowledged and integrated in the design of the study to maintain trustworthiness.

The limitations in this research include

1. This study was limited to a small group of participants with similar experiences as Deaf interpreters from the Northeast Coast. Randomness in selecting the participants was very limited as most DIs are familiar to each other; thus the process of selection diminishes the generalizability of the findings.
2. Participants were from one region; therefore, findings from this study cannot be generalized to Deaf interpreters in other regions.
3. The participants had little or no experience with the research design, based on Think Aloud Protocol and Retrospective Debriefing.
4. As in any research, there was potential for researcher bias. Chapter 3 will discuss how this will be addressed.

Nature of the Study

The qualitative and cross-sectional research design was based on a three-step process (Bernardini, 1999; Ericsson & Simon, 1994; Hansen, 2005; Jääskeläinen, 1999; Rydning, 2000; Zhao, 2004). The first step entailed an interview with open-ended questions on personal and professional background. Second, there was a “concurrent” (Bernardini, 1999, p. 1; Ericsson & Simon, 1994, p. 16) Think Aloud protocol (Ericsson & Simon, 1994, p. 3; Bernardini, 1999, p. 1), also known as “concurrent verbal protocol”

(Taylor & Dionne, 2000, p. 413). During this protocol, the participants assessed a signed text for interpretation for a specific audience by verbalizing the thoughts as they occur in the participants' mind during the task. The last step included "retrospective debriefing" (Taylor & Dionne, 2000, p. 413) with the participants after the Think Aloud protocol was completed to add further insights on the data, collected through the Think Aloud protocol (Ericsson & Simon, 1994; Taylor & Dionne, 2000).

Organization of the Remainder of the Study

Chapter 2 provided a review of literature germane to this study. Chapter 3 discussed the three-step research design and how TAP was utilized as a research method. Chapter 4 detailed an analysis of the protocols and the processes observed. Chapter 5 presented the results from the analysis along with implications, contributions, and conclusion(s) of the study.

CHAPTER 2. LITERATURE REVIEW

Deaf Interpreters

Demographics of Deaf Interpreters

The Registry of Interpreters for the Deaf (RID) is a national organization of ASL-English interpreters with a certifying board. RID (www.RID.org) reported as of July 20, 2009, there were 119 Deaf interpreters who currently hold certification. RID (2008) also stated that approximately 40% of Deaf candidates for certification failed the written component of the examination, making them ineligible to take the interview and performance skill components. This failure rate was of major concern to RID, which led to its revisiting the certification examination for DIs (NCIEC, 2008; RID, 2008). Another area of concern was the dearth of training and education to increase the numbers of certified DIs (Boudreault, 2005; Cokely, 2005; Forestal, 2005; NCIEC, 2008; RID, 2008).

The latest research came from a national survey conducted under the auspices of the National Consortium of Interpreter Education Centers – Deaf Interpreting Team (NCIEC, 2009) in the spring of 2008, with 196 Deaf respondents who identified themselves as DIs. The overarching objectives of this survey were to investigate the backgrounds of DIs with regard to family, education, credentials, and experience; the settings where DIs work; consumers they serve; professional development needs and goals. Of the 196 respondents, 122 were female and 74 male; 172 were European Americans; 8 Asian Americans or African Americans; 8 Hispanic Americans; 8 unknown. On the highest level of education achieved, 36 had a high school diploma; 23

had an associate degree; 37 a bachelor's degree; 66 a master's degree and two had a doctorate degree. Thirty respondents were in the process of earning a degree: 4 for an associate degree; 8 a bachelor's; 9 a master's; 9 a PhD. Moving on to certification held by the respondents, 63 held certification awarded by RID, which was 32% of the sample (NCIEC, 2009).

On the subject of their status of employment, thirty respondents (18%) worked full-time as DIs whereas 138 (82%) worked in that capacity on a part time basis. In addition, a majority of those who worked full time were in roles as staff members while 80% of the part-timers freelanced in their DI work through referrals (www.nciec.org, 2009). Regarding placement of employment, the NCIEC survey (2009) stated that the bulk of the DIs' work took place in medical, mental health, social services, and legal settings, followed by business and vocational rehabilitation sites, substantiated by Boudreault (2005), Cokely, (2005), and Forestal (2005) through their research.

The Beginnings of Deaf Persons Working as Interpreters

Historically, not much has been known about the beginnings of Deaf persons translating or interpreting and how Deaf persons got involved in interpreting (Bartley & Stone, 2008). However, Bartley and Stone surmised from their research and studies that as long Deaf people have been in existence, they have been translating and interpreting within the Deaf community. The earliest documentation of a Deaf interpreter being used in a courtroom was in the year of 1886 in an Indiana Supreme Court (Mathers, 2009). Quigley and Youngs (1965) discussed very briefly about Deaf persons working as interpreters in their book, *Interpreting for Deaf People*, which seems to be the earliest known publication that made a reference to Deaf interpreters.

As a collective group (Bauman, 2008; Boudreault, 2005; Humphries & Padden 2005; Ladd, 2003; Stone, 2005), Deaf people share the same language (ASL or their respective country's sign language), cultural experiences and knowledge and also understand what it is like to constantly miss information or not be able to obtain information in the best manner understood. Bienvenu (2001) and Boudreault substantiated that Deaf persons would interpret for each other to assure full understanding of what was being communicated, whether in classrooms, meetings, appointments, or written documents and letters. It was found that Deaf children, both in and out of the classroom, would frequently explain, rephrase, or clarify for each other the signed communication used by hearing teachers (Bienvenu, 1991, Boudreault, 2005; Stone, 2005). These Deaf students would informally assume this role "without expressly being asked, as a 'relay' or 'facilitator' between the teacher and the others in class" (Boudreault, 2005, p. 324).

Many Deaf adults of Deaf parents have reported that they frequently translated and interpreted for their parents, thus becoming bilingual in ASL and English (Bienvenu & Colonomos, 1990; Boudreault, 2005; Collins & Roth, 1992). This was corroborated by Bartley and Stone (2008), who found that Deaf persons who had English skills often became "ghost writers" (Bartley & Stone, 2008) for certain communication needs such as letters or memoirs, forms, resumes and the like. Bartley and Stone discovered evidence through their research that ghost writing, translating and interpreting had gone on for many generations in Australia and in the United Kingdom. Another interesting characteristic of Deaf persons with balanced bilingual skills was that they would often take on the role of *reporting* news from newspapers and other sources in the Deaf clubs

or wherever Deaf persons gathered (Stone, 2005). This phenomenon had likely transpired ever since the first Deaf community came into existence centuries ago (Bauman, 2008; Stone, 2005). To reiterate, Boudreault and Stone found that within the Deaf community, ghost writing, reporting, translating, and interpreting was a natural event and a form of reciprocity, rather than a paid service.

The Evolution of Deaf Interpreting as a Profession

“There is a new trend around the world for ... Deaf interpreter[s] ...” (Boudreault, 2005, p. 323) as the status of Deaf interpreters rose “to the professional level” within the past two or three decades (p. 325). This emergence of DIs as professionals created a ripple effect within the interpreting profession on different levels (Dey, 2009). More attention has been given to this evolving profession through RID’s recognition, support, and provision of examinations and certifications, some individual states’ licensing procedures and increased employment of DIs (www.rid.org). RID’s Code of Professional Conduct, revised in 2005, includes the consideration of DIs to assure communication access for certain situations (www.RID.org). State Commissions, such as the Massachusetts Commission for the Deaf and Hard of Hearing and Board of Evaluation of Interpreters (under the auspices of the Texas Department of Assistive and Rehabilitative Services), established standards for state level certification for DIs (www.dars.state.tx.us/dhhs/bei, 2009; www.mass.gov/mcdhh, 2009).

Federal funding had been awarded to the NCIEC’s Deaf Interpreting project to explore issues related to Deaf Interpreters, including educational and employment opportunities, data collection on the work of Deaf Interpreters (NCIEC, 2009). The impact of the Americans with Disabilities Act and other federal laws that mandated

"communication accessibility" (Bienvenu & Colonomos, 1990; Boudreault, 2005, p. 326) increased hiring of DIs to work in legal and medical settings and to interpret for Deaf-blind, semi-lingual and monolingual Deaf consumers (Boudreault, 2005). In addition, mounting numbers of foreign Deaf persons immigrating to the United States created an ever-increasing demand for DIs in major cities (Boudreault, 2005; Cokely, 2005; Langholtz, 2004).

The increasing numbers of Deaf interpreters within the profession has raised some concerns among hearing consumers and hearing interpreters regarding accountability, increased costs, and judgments of the hearing interpreters' qualifications and skills (Boudreault, 2005; Cokely, 2005 Forestal, 2005). Kegl, McKinley, and Reynolds (2005), Langholtz (2004), and Mindess, (1999) affirmed that the benefits of having DIs are that linguistic and cultural adjustments would become part of the interpretation and that communication and understanding by all parties – the hearing and Deaf consumers – would be optimized. In the long run, misunderstandings and frustrations would be alleviated, ultimately saving time and money (Forestal, 2005; Langholtz, 2004).

Boudreault (2005) steadfastly believed that even though DIs acquired their language and cultural competency through their experiences growing up in the Deaf community, there is a need for DIs to have an accompanying formal education to achieve the high standards of interpreting mandated by the interpreting profession. Boudreault and Stone (2005) stressed that interpreting processes are complex, requiring numerous ethical decisions and ameliorating power imbalances between the hearing and Deaf consumers, and, at times, with hearing interpreters. Formal education should include theoretical knowledge of interpreting, linguistics, studies in mass culture and Deaf

culture, ethical reasoning, communication skills and such (Boudreault, 2005; Cokely, 2005).

The Deaf Translator Norm

Stone (2005) discussed how Deaf interpreters are taking the “Deaf translator norm” (p. 127) with them into the interpreting profession, which entailed that the Deaf persons receiving the information would experience “a parallel understanding of the information ... through a clear mental picture” (Stone, 2005, p. 129) in their target language (TL). This norm provides assurance that the message was “TL driven” (Stone, 2005, p. 126), including rapport with the Deaf audience, a linguistic and “a Deaf culturally (centered) form of translation” (Stone, 2005, p. 122), in other words, into a “Deaf way of thinking” (Stone, 2005, p. 125).

In Stone’s (2005) interviews, DIs explained that the information delivered in the TL must be “culturally sensitive and appropriate to the audience” (Stone, 2005, p. 57), thus a responsibility of the Deaf interpreter is to aim for the TL to be cohesive and “maximally relevant” (Stone, 2005, p. 126). The DIs observed that the hearing interpreters’ interpretations were influenced by the language used by the “hearing mainstream” (Stone, 2005, p. 126) society. Stone also noted that the hearing interpreters demonstrated a degree of impartiality regarding the duration of message delivery, making comprehension of the TL difficult. In the same line of thinking, Boudreault (2005) stated that DIs must also work on the imbalance of power between the hearing and Deaf consumers that, in turn, challenges the DIs to empower the Deaf consumers.

Stone (2005) underscored that the DIs are primarily interpreting from a “majority language to a minority ... language” (p. 59), namely sign language, which is an

oppressed language (Ladd, 2003; Bauman 2008). They have the linguistic and pragmatic skills and, most importantly, “cultural knowledge” (p. 62) that makes it possible to weave “contextual assumptions” (Stone, 2005, p. 129) into the translation or interpretation into the TL (Stone, 2005). DIs also use culture-specific gestures, low/close vision strategies and other modalities for Deaf-blind persons, sight translation (from printed materials) and foreign sign languages or international sign language as some of the language and vernaculars for effective interpreting, depending on the communication or physical needs of the Deaf consumers (Boudreault, 2005; www.nciec.org, 2007).

Substantiating this, Zhao (2004), in his studies on translators, stated that translators primarily work into their "mother tongue" (p. 18), their first or native language, as they translate from source materials that are in their second language. Zhao, in his research on translation from English to Chinese, argued that translating into their mother tongue enabled the translators to utilize their worldviews and cultural knowledge to include appropriate contextual assumptions into the TL, lending to more equivalency in the target message. Based on the assumption that most translations go into the mother tongue, DIs work with a source language, English, that has been interpreted into ASL by the HI (Boudreault, 2005).

DIs have the “cultural and linguistic competence” (Stone, 2005, p. 127) to most effectively interpret and translate into their mother tongue (Boudreault, 2005; Cerney, 2004; Cokely, 2005; Stone, 2005). From a socio-linguistic perspective, DIs are “balanced-bilinguals... with skills in at least one written and one signed language” (Boudreault, 2005, p. 234). They have taken on a critical role, formally or informally, to ensure that the Deaf person(s) understands the message from the hearing person by

transmitting it “clearly and grammatically in a visual and spatial medium” (Boudreault, 2005, p. 325) through a Deaf way of thinking (Stone, 2005).

In his studies on Deaf interpreters and the Deaf translator norm, Stone (2005) argued that the norm used by DIs, because of the visual and spatial nature of sign language, added a dimension to the interpretation, different “than other mainstream translation norms” (Stone, 2005, p. 236). The goal of translation is to produce the TL in a manner that the audience will readily comprehend with “the least cognitive effort” (Stone, 2005, p. 236). Stone emphasized that “the Deaf translation norm draws upon the Deaf [interpreters’] ability to think like other Deaf people, relying primarily on their visual experience of the world and visual conceptualisation [sic] of information, to construct the TL as cultural insiders” (p. 237). Stone claimed that his studies show that there is a “community-based model” (Bartley & Stone, 2008), the Deaf translator norm, and that utilizing this norm would be a great advantage for interpreter education programs for both hearing and Deaf interpreters. However, many programs, especially in the United Kingdom, were based on “mainstream models of translation and interpretation” (p. 242). In his conclusion, Stone asserted that his introduction of the concept of Deaf translator norm would assist both Deaf and hearing interpreters in relaying information to a Deaf audience through the Deaf way of thinking. Stone also stressed that consecutive interpreting, wherein the interpreter takes time to prepare the interpretation, would improve the quality and equivalency of the interpretation. Stone’s (2005, 2007) study provided a baseline to begin looking at the processes used by DIs, a starting point of an analysis from the DIs’ perspective. Stone concluded that further use of Think Aloud Protocol would provide a broader baseline to examine what is entailed in

the actual work of DIs in light of thought and decision-making processes in a given setting or a text. For further studies, Stone recommended that the processes used by Deaf interpreters to “construct” (p. 246) their interpretation or translation be explored.

Deaf-Hearing Interpreting Team Processes

There have been three major studies related to Deaf interpreting. Ressler's (1998) research for her master's degree and Cerney's (2004) dissertation primarily looked at the processes within the Deaf and hearing interpreter (HI) teams. Stone's (2005) study was based on Deaf interpreters.

As discussed in Chapter 1, the DI and the HI work as a team in most settings. At present, not much is empirically known about the dynamics, team processes, and interpretation between the hearing consumer, HI, DI, and the Deaf consumer (Cerney, 2004; Ressler, 1998). Cerney stated that this aspect of the interpreting profession was an “under-explored process” (p. 92), even though DIs and HIs have been formally teaming in the aforementioned configuration for more than 20 years.

Ressler (1998) focused on a comparative analysis between the DI and HI as they worked on interpreting from spoken English as the source language (SL) into American Sign Language, the target language (TL), in a simultaneous mode. Ressler's aim was to analyze the process for “physically observable differences” (p. 5). The findings from this study established that there were differences mainly “in six areas: [a] pausing, [b] eye gaze, [c] head nods, [d] the number of signs produced per minute, [e] fingerspelling versus signs and [f] clarifications between the two interpreters” (Ressler, 1998, p. 35). Ressler also discovered strategies that were primarily used by the HI while the DI was interpreting, providing the DI support, clarification and information. Some strategies used

by the DI were designed for clarification with the HI, checking for message accuracy, and such (Ressler, 1998).

Cerney's (2004) research was similar to Ressler's (1998); however, the research was conducted live during a conference keynote with a working DI/HI team. Cerney primarily explored "the message equivalence between the source presenter, the hearing interpreter and the Deaf interpreter" (p. 11), the "processing time" (p. 12) that elapsed between the three parties, and the "structural differences" (p. 12) in the interpretation within the HI's and DI's TL. His findings pointed out the effectiveness of the message equivalence as the DI incorporated an "overall accuracy" (p. 93) in the TL and generated a "more culturally appropriate and idiomatic target text" (p. 93).

The implications from Ressler's (1998) and Cerney's (2004) research strongly indicated the need to explore the thought processes of a DI during an interpreting assignment and how the DI initiates and works through the process for an equivalent message. Consequently, the next step for research would be to focus primarily on the Deaf member of the interpreting team (Cerney, 2004; Ressler, 1998).

Think Aloud Protocol

Think Aloud Protocol (TAP), borrowed from psychology and cognitive science, is a research method where individuals are asked to Think Aloud or express "what goes through their head" (Somerén, Barnard & Sandberg, 1994, p. 8) while working on a task, and then the "verbal protocol" (Somerén, et al., 1994, p. 8; Ericsson & Simon, 1993) is analyzed. This approach allows access to the thought processes through a *window* to see how and what the individuals are thinking, "to uncover the translator's "black box,"

namely mental activities while engaging in translating” (Li, 2004, p. 301). The TAP process enables the researcher to see how the individual is approaching the task or problem, steps undertaken, strategies employed, past experiences drawn upon, where there might be confusion or challenges within the task, solving the task, and the decisions made. TAP focuses on the process of working through a task or a problem, not the product or the outcome (Ericsson & Simon, 1993; Kussmaul & Tirkkonen-Condit, 1995).

Because this approach allows a view into the thought processes, rather than the product or the outcome itself, TAP provides a “very direct method to gain insight in the knowledge and methods of human problem solving” (Somerén, et al., 1994, p. 1). It is recognized and accepted as an essential method to acquire data on “cognitive processes” (Somerén, et al., 1994, p. 2) that would be otherwise difficult to observe using other research methods (Bernardini, 1999; Ericsson & Simon, 1993).

The past two decades have seen an escalation of the importance of studying translation processes as well as the use of TAP as a qualitative research tool (Li, 2004; Rydning, 2000). TAP is currently used to investigate differences and similarities in task management or problem solving, degrees of difficulty in tasks, outcomes of instruction, and factors influencing steps and techniques in problem solving in computer sciences, mathematics, physics and the field of education, (Bernardini, 1999; Ericsson & Simon, 1993; Someren, et al., 1994).

TAP in Translation Studies

TAP became a popular research method in the 1980's, even more so during the 1990's. Translation researchers picked up TAP as a means to investigate the processes utilized by the translators, using it primarily for comparative study between experienced

translators and novice translators or students (Bernardini, 1999). Bernardini claimed that TAP provided a “descriptive, scientific” (p. 2) research approach to explore the cognitive processes during translating and interpreting, which contributed towards substantially more empirical research. Since 1985, TAP has become “a major instrument in process-oriented translation studies” (p. 1), Bernardini indicated that earlier research had been based on indirect assessment of the “translator’s mind” (p. 1). Thus, TAP is “gaining ground” (Bernardini, 1999, p. 1) as a research tool to “ask translators themselves to reveal their mental processes in real time while carrying out a translation” (p. 1). Essentially, the objective of TAP is to “collect the process” (p. 20) as patterns emerge from the data.

Zhoa (2004) provided details on how several TAP studies identified "an array of cognitive processes involved in translation" (p. 16) from a number of participants who did a variety of “translation tasks, including conducting memory search of equivalents, drawing on subject knowledge, resorting to external resources” (p. 16). Zhoa pointed out that patterns were noted throughout the translation processes, revealing "a number of translation stages ..., namely, comprehension, production, and monitoring" (p. 17). Zhoa’s research also discovered the "three levels of processing in ST (source text) comprehension: the textual level, the linguistic level, and the notional level" (p. 17), which helps to break down the translation processes. He discussed how TAP "contributed to understanding how translation is carried out to a higher level of abstraction." (p. 17), which led to the question of what DIs do in their process of translating and interpreting, what processes from the SL go into the TL production and how do DIs double check or monitor their translations.

Techniques for Effectiveness of TAP

Ericsson and Simon (1993) delineated techniques to assure the effectiveness of TAP as it is administered with Bernardini (1999) supporting their recommended procedures. The techniques, as explained by Ericsson and Simon (1993), were that the tasks should “take much longer than ten seconds to complete” (Bernardini, 1999, p. 2); the subjects do not feel involved in “social interaction” (Bernardini, 1999, p. 2); it was critical that interaction between the subject and researcher be virtually nonexistent. Additionally, the amount of “practice and experience may affect the amount of processing ... fewer mental states will be available for verbalization to subjects experienced in a task” (Ericsson & Simon, 1993, p. 127).

Ericsson and Simon (1993) and Bernardini (1999) discussed that personality and personal background need to be considered along with the data, stating that “individual differences do exist, and research should not conceal them.” They advised that “the effects of individual differences” (Bernardini, 1999, p. 3) are limited but the researcher should “take them into account during the analysis, in order to obtain more reliable and generalizable data” (Bernardini, 1999, p. 3).

Limitations of TAP

More often than not, the persons doing TAP are not accustomed to “verbalizing their thoughts” (Rydning, 2000, p. 98) during the work of translating. Thinking aloud for the sole purpose of a study or observation, for most, creates a sense of artificiality. The researcher can attempt to create an environment conducive for this observation; however, Rydning doubted that a warm-up exercise would alleviate the artificiality.

Another weakness of TAP is related to the text of the source language, which could become truncated. Even though the reduced version would be self-contained, the function of the text might be eliminated, creating a loss of complete understanding in some units of the text. Rydning (2000) determined that the entire text should be provided to assure a full grasp of the context of the given text. This type of protocol requires more time for people to process and complete the tasks, as they need to slow down in order to think aloud (Ericsson & Simon, 1993; Someren, et al.,1994).

Trustworthiness in TAP

Psychological studies revealed no evidence that people give wrong information regarding thought processes during the think aloud protocols (Someren, et al, 1994). Li (2004) believes that TAP, however “imperfect as [it] may be” (p. 302), has a value in revealing the translators’ mental activities in some measure as long as fundamental safeguards were applied during its application to enhance the trustworthiness of this research approach. Concerns of TAP as an “empirical study” (Li, 2004, p. 303) are its “truth value... applicability... consistency..., [and] neutrality” (Li, 2004, p. 303). With TAP being a “new kid on the block” in the realm of qualitative research, safeguards are even more essential in addressing these concerns. Li strongly felt, based on his analysis of 15 TAP research articles published in reputable journals in the translation field, the trustworthiness of TAP studies were seriously compromised if safeguards were not included or explained. Whether the safeguards were followed stringently or not, it was best that the results of the TAP studies were considered as “working hypotheses” (Li, 2004, p. 309) for further studies on a larger scale or through a more rigorous research design.

Safeguards for TAP

Li (2004) recommended and delineated the several safeguards. The first one relates to the participation of the subjects must be voluntary with no conflict of interest for either the researcher or the participant. Secondly, during the briefing, the researcher needs to inform the participant of the purpose and approach of the project, what the requirements and expectations are, how the data will be used, and how confidentiality will be maintained.

Interpretative Theory of Translation

The “interpretative theory of translation” (Rydning, 2004, p. 92) is known basically as a process or activity that calls for steps towards understanding and analyzing the source language and re-producing it into the language intended for a specific audience, called the target language. It is critical that the interpreter or translator has a mastery of both the source and target languages. Seleskovitch (1986), well noted as an originator for this theory, emphasized that there is “an intermediate phase between the source language and target language (as found in Rydning, 2004, p. 92), where the comprehension of the source language occurs through a method or a series of methods for an accurate interpretation or translation into the target language.

The interpretative theory has four major components: a command of the source language (most often the interpreter/translator’s native language); a command of the target language(s), (acquired at a later age); and global knowledge coupled with knowledge of linguistic information of both languages. The final stage encompasses the

methods and techniques of interpreting and translating utilized during the interpretive process (Jungwha, 2003).

During translating or interpreting, the process comes to a full head when world knowledge is incorporated into the translation, along with the linguistic components of the source and target languages (Jungwha, 2003). Jungwha considered that the interpreters are “part of the event at which they interpret. They not only see the parties, but they also know who the participants are and in what capacity they [are involved]” (p. 4). The cognitive processes demonstrate the interpreter’s “awareness of situational context” (Jungwha, 2003, p. 4) allowing the interpreter to observe the “proceedings ... to gather sufficient knowledge to [interpret] appropriately” (Jungwha, 2003, p. 4), ultimately rendering an “equivalence” (p. 4) of the source language’s message in the target language. The result of the interpretation reflects the level of his understanding of the situational context and grasp of the event and the language that comes with it (Jungwha, 2003; Rydning, 2000; Seleskovitch, 1978).

The intermediate phase, as Seleskovitch explained, is where the meaning of the source language and the “sense” (Jungwha, 2003, p. 10) of the event and context are being broken down into units, based on the schema of what was understood, yet retaining the intent of the message when it is re-structured into the target language. This phase is where the translator must put in the greatest effort to provide an equivalent message in the best cultural and linguistic sense most readily understood by the target audience (Jungwha, 2003; Seleskovitch, 1986). Jungwha and Rydning (2000) stressed that this phase is a critical and natural component of the interpreting or translating process, yet the most difficult to actually observe.

Think Aloud protocol is a means to gain insight into what is occurring in this intermediate phase, through a verbalized description of the mental work of the interpreter/translator actively engaged in the process. Rydning (2000) argued that TAP does not actually “throw ... the light on the process leading to the final solution” (p. 100) in the interpretation. Still, it provides valuable insight by describing the mental activities during TAP’s verbalization. Rydning cautioned that generalizations on findings from TAP should not be made; however, she asserted that findings could be used as stepping stones towards a deeper understanding of the mental processes occurring during interpreting and translating. Rydning believed that continuation of studies using TAP would grant further insight into the mental activities and stages of the interpreting or translating processes that emerge through the verbalizations.

According to Olk (2002), translation is considered to be both linguistic and cultural. One cannot exclude one or the other without skewing the translation. Thus, “intercultural competence” (Olk, 2002, p. 122) is a requisite skill for translating and interpreting.

Summary

The literature review revealed the historic roots, current perspectives of Deaf interpreting, and the major studies on Deaf interpreting and Deaf-hearing interpreter teaming processes, providing a pathway for greater insight on the work of Deaf interpreters. The theoretical and conceptual fundamentals of Think Aloud Protocol, understanding of the usage of TAP in translation studies, and TAP’s related issues contributed towards the research approach to enhance the effectiveness of TAP as a

research design and for data collection and analysis that will be discussed in the next chapter. Moreover, the research questions were refined to focus on the actual steps of the interpreting processes of Deaf interpreters.

CHAPTER 3. METHODOLOGY

Research Design

As mentioned earlier, the purpose of this qualitative, descriptive, and cross-sectional study was to gain insight into the cognitive processes of Deaf interpreters while they are working. Think Aloud Protocol (TAP) was used as a fundamental research tool along with a preliminary interview and a post-interview, known as retro-debriefing. Generalizations based on theories of TAP guided the research to an “end point” (Creswell, 2003, p. 132) as the three-step research design was inductive, constructing an analysis from the data to discover themes, patterns, and generalizations (Bernadini, 1999; Creswell, 2003; Ericsson & Simon, 1994; Gerloff, 1988).

The premise for this particular research design was to “explore processes, activities, and events” (Creswell, 2003 p. 183) to establish a baseline on the processes used by DIs in their interpreting work and their motivation to be involved in this type of work. Creswell explained that such qualitative research provides an opportunity to do an in-depth exploration of a study, in this case, a process within the participants’ perspectives, linguistic and “cultural lenses” (Stone, 2005, p. 92) and work related to interpreting. The first step entailed an interview with open-ended questions on personal and professional background. Second, there was a “concurrent” (Bernardini, 1999, p. 1; Ericsson & Simon, 1994, p. 16) Think Aloud protocol (TAP), also known as “concurrent verbal protocol” (Taylor & Dionne, 2000, p. 413). The third and final step included “retrospective debriefing” (Taylor & Dionne, 2000, p. 413) immediately after the completion of Think Aloud protocol to add further insights on the data (Ericsson &

Simon, 1994; Taylor & Dionne, 2000). The three-step research process, as a strategy of inquiry, attempted to construct “the essence of experience from [the] participants” (Riemen, 1986, in Creswell, 2003, p.133).

Participants

Participants were required to possess national certification from the Registry of Interpreters for the Deaf, a national organization with its own certifying board, and had at least five years of experience. All participants, including the person conducting this study, were Deaf and use ASL as their primary form of communication. Participants were selected from the Northeast Coast region.

Randomness for selection of participants was a challenge. Invitations to be part of the research project were sent out to Deaf interpreters throughout the coastal New England states. It was very likely that the researcher would know some, if not all, participants. A regional interpreter education center agreed that the center would mail letters of invitation to participate to the DIs who live in the Northeast region for mailings through e-mails. Each state in the Northeast area had a small number of certified Deaf interpreters who work full or part time as interpreters. The rationale of narrowing down the area to the Northeast Coast was due to the cost and logistics of bringing participants in to the researcher’s locale or traveling to their locations. Remuneration for the participants’ time and effort needed to be considered as well. The participants were reimbursed for mileage, tolls, parking, or train fare. They were awarded a gift card of \$50 each after the interviews were conducted.

Data Collection

Qualitative findings emerged from this three-step process. Six participants, as a maximum, selected for this study were Deaf interpreters who are currently working in the field, with a minimum of five years of experience. The rationale for having six participants was that a small number of participants is the norm for this type of qualitative research and that the three-step process required a surmountable amount of time to allow for the interviews, protocols, transcribing, and data analysis (Creswell, 2005; Dionne & Taylor, 1999; Gerloff, 1988). The time duration of the three-step process (interview, protocol, and debriefing) was between two and two and half hours for each participant.

Prior to the interview, each participant signed a consent form, providing permission to record each step of the interview. The entire process was video-recorded in order to document the participants' discussions in response to a series of questions for coding and interpretation of the data gleaned from interview, TAP, and retro-debriefing interview. They were assured both that the videos would be erased or disposed of properly after a three-year period, as stated in their consent form and mandated by IRB's policies.

Preliminary Proceedings

Steps were undertaken to obtain approval from the Institutional Review Board (IRB) for the protection of the participants' privacy. Letters, forms related to the administrative process of the study, and instructions for TAP were approved by the IRB. A consent form, required by the IRB, was designed for the participants to review and

sign. The participants were allowed to ask questions of the interviewer on any of the forms such as the consent form and instructions for clarification purposes.

The participants came to one of two neutral sites, separate from the researcher's place of employment, selected to remove any alliance with the researcher's affiliation. For out of state interviews, two colleges were contacted for use of its facilities; these colleges obtained approval from their IRB offices. The room used for the interview were equipped with a table, chairs, a laptop computer with a video player, writing pad, a pen, a recording video camera, plenty of light and space, and a sight-line of the researcher to assure a Deaf-friendly and conducive environment (Stone, 2005). Precautions to prevent potential visual distraction during the interview process were considered and addressed.

Open-Ended Interview

After explaining the process with its three steps and the IRB, each participant was provided a consent form along with the IRB forms to be signed. The preliminary interview, which was the first phase of the study, was then commenced with a pre-set list of open-ended questions that was developed by the researcher. These questions asked the participant about his educational background, experiences as an interpreter, how and why the DI got involved in and chose to continue his work as a DI (Appendix A).

Think Aloud Process

Immediately after the interview, the second step of the study began, starting with instructions that provided a brief explanation of TAP and how to use it while working on the given task. Another instructional sheet provided information about the interpreting assignment for the actual task. During this protocol, the participant assessed a text conveyed from a hearing interpreter in a staged meeting on the video. While doing so,

they expressed their thoughts as they occurred in their minds during the task. The video consisted of a staged meeting with a hearing consumer (HC), hearing interpreter (HI), and a Deaf consumer (DC). The HC and HI were visible on the laptop monitor during the entire TAP process. In addition, there was a video of the Deaf consumer signing a brief introduction to demonstrate a sample of his language, discourse, and cultural connections with the Deaf community, which provided the participants a schema for the target language of the interpretation. In other words, the DI were required to determine the frame to match the particular vernacular of the Deaf consumer's ASL. After the introduction of the Deaf consumer, the meeting on the video proceeded with the HC and the HI as the meeting transpired in the consecutive mode of interpreting.

The authenticity of a staged meeting with the hearing consumer, hearing interpreter and Deaf consumer as presented on the video was well thought-out and planned accordingly (Li, 2004). As it has been demonstrated in some TAP studies, the difficulty and relativity of the material was critical in the selection process, as it has an impact on the length of time that lends itself to being sufficient for data collection (Dionne & Taylor, 2000; Ericsson & Simon, 1993; Li, 2004). Material too easy for the task may be completed too quickly or may not allow the participant to think aloud, especially when there is a possibility of being triggered into autopilot based on prior experience with a similar task (Bernadini, 1999; Ericsson & Simon, 1993). On the contrary, material that was too difficult may undermine the participant and cause him to question his skills or perceive that his skills was being tested rather than observed (Bernadini, 1999; Ericsson & Simon, 1993). After reading the instructions, but prior to starting the TAP process, the participants were allowed time and space to address any

questions or issues. The intent of this was to ensure the participants a sense of control of their own process (Ericsson & Simon, 1994; Gerloff, 1988; Stone, 2005).

The room, where the interviews were held, contained a laptop computer with a video player, a note pad, a pen, and background information on the speaker, topic, and purpose of the task. The participants were allowed to have control to pause the video during the viewing of the signed text, and the note pad was available for writing notes as needed or desired. A recording video camera was set up to capture everything during the TAP process.

Retro-Debriefing Interview

Through open-ended questions during the last phase of the study, the participants were queried about their experience of utilizing TAP on the given task to add further insights on the work and his thought processes (Appendix B). The researcher developed these open-ended questions. “Questions [were] broadly stated without specific reference to the existing literature or a typology of questions” (Creswell, 2003, p. 106) that allowed the participants an opportunity to reflect on the experience that had transpired during TAP (Ericsson & Simon, 1993; Someren, et al., 1994). Creswell also recommended that the “central question begins with ‘how’ ... [with] an open-ended verb” (p. 107). The debriefing process also assisted the participant to have closure with the TAP process.

Ethical Considerations

Caution was undertaken to remove any possibilities of bias and to maintain ethical considerations during the process of this research. Invitations were emailed to prospective participants by an organization to maintain objectivity as discussed earlier. The interview,

TAP, and retro-debriefing were conducted entirely in ASL, the primary language used by all parties. All information, such as the Institutional Review Board's (IRB) policies, explanation of the IRB permission forms, instructions for each step, et cetera, were provided in written English and discussed in ASL if any clarification was needed. The next critical aspect was the development of the text to use during TAP, as discussed earlier. Appropriateness of the materials for TAP was considered and weighed, as well as selection of the hearing consumer, hearing interpreter, Deaf consumer, topic, and goal of the staged meeting (Creswell, 2003).

The translating process of the videos necessitated translation from ASL to written English, thus attention was given to include the discourse and cultural implications within ASL. It is imperative to point out that the discourse analysis of ASL into written English was not a focus of this research (Forestal, 2005). The translation was audited, as mentioned earlier, for accuracy and reliability by two external auditors (Creswell, 2003).

A Backyard Research

This study had great potential to become a "backyard research [as it] involves studying [within the same] ... organization, or friends, or immediate work setting" (Glesne & Pshkin, 1992 in Creswell, 2003, p. 184). A concern that Creswell raised was the possibility that power or undue influence may come into play among the participants during this particular strategy of inquiry. Another concern was whether the participants would feel secure that this study would uphold confidentiality (Creswell, 2003). Being known in the field of interpreter education, many colleagues in the field, including Deaf interpreters, may raise the question of validity of the research, thus this study included several strategies to increase confidence with the readers. Creswell stressed that the

“qualitative researcher systematically reflects on who ... [she] is in the inquiry and is sensitive to ... [her] personal biography and how it shapes the study” (p. 182). Through the IRB information, confidentiality was stressed to the participants. Additionally, fairness and respect to their work as DIs were demonstrated throughout the three-step process.

According to IRB’s requirements, there must be two external auditors to certify the translations from American Sign Language to English. Two certified interpreters, one Deaf and one hearing, were procured to review and audit the translations of the narratives from the signed videos and compare it with the videos to check for undue bias and appraise the findings and interpretations for accuracy and reliability (Creswell, 2003). They have reviewed and approved the translations of the videos of the six participants (Appendix C). These two auditors were not involved in any other parts of the research proceedings, had no relationship to the study, were familiar with qualitative research, and are bilingual in English and ASL (Creswell, 2003).

Data Analysis

The data, collected through transcriptions from the notes and double-checking from the videos of the three-step interview, was prepared for analysis. The analysis entailed looking at “significant statements, the generation of meaning units, and the development of an ‘essence’ description” (Moustakas, 1994, in Creswell, 2003, p. 191). Creswell suggested that the steps for data analysis included preparation of the data, which was mainly to complete all translations, glean through the data to get a feel of the information and the general themes that crop up, design a system for coding, and

organize the “chunks” (p. 192) of information for placement into categories of meaning. The next few steps involved looking at the categories for themes and descriptions, identifying the themes and considering “how the themes and descriptions would be represented in a qualitative narrative” (Creswell, 2003, p. 194). The final step was an interpretation of the data with the use of analytical questions to assure that the data was probed for deeper levels of meaning. The interpretation used “rich, thick description” (Creswell, 2003, p 196) as that would augment and solidify trustworthiness and credibility.

Summary

This qualitative, descriptive, and cross-sectional research design was based on a three-step process (Bernadini, 1999; Ericsson & Simon, 1994; Gerloff, 1988). The three steps entailed an interview, an activity utilizing Think Aloud Protocol, and lastly, an exit interview, known as retrospective debriefing. The premise for this particular research design was to “explore processes, activities, and events” (Creswell, 2003 p. 183) to establish a baseline on the processes used by DIs in their interpreting work and their motivation to be involved in this type of work. Considerations that go into the preparation of the study and data analysis, including ethical concerns, were outlined and discussed.

CHAPTER 4. DATA COLLECTION AND ANALYSIS

This study explored the thought processes of Deaf persons, who work as interpreters, to discover the steps used to ensure effective interpretation, as well as the resources and strategies needed to accomplish analysis for interpretation. The research design for this study consisted of three phases: a preliminary interview, a Think Aloud Protocol activity, and a retro-debriefing interview. The research method in this study was qualitative, descriptive, and cross-sectional, using the research tool known as Think Aloud Protocol (TAP). The purpose was to gain insight into the thought processes of the Deaf interpreters involved in this study as participants through the TAP activity and the retro-debriefing interview. In TAP, the participants were given a task in which they were required think aloud during the activity while they worked through the task. The premise, as explained in the previous chapter, was to determine a baseline on the processes demonstrated by the participants. The retro-debriefing interview, the last phase of the study, consisted of open-ended questions; its primary purpose was to collect additional insights on the given task, the thought processes, and the participants' experience with TAP. All participants were required to be certified from a national organization of interpreters and have at least five years experience as Deaf interpreters. The preliminary interview, the first phase of the study, had a set of 15 open-ended questions to glean background information on the participants (see Appendix A).

Data collection commenced, according to the steps as outlined in Chapter 3. After the videos and material for the data collection were developed, letters of invitation to participate were sent out through a neutral and approved site. A regional interpreter

education center had a collection of most, if not all, Deaf interpreters who were certified through a national professional interpreter organization and were actively working as interpreters within the Northeast region of the country.

The first six responders to the invitation who were able to work within the required time frame were accepted. All six participants were from the northeastern part of United States. Several more expressed interest; they were informed that the required number was met, and were thanked for their willingness to be part of the study. The sites of the interviews were at the IRB-approved locations within the Northeastern states. The six interviews were conducted and videotaped as delineated in Chapter 3.

Data Collection and Analysis

The six Deaf participants spoke in American Sign Language (ASL); thus, the entire study was conducted in ASL. The setting of the study required the researcher meeting each participant individually in a conference room, at one of two IRB-approved sites, where they were videotaped. After the researcher greeted each participant, the procedure of the interview was reviewed, and then the consent forms were signed after all participant questions were answered and concerns resolved.

Once the participants completed the preliminary interview, the Think Aloud Protocol (TAP) activity was implemented. Once the task involved with TAP was fully understood by the participants, video recording of the interpreting assignment began. At this juncture, the participants were to initiate thinking aloud about the assignment. When ready, they started the video on the laptop computer monitor to *meet* the Deaf consumer. On the video, the Deaf consumer provided some background information and introduced

himself. The participants were allowed to pause the video any time to think aloud. Playback of the video was permitted only once for any section. The video moved on to a scene with a hearing interpreter (HI) and hearing consumer (HC) seated at a conference table, chatting with each other. Upon acknowledgment of the presence of the DI, the meeting is set into motion. Upon completion of the TAP activity, there was an exiting interview consisting of five questions (see Appendix B) for the participants to debrief about their TAP experience and to add additional thoughts.

The length of the three-phase interview ranged from one and one-half to two hours. This time included meeting the participants, preparation of the setting, set up of the camera, answering any questions and signing the informed consent forms. The first stage of this research, the preliminary interview, took approximately 15 minutes for each participant. TAP, the longest activity of all three parts, as expected, averaged 36 minutes per participant, the least time was 24 minutes, and the longest was 50 minutes. The retro-briefing interview ran approximately 10 minutes per participant; the shortest time was eight minutes and the longest was 17 minutes. The most time-consuming task was the translation of the videos from American Sign Language to English, averaging 20 hours for each video.

Table 1. *Breakdown in Minutes of the Interview, TAP, and Debriefing Phases*

Participant	Preliminary interview	Think aloud protocol activity	Retro-debriefing protocol	Total
A	10	34	8	52
B	11	24	14	49

Table 1, continued. *Breakdown in Minutes of the Interview, TAP, and Debriefing Phases*

Participant	Preliminary interview	Think aloud protocol activity	Retro-debriefing protocol	Total
C	12	41	17	70
D	13	25	13	51
E	18	40	10	68
F	21	50	12	83

The set-up of the conference room had a small table with two chairs with both parties sitting opposite of each other; the video camera was in position for videotaping. A folder with papers needed for the activity, along with a writing pad and a pen, was set in front of where the participant would be sitting. The interviewer sat facing the door to avoid distractions, as there was a window next to the door. Conversations were kept to a minimum, other than a greeting. Few minutes were allowed for the participants to settle in before proceeding with the consent form and explanation of the three parts that would occur during their time as a participant. Before the first phase began with the preliminary interview, the participants were inquired if they were ready and reminded that they could stop any time for questioning or did not want to continue. During the videotaping for the TAP activity, the researcher sat across from the table at an angle to be towards the end of the participants' peripheral vision to avoid any distraction from her end. Since the researcher was known to the participants, this was also done to minimize any undue influence during their thinking-aloud activity. At the end of the three-phase activity, the

participants were thanked for their time, reimbursed for travel costs. They were also granted a gift card of \$50 each. As the participants left, the interviewer remained in the conference room.

Preliminary Interviews

The primary purpose of the interviews was to glean information on the participants' educational background, work experience related to interpreting and how they became involved in the field as Deaf interpreters. Additionally, there were questions about their professional development in interpreting and future plans as a Deaf interpreter. The first few questions were related to the participants' age, whether the participants were Deaf or hard of hearing, and whether they had Deaf blood relatives in their immediate family.

The six interviewees comprised of four females and two males, thus the make up of the participants was two thirds female and one third male. They have all been Deaf since birth or early childhood. Only one participant reported having a Deaf blood relation, a nephew. All others had no blood relations who were Deaf; three had Deaf spouses, one had a Deaf cousin through marriage. Ages of the participants ranged between 28 and 67 years with the mean age of 48.8 and the median ages being 51 and 53. However, four were over the age of 50, specifically 67%, or two thirds, of the six participants.

Table 2. *Gender, Age, and Deaf Family Members of Participants*

Participant	Gender	Age	Deaf family members
A	F	33	None
B	F	53	nephew, husband
C	M	51	None
D	F	61	None, husband
E	M	28	None; however a distant cousin
F	F	67	None, husband

Even though the requirements for being a participant in this study was to hold a national interpreting certification and have at least five years of interpreting experience, the question asked about their interpreter certifications as well as other certifications. The participants confirmed that they were nationally certified and had been working as Deaf interpreters for five years or longer.

In addition to the Certification for Deaf Interpreters (CDI) held by the participants, one participant also had the older certification, Reverse Skills Certification (RSC). The RSC is no longer offered due to the new certification (CDI), making this participant the only one of the six participants who had both certifications (16%). This same participant also held a teaching certification from the American Sign Language Teachers Association (ASLTA), again one out of six (16%).

Another question asked the participants how long they had worked as interpreters. The range of the years of experience was from five to thirty-two years; the median was 13 years and the average was 16.3 – 16.8 years. As illustrated in Table 2, one participant had between five to six years of experience whereas the other five had ten years or more, with the most being 32 years.

Table 3. *Certification, Years of Experience, and Employment Status*

Participant	Certification	Years of experience as DI	Working as DI
A	CDI	10	Full time
B	CDI	13-15	Full time
C	CDI	26	Part time
D	RSC, CDI, ASLTA	32	Part time
E	CDI	5-6	Part time
F	CDI	12+	Part time

The next question asked the participants whether they were working as interpreters on a full-time or part-time basis, two of the participants reported working full time while the other four reported working part time. Of the four working part-time, one participant had retired after many years of teaching and elected not to interpret full time. The other three participants already have established careers: two are full-time professors and one is a full-time manager for a Video Relay Service agency. These four participants

interpreted an average of zero – 12 hours weekly; two reported that there were times there would be no work for a while, then followed by a demand for their work. One participant accounted that the amount of work averaged about 12 to 15 assignments monthly.

The next question in the preliminary interview asked the participants if they had college degrees. If so, they were asked for the names of the colleges attended. Four of the participants have master’s degrees, one has a bachelor’s, and one has a high school diploma. Of the five participants with bachelor degrees, two went to a liberal arts university primarily for Deaf students, and one went to a college with a large program for the Deaf. The degrees earned by the five DIs were related to helping professions such as Counseling, Psychology, Deaf Studies, and Rehabilitation with the one exception of Business Administration. As shown in Table 3, four of the five participants attended a higher education institution primarily geared for Deaf students working towards either their bachelor’s or master’s degrees. Two of the participants attended a university with no special programs for Deaf students; however, one attended a university for Deaf students for the master’s degree. It should be noted that the two participants who went to local colleges for their BA degrees had strong ties to their Deaf communities.

Table 4. *College Degrees and Type of Institution Attended*

Participant	College degrees	Type of institution attended
A	BA in Deaf Studies and Psychology; MA in Interpreting	University for Deaf students

Table 4, continued. *College Degrees and Type of Institution Attended*

Participant	College degrees	Type of institution attended
B	None; high school diploma	
C	BA in Business Management; MA in Deaf Studies	College for the Deaf under auspices of a college for BA; university with small population of Deaf students
D	BA in Psychology and Sociology; MA in Deafness Rehabilitation	University for Deaf students; university with small population of Deaf students for MA
E	BA in Psychology	College with support services
F	BA in Sociology; MA in Counseling	College with support services for BA; university for Deaf students for MA

Types of Schools

The participants were asked about their educational background and schools attended. All six participants attended some type of educational program designed for Deaf children. All of the participants experienced being mainstreamed with hearing students in elementary or high school, some with and some without support services. Three participants attended a private school for Deaf children, whose program was primarily based on oralism, an educational philosophy that has been a long-standing controversy within the Deaf community. This educational approach of educating Deaf children is through means of speech reading, spoken speech, and use of residual hearing,

and in which sign language is not allowed in any form. All the participants experienced oralism during different phases of their schooling, primarily in the elementary settings. One participant attended a state residential school for the Deaf for several years. One attended two public day schools for the Deaf. Another participant went to a small program in a public school for few years before being mainstreamed with no support services.

Types and Settings of Interpreting Work

Continuing with the preliminary interview, the next question was related to the settings where the participants worked as interpreters and which settings did they work in most of the time. The settings where the participants worked as interpreters were widely diversified. The medical setting was an area in which the DIs interpreted for clinical and medical appointments, and emergency rooms. Another area was in mental health settings with psychiatric care, evaluations, support groups, and counseling. The legal setting included police stations, courts, Legal Aid offices, prisons, FBI agencies, and lawyer's offices. Other reported settings included community service agencies, employment agencies, educational programs for Deaf children, a Jewish temple, national and international conferences, Registry of Interpreters for the Deaf conferences, theaters and concerts. Additionally, travel tours, government agencies, such as the Social Security Administration and Department of Children and Family, job training, forums, and town meetings were mentioned. One participant stated that he did transcriptions and translations from written and video texts. Regarding consumers for whom interpreting services were rendered, three of the six participants (50%) had extensive experience

working with Deaf-blind consumers. Two other participants worked with Deaf-blind consumers several times.

Preferences of Settings

The next question asked the participants which settings were preferred and why the participants preferred these settings. The medical setting ranked the highest among five of the six participants. Two of these five participants tagged mental health along with the medical venue. Legal settings came second with one of the participants stating legal venues only as a preference whereas two participants stated both medical and legal settings. One participant mentioned that in addition to medical settings, platform interpreting at conferences, forums or in front of large audiences was a favorite as well. Another participant indicated a specialty within the medical setting: prenatal care, labor, postnatal care, and nursing. While the participants were not asked in their interview to identify their lowest preferences, one volunteered that the least preference was interpreting child abuse and domestic violence cases in court. In a response to the question related to the DIs' professional development, the DIs indicated that they attended workshops and completed courses for specialized training, expressing an elevated need for DIs to obtain specialized training for these settings.

Reasons for Getting Involved as an Interpreter

The next question was focused on how and why the participants became Deaf interpreters. All the respondents entered the field with endorsements of Deaf persons who noted that they possessed the requisite skills. Based on their narratives, all six participants were more or less drafted into interpreting. The majority of them were thrust into

situations to interpret for Deaf persons in need of communication that resulted in a discovery in which they had never imagined themselves as interpreters.

The exposure to differences in language and communication skills presented the participants a challenge to adapt their approaches and techniques in communicating with Deaf persons who had different educational backgrounds. Some were from other countries; hence, their language and communication were varied and idiosyncratic. Also for three of the participants, the experience of working with Deaf-blind persons fueled their passion to work with the Deaf-blind community. Once all the participants realized that there were actually Deaf persons working as professional interpreters, they decided to pursue interpreting as a possible career, and were encouraged by members of the Deaf community to do so. As one participant pointed out, his experiences working at an agency that offered a program for Deaf mothers “shaped his future as a Deaf interpreter” (Participant B). Another participant reminisced about a time “when [he was] growing up, [he] would interpret for those who couldn’t understand what was being said... [He had] been interpreting all [his] life” (Participant F). One participant inadvertently discovered interpreting between two different sign languages (British Sign Language and American Sign Language) during his travels in Europe.

The participants commented that they did not realize until later that there were times during their school or college years when they would interpret for their classmates, family members, or friends who asked for assistance with communication. They never thought to call this interpreting. Different Deaf persons noticed how effective they were with communicating and strongly recommended that they contemplate interpreting as a

career as they were informed that they had “the skills necessary to be an interpreter” (Participant B).

The six participants’ rationales for becoming interpreters demonstrated the ways Deaf people support each other by assuring access to communication. Deaf people commonly experience frustrations with communication and barriers to information access. The participants found themselves in positions to assist with transmission of information, clarification, and explanation, through whatever means necessary to convey what was transpiring at those moments. Other Deaf people observed their abilities to interpret and translate from written texts and encouraged them to pursue careers as interpreters.

The six participants recognized a need for interpreters who understood their native language in the Deaf community, who had the ability to use diversified modes of communication and make adaptations for understanding based on language skills or physical needs, i.e., those who are Deaf-blind. The participants also had the formative cultural experience to intuitively understand how Deaf people receive and process information. They also had a love of learning about languages, cultures, and skills related to interpreting as well as specialized information for different settings. Many Deaf persons started drafting these six participants to interpret for them. Ultimately, they turned to interpreting as a career, either full or part time.

Interpreter Education and Professional Development

The premise of the next question was to elicit information on the participants’ interpreter education, preparation, and professional development. The question asked about the participants’ training as a Deaf interpreter and professional development after

becoming an interpreter. The second part of the question about the participants' professional development was related to their continuing education after their interpreter education and certification.

Five of the six participants (83%) had formal interpreter education: one with a master's degree in interpreting, two from a three-year regional interpreter education program specifically for Deaf persons, one from a two-year interpreter education program at a local community college where interpreting services were provided for the Deaf student, and one in a nine-month local training program. The participant, who attended the nine-month program, one of the earliest programs of its kind, mentioned that his involvement stemmed from the program's aim to have a "real life Deaf person" (Participant D). Such interpreter education programs taught the participants "what was involved in the [theories and] processes of interpreting... Even though we can sign, interpreting requires different processes [which was] quite a challenge." Skill development in these programs required the practice of "comprehend[ing] the information, understanding the message, and then dropping the form to interpret into whatever mode [was] necessitated by the Deaf consumer" (Participant C).

The participant who did not have formal interpreter education obtained training through workshops designed for Deaf persons who intended to become certified interpreters. These workshops, as all the participants indicated, were scarce and significant travel was required to earn the mandated hours of training for eligibility to take the certification exam. In addition, they had to study on their own to be adequately prepared for the certification examination.

All certified interpreters are required to earn a certain number of continuing education hours to maintain their certification, as mandated by the national interpreter organization (RID, 2001). Thus, all six participants in this study have pursued professional development, primarily in medical, legal, and mental health settings. Attending conferences hosted by the Registry of Interpreters for the Deaf, Conference of Interpreter Trainers, the American Sign Language Teachers Association and local interpreting organizations, provided opportunities for them to earn the required number of continuing education units. They all emphasized that it was critical to have training in mentoring, teaming processes, interpreting processes, interpreting for Deaf-Blind consumers, along with cultural and linguistic studies. The participants attended workshops that met their specific training needs as they delved into interpreting specialties and working with diverse Deaf consumers. As an example, Participant C attended “workshops... on interpreting in legal settings, legal systems, processing for different legal cases..., [and] medical information”. As another example, Participant F took “courses and workshops to upgrade skills and knowledge such as learning about interpreting in different settings such as medical and legal, AIDS and HIV, childbirth, working with Spanish families”. Additional professional development was accomplished by reading literature related to interpreting and being involved with local and national organizations for interpreters. Three participants discussed being involved in groups for Deaf interpreters who met occasionally to share their experiences, offer advice, and resources.

Four of the participants expressed a critical need for an ongoing mentoring program for Deaf interpreters. Participant A had formal mentoring for a full year after

earning a master's degree. During the mentoring program, this participant had opportunities to interpret both in the college environment and in the community outside the university, where he was exposed to a variety of situations, Deaf, and Deaf-blind consumers. This participant felt strongly that "there was a huge gap currently for Deaf interpreters" with regard to mentoring opportunities and wished that "they would have the same experience as [he] did" (Participant A).

Future Plans as a Deaf Interpreter

The participants were asked about their plans as a Deaf interpreter in the future. The purpose of the question was to collect their perceptions of themselves working as a Deaf interpreter and their plans in the field. All the participants intended to continue working as DIs, two full-time, one part-time due to retirement and three on a part-time basis as they already have full-time careers. One of these three participants indicated that interpreting full time would be considered if it was financially possible while taking on other roles as a trainer and consultant. One participant expressed interest in expanding the interpreting work in hospitals, in other medical and health settings and in social services. One mentioned the possibility of pursuing a doctorate in interpreting.

Five participants have already taken on additional roles as trainers, mentors or supervisors of novice DIs. Three participants would like to take on additional roles as mentors and consultants, especially with DIs, in specialized settings such as legal and medical venues and interpreting for Deaf-Blind consumers. Mentoring was something Participant A wanted to do as a way to give back to the Deaf community, specifically with Deaf persons who were "committed to becoming" certified Deaf interpreters. Three participants called attention to the need for training of hearing interpreters on the teaming

and collaborative processes when working with DIs, thus they planned to continue their involvement in the training of hearing interpreters. In addition, three of the participants mentioned plans to become more involved in their local RID chapters and with the DI members of those organizations.

All the participants stated that they would like to see the profession and the number of trained and professional DIs expand. One participant mentioned a wish list for a center to be established for DIs as a place for training, resources, mentoring and referrals, as well as providing a support system for DIs. The justification for such a center was that there are “many gaps with training” (Participant A) and opportunities for professional development being far and few. Another participant emphasized the “need to provide these opportunities” (Participant B) for networking and mentoring as there was a “tremendous growth in numbers of Deaf interpreters” (Participant B). The remaining participants echoed this idea as well.

A participant stressed that DIs needed to be “supportive of each other” professional and able to collaborate and team with hearing interpreters; thus, this participant strived to be “role model for them... It [was] critical that the teams are compatible and [are able to] work together... [and] more hearing interpreters [were willing to] work with DIs” (Participant C). Participant F shared concerns about Deaf persons who have hostile attitudes towards hearing people and cautioned that they get rid of those attitudes, as they “have to work with hearing interpreters, build relationships, and work with them as equals, as peers, not one superseding the other” (Participant F). The same participant added that these feelings of hostility against hearing people run deep in some Deaf people that made it difficult for them to work collegially with hearing

interpreters or diverse Deaf consumers. The many years of work and experience as a teacher provided this participant a foundation of making “well educated decisions on the job” (Participant F); therefore he understands the necessity for DIs to have comparable formative experiences. Raising the issue about Deaf interpreters who “grew up in mainstream schools” (Participant F), Participant F saw the need for them to “immerse themselves into the Deaf community... and be accepting” (Participant F) of the Deaf community and Deaf culture. This participant felt strongly that their attitude was not what it should be and that they needed to make adjustments to be culturally appropriate to work as professional interpreters.

Closing Comments for the Preliminary Interview

The final question provided an opportunity to end the preliminary interview. The question asked the participants if they had anything further to say or add before moving on to the next phase. The goal of the open-ended question was to allow the participants to review their thoughts and make additional comments as afterthoughts. Three of the four participants restated that interpreting as a career had not occurred to them until they were introduced to it by chance and that it was an “exciting field” (Participant A) that will continue to grow for Deaf persons who are “making a career out of it... [not as] a side job” (Participant A). Much enthusiasm and interest for the field has been generated within the Deaf community as it has become recognized as a profession. Participant D added that he could envision the “field prospering and growing if [there is] more ... support from the society, hearing interpreters, organizations from all around”. Two participants emphasized that mentoring was critical to assure that “Deaf persons became

interpreters for justifiable reasons, rather than for financial gain or status and that their Deaf [consumers] can make informed decisions” (Participant A).

One participant indicated a strong need for additional published research conducted by Deaf persons themselves on Deaf interpreters, their development, processes, decisions on ethical dilemmas, teaming processes and perspectives of Deaf interpreters about their work. Another participant stressed the need for more professional conferences for DIs. Raising the issue on the needs for Deaf persons who failed the national certification exam, Participant F stressed that RID needed to do something about the difficulty of passing the exam while maintaining high standards. More opportunities for interpreter education should be provided to improve candidates’ knowledge of theories, ethics, and skills of interpreting as well as reading, writing and test-taking skills.

Preparation for the Next Phase

Upon closing the preliminary interview, the participants were provided an instruction sheet, explaining the Think Aloud Protocol (TAP) and what was being asked of them. This was a review, as the information was also included with the letter of invitation to participate in this study. An opportunity to ask questions related to the TAP was provided before proceeding to the next step.

Think Aloud Protocol

Think Aloud Protocol (TAP), as explicated in previous chapters, is “a process where [the DI was] asked to perform a translation task and whilst doing the task explains what they are thinking....This ‘thinking out loud’ is analyzed to see what problems and approaches there are” (Stone, 2005, p 91). To reiterate, the “aim of TAPs was to elicit the

decisions by the participants,” (Stone, 2005, p. 111) and to demonstrate that interpreting was a complex activity, which the participants in this study confirmed while utilizing TAP (Jääskeläinen, 1999; Taylor and Dionne, 2000; Zhao, 2004).

At the beginning of the TAP activity, the participants were provided instructions about the Think Aloud Protocol and what it entailed. The participants were then asked if they needed clarification on the directives about the TAP activity before being provided information on the interpreting assignment that was used as part of this activity. They were given time to reflect on the interpreting assignment. The material selected for the TAP activity was related to housing, which is contemporary with today’s economic issues and something with which the participants might have some relevant personal experience, although perhaps not through Housing and Urban Development’s (HUD) Federal Housing Administration. Additionally, the participants may have some experience interpreting these formal processes and legal documents, either personally or professionally.

Proceeding with the TAP activity, the participants read the assignment sheet and reflected on the particular assignment by signing aloud in American Sign Language (ASL). It was up to the participants to decide when to start the video to view the first section, introducing the Deaf consumer. Next on the video was a brief meeting with the hearing interpreter (HI) and the HUD officer who apparently had some discussions before the DI *arrived* on the scene. The purpose of that scenario was to elicit reactions from the participants about the meeting of the HI and HUD officer, and to explore the participants’ expectations of teaming with the HI. On the video, the HI briefly filled the participant in

on the discussion between the HI and the hearing consumer (HC). Again, this was to elicit responses on how the DI would have preferred to proceed with the assignment.

With the assignment proceeding quickly after the introductions, the interpretation process was set to be consecutive, with the HUD officer reading from a text, pausing for the HI to convey the information to the DI and waiting until the HI finished with the particular unit of information. It should be noted that the assignment sheet informed the participants that the interpretation would be done consecutively. In a normal setting, interaction would take place between all four parties: the hearing consumer, the hearing interpreter, the Deaf interpreter (DI), and the Deaf consumer, in addition to the teaming process between the DI and HI. The Deaf consumer, in a live setting, would provide back channeling, known as conversational feedback, to let the DI know whether the information was understood or not. Moreover, the DI would make adjustments in the interpreting process, based on interactions with the Deaf consumer and the HI, possibly asking the HI or the HC for repetition, clarification, or additional information.

In this case, with the three parties on the video (Deaf consumer alone on the video, HUD officer, and HI sitting together at a table in a conference room), there was no interaction with any of them. The DC was not seen again after the video introduction. The introductory section of the video closed with an indication that it was time for the DC and DI to go in for the meeting. Although not visible, it was assumed that the DC was present in the conference room, sitting across from the DI.

Interpreters, both Deaf and hearing, ordinarily receive basic information about an assignment ahead of time, first in order to decide whether to accept it, and then to prepare for the work itself. These basics normally include names and titles of the clientele,

purpose, and objectives of the meeting, context, logistics, and other relevant details. In this case, the participant was given the basics about the assignment at the beginning of the TAP activity and was provided time to think aloud about the assignment. In an actual situation, the DI would have an opportunity to have a pre-conference with the hearing interpreter and the Deaf and hearing consumers.

Thus, during the TAP activity, the Deaf interpreter, functioning as a participant in this study, was primarily engaging in only one aspect of the interpreting process. The DI had to work with the information conveyed by the HI with no opportunity to confer with the team for clarification, further interpretation, repetition of the information or any other dynamic feedback that would be required for more effective interpretation. The participant was allowed to play back a part of the video to review the information from the HI and to pause at any time for note-taking, thinking aloud or when the chunk of information was enough or too much before moving on to the next section.

The schema (Figure 1) illustrates what was transpiring on the video, a one-way communication, whereas the second schema (Figure 2) shows the HC interacting with the HI, the HI and DI conferring with each other, and then the DI interacting with the Deaf consumer and the other way around as well. Consequently, for this TAP activity, the challenge for the DI was to proceed alone with only the information from the assignment sheet, language assessment of the DC and the interaction with the HI and HC. Next on the video, the hearing interpreter *introduced* the DI to the HC. The video then proceeds quickly to the meeting with the HC's explanation of the meeting's purpose. It is imperative to reiterate that, for this exercise, the DI had no interaction with the DC or the HI for pre-conference discussion or team development.

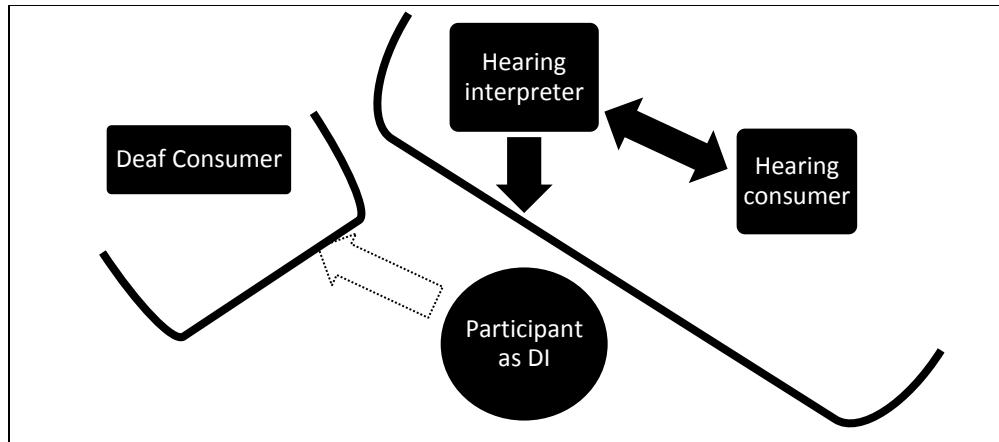


Figure 1. Interaction as seen on video for TAP activity. The lines separate the DI from the DC and HI. Note the dotted arrow from DI to DC as there was no interaction between the DC and the DI or between the DI and HI.

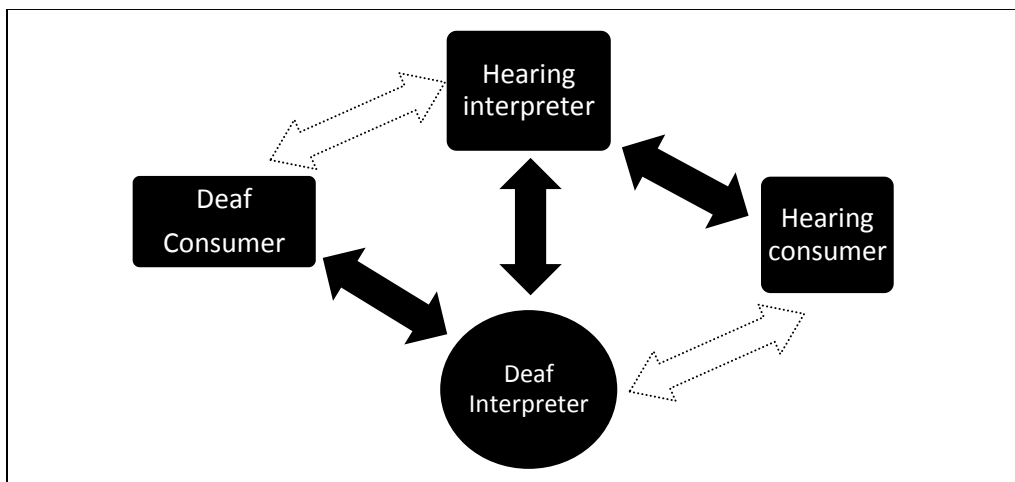


Figure 2. In live situations with each party interacting with one another.

The Interpreting Assignment

The TAP activity was initiated with the sheet on the interpreting assignment for the participant to think aloud while reflecting about the specifics of the assignment. The sheet gave basics about the purpose and setting that involved purchasing a house through

the Housing and Urban Development's (HUD) Federal Housing Administration (FHA). Very little background information was provided about the Deaf and hearing consumers. The sheet stated that the Deaf consumer was a first time homebuyer and was seeking consultation regarding his eligibility, rights, protections, and whether the DC should buy a home through FHA. It also indicated that the HC was an HUD officer who had previously worked with Deaf-hearing interpreter teams. Almost nothing was said about the HI, other than that the interpreter would be teaming with the DI. Concerning the interpretation, the participant was informed that the consecutive mode would be utilized, wherein chunks of information would be conveyed from the HC to the HI with pauses for the HI to relay that information to the DI.

With the sheet on the interpreting assignment in hand, the participants began their TAP activity. Recurring themes were noted among the six participants, related to their thoughts about the forthcoming assignment.

The language and world knowledge of the Deaf consumer were the first items to come to mind for all of the participants. Upon learning the specifics of the assignment from the information sheet, they were concerned about whether there would be an opportunity to *meet* the DC on the video to assess his language in American Sign Language and English, his educational background, his knowledge and experience with finances. Another issue for the participants was whether the DC understood the purpose of the meeting and the processes of buying a home. They hoped that meeting the DC would provide an opportunity for them to get a feel for his familiarity with specific sign vocabulary related to this milieu, which would guide their decision-making regarding how much contextualization would be needed in their interpretation. Concerns about

being able to accommodate the language and needs of the DC were a common theme that arose among all participants during the TAP activity. The DC's age and gender as well as use of Deaf interpreters in the past also occurred in the participants' minds.

One participant wondered whether the situation should be reframed with the assumption that a previous meeting with only a hearing interpreter present had "failed" (Participant E), resulting in a DI coming in on an "emergency" (Participant E) basis. The knowledge of that possibility made this participant uncomfortable as that would "put pressure on [him] as [he] would have to fix that communication breakdown" (Participant E). Another participant discussed the DC's understanding of the inquiry process during the meeting to obtain his financial background and the fact that the DC might use his "disability" (Participant C) to qualify. This participant was concerned that the DC might be reluctant to answer these questions or reveal his sources of income due to being a recipient of SSI (Supplementary Income from the Social Security Administration). The DC needed to be aware that "[within] hearing culture, people are accustomed to being questioned in this type of a situation" (Participant C). This participant expressed concern about maintaining objectivity as an interpreter if the HC started asking about the DC's disability. Another participant wondered if this was a subsequent meeting where a DI-HI team was employed and if it was possible to get information from the previous DI to get specific background information about the DC and results of the prior meeting.

The topic of the meeting led to several schemas for the participants related to their own experiences of purchasing a house and whether their own familiarity would be an asset in this situation, and if there had been any changes in the processes, laws and policies. All the participants worked on their mental simulations related to the processes

of purchasing a house. They declared that this topic was complicated and were hoping that more information would be forthcoming from the HC and HI prior to the meeting. They expressed the need to know the objectives of the meeting, expectations of the DC and HC, and the HC's prior experiences with a DI-HI team. Additionally, they were hoping for a pre-conference with the HI. One participant was concerned that this setting was actually a legal situation and wondered if the hearing interpreter was certified for such a setting. After reading that the interpretation would be in the consecutive mode, they all said that it was ideal for such a meeting. One participant questioned the logistics related to the seating of the four parties involved in the meeting.

Meeting the Deaf Consumer

Observing the Deaf consumer initiated thoughts from the participants regarding their assessment of his language and communication style. The Deaf consumer made an introduction and discussed an interest in buying a house and learning about FHA to decide whether he should use its services to obtain a loan. In addition, the DC mentioned he would need to have a discussion with his wife and family after the meeting before making a decision. All the participants envisioned how they would communicate and interact with the DC, seeing that they would have compatibility with his language and communication style based on his educational background, knowledge and his motive for attending this meeting. The background information on the schools where the DC attended assisted the participants to identify his use of American Sign Language. Three of the participants made mention of some of the DC's signs being regional, based on the signs used for mortgage and interest. The fact that the DC was familiar with the use of DIs was reassuring to the participants, eliminating the need to explain the role of a DI and

how the DI would work with the DC. The DC's reasons for the meeting guided the participants to understand the purpose of the meeting. With that in mind, most of the participants immediately began to express concern about their compatibility with the HI.

Two participants expressed concern that because the DC was not familiar with the laws related to home purchases and FHA's policies, it could affect their decisions on how much contextualization to apply in the interpretation. This appeared to be a legal situation, raising the question of whether the HUD officer would have to take on more accountability in explaining the laws and policies. Towards the end of the video, the DC asked the viewers if they had experiences buying a home that got the attention of three participants who wondered how they would respond to such a question. They communicated their need to establish a professional relationship while remaining congenial. Because the DI and DC were Deaf, this was a sensitive issue for them. One said he would reply affirmatively and move on to another point of discussion, while the other two talked about how they would approach this diplomatically, explaining their roles as DI hired by the housing authority.

Meeting the Hearing Interpreter

Next on the video, the Deaf consumer fades out and a new scenario appears with the HI and HC conversing at a conference table. Reactions from the participants included discomfort, impatience, and confusion when the HI did not stop conversing with the HC when the DI *arrived* on the scene, but continued their discussion. One participant declared feeling "disconnected" (Participant C). Other participants commented on feeling left out, "missing out" (Participant F) on the discussion, believing that they should be part of the discussion. They felt at a loss, as they did not know what was transpiring during

the discussion. Participant F told the HI on the video, “Please look at me” (Participant F). Five of them visibly and verbally expressed frustration as the conference between the HC and HI went on too long. They indicated that bonding should occur among the three of them prior to working with the DC. Participant B stressed that the DI and HI should go in together as a team to meet with the HC. Before the meeting, they would have a pre-conference where bonding and trust would develop through a team building process. They would have an opportunity to discuss team strategies, which would entail checking in with each other for understanding or clarification, being accountable to each other, setting the flow of the communication between the parties, chunking of the information and techniques for presenting the information (contextualizing, writing, drawing, miming, or gesturing) to the DC. The majority (five participants) strongly emphasized that they “need[ed] to know about the people involved, the situation, and the environment” (Participant B) before the meeting.

All participants reiterated the need to know the HC’s plan for the meeting and his presentation of the material along with how they would work with the HI. Four participants said that specific information related to FHA would be requested during the conference with the HC with half of the participants asking the HC to share his papers as the material was “challenging” (Participant D). Participant B wanted to know if legal documents would be signed due concerns about his qualifications to interpret such documents.

While waiting for the HI and HC to finish their discussion, four participants commented on the setting of the room with regard to seating, lighting and the mannerisms and dress of the HC and HI, which were indicators of the formality of the

meeting. For them, the ability to see the room helped shape the logistics for seating. The HC presented himself to three of the six participants as professional and serious, yet friendly.

“Finally,” exclaimed three participants, when the HI on the video *acknowledged* the DI, and *introduced* the DI to the HC. Participant B was relieved to learn that the HI had previous experience working with DIs. Three participants concurred with the HI when the interpreter mentioned that she did not know much about FHA, even though the HI has experienced the process of buying a home. All participants were reassured when the HI informed them that she had reviewed the team process, consecutive mode, and process time with the HC and that the HC was open to working with them by pausing, allowing interruptions for clarifying, defining, and explaining the material upon requests.

Three participants recognized a few of the HI’s signs as sign variants and would check with her, regarding these signs. At the cue that the meeting would start, three participants stopped the video to create a mental simulation of how the DI and HI would work together in terms of dynamics, processes, prediction of subtopics, technical vocabulary, chunking and monitoring. Participant E accentuated that in a real-world situation there would be more interaction between the four parties.

“The Meeting”

Introduction of the Meeting

With all four parties supposedly present, the meeting began with the hearing consumer (HC) introducing himself as the FHA loan officer whose responsibility was to explain the application process, eligibility, rights and protections offered to homeowners.

The HC mentioned briefly that he had already discussed how the meeting would work with the interpreters with the HI, and was ready to proceed to advise the DC about FHA and its regulations. The HC added that there would be an opportunity for a review at the end of the meeting.

Three participants noted the FHA loan officer's demeanor was calm, friendly, patient, and open. It was of interest to them that the HC had prior experience working with interpreters and was cooperative in working with them. While the HC was talking to the HI and the participants were waiting for the first piece of information to be transmitted, all the participants stopped the video to express their thoughts and concerns. Participant A expressed surprise that there was no discussion on the logistics of seating and accessibility for the DC. Two participants repeatedly said it was critical that the HC make eye contact to connect with the DC; the strategy would be to inform the HC to do so. The issue of not meeting the HI and HC beforehand came up again as two participants expressed concern about not being part of the decision making process regarding the logistics and proceedings of the meeting and whether there would be any signing of legal documents. Four participants made note of the papers that the HC had in front of him and wished for access to them prior to the meeting.

Before restarting the video, all the participants demonstrated their concerns by reviewing what would transpire during the meeting. With relief and satisfaction that the meeting would be conducted consecutively, they expressed that it would allow the DI to focus on key components and their critical facets. Interpreting consecutively would allow time for each party to go through each subtext and ensure understanding, requiring that both the HI and DI understood the material as they could discuss "each part until there

[was] a full thought” (Participant C). As mentioned by four of the participants, there was apprehension on how large the chunks would be. Observing the length of time the HC spent talking with the HI, one participant expressed concern that the HC was “packing all this information into one big explanation” (Participant D), requiring the DI to request that the HC break up the chunk into smaller parts. One participant wondered how the HI could be “retaining all that information” (Participant F) due to the fact the HC was speaking for a long stretch of time and commented that there would be a need to interrupt frequently for smaller chunks, and the DC would possibly be doing the same.

Continuing their thoughts, the participants discussed on how they would interpret the information when they received it from the HI. At this juncture, before restarting the video, there was some elaboration on what the process might look like in this type of a situation. Participant E was relieved that the HC said there would be no rushing through the information, allowing more time to get the “full picture” (Participant E) for interpreting and expansion. This same participant said it was important to render the interpretation and make sure the DC understood before moving on to the next part as the participant did not “want to just throw [the information] at [the DC]” (Participant E). If the DC did not understand, this same participant would subsequently inform the HC to allow him to decide where to go from there. Participant E theorized that in this setting with the expected content, the information would be very detailed, thereby making it necessary to work on each part. With that in mind, the same participant continued with the mental schema of the situation, predicting what would emerge during the meeting such as terminology related to housing, such as “interest rates, percentages, fixed rates ..., [and] questions, the DC [might] ask” (Participant E). His intention was not to “limit,

but to cut down on the DC's having to ask again and again for clarification when [he] can give a better interpretation this way" (Participant E). This approach would allow the participant to convey "the entire concept, rather than bits by bits, ... not having to go back and forth of asking and explaining... working to having a balance of working [between] the DC and HC is something I have to make sure of" (Participant E). The team would need to work together and have prepared strategies such as cueing in the HI when there was a need for clarification, double-checking, a private conference or "a brief discussion on a specific sign or point of information... if it was something we didn't know, then we [could] ask the HC" (Participant E) for needed information. A body lean to the side was demonstrated as a strategy to use for the abovementioned reasons. Participant E ended this train of thought by assessing that it would be a long but effective process.

Participant B reflected aloud about what he would do with the interpretation of the information when the HI conveyed it. The participant would ask the HI to wait until that piece of information was interpreted before getting the next part from the HC. This same participant said that he would "listen to the HI, get the points of information, and think about what would [be done] with that [information] by processing it... [The participant] needed to weigh in ... [the fact that] it was [the DC's] first time to buy a house ... for [purposes of] expanding" (Participant B) within the interpretation. The participant reiterated that he would be "attentive to what is being said and get the full concept ..., [and use] techniques for expansion before [he] interpreted to the DC" (Participant B).

Participant D was eager to get going as his “mind was ready to start processing”. Watching the HI interact with the HC, the participant was prepared for what was coming. He was “happy that they [were] taking the time to explain the information” (Participant D). With the HI signing on the video what the HC said, this participant started framing the information as introductory, including the title of the HC and the goal of the meeting. He outlined that the meeting would discuss the background, rights, and logistics of FHA.

Hitting the button to view the introductory part wherein the HC introduces himself and states the purpose of the meeting, Participant D indicated that he needed the HI to wait until he was finished before moving on. In that moment, the HI finished signing the information to her, paused for a bit, and then turned to the HC for the next chunk. The participant again asked the HI to wait. Stopping the video, the body language of the participant showed frustration as participant D stated that he wanted to make sure there was time to connect with the HI after receiving the information.

The remainder of the participants expressed that it was helpful to know that the main objective of the meeting was to inform the DC about FHA and its application process, not to convince him to use it. With that goal in mind, they were able to start predicting the forthcoming list of criteria. Additionally, “[the] information was for the general public, not specifically for the DC” (Participant C) as that would be part of the expansion for interpreting.

Participant E brought up the fact that he would have to remind the DC that the process was happening in the consecutive mode, in case the DC started wondering why the HC was talking and neither the HI or the DI were signing. This same participant would again explain what the consecutive process would look like and make sure that the

DC was comfortable with that. Reflecting on the meeting with the DC earlier, Participant E surmised that the DC had “general world knowledge ... [and] just doesn’t know much about mortgages ... [or] the process of getting one” (Participant E). Participant E stopped the video as “so much was being given to me all at one time. [The same participant] wanted to tell the HI to hold it, as [he] couldn’t watch any more” (Participant E) and advise the HI and HC to go at a slower pace to allow him to focus on the message and reduce stress for both him and the DC. This participant emphasized that the team was there for the DC’s benefit. In addition, Participant E suggested that the DC might need some time to adjust to the consecutive mode of interpreting if the DC was not familiar with it.

Criteria for Eligibility to Federal Housing Association

This portion gave an overview of the rationale for choosing FHA insurance for a loan, if the applicant was eligible, by meeting one or more of its criteria. All participants took the cue from the HI on the number of points being covered within the respective chunk of information by using numerical indexing, a discourse feature in American Sign Language (ASL), to cue the DI on the number of points that the HC was covering in that respective piece of information. Participant D used the cue to prepare herself by jotting notes based on the points given by the HI, and signed what was written.

After the HI conveyed three of the six criteria for eligibility for FHA-insured loans, Participant A considered how the information would be set up in contrastive space, in which each item could be expanded into a checklist, for clear comprehension.

Contrastive space, a linguistic feature of ASL, provides visual-spatial areas where

different items are established in front of the signer. He emphasized that it would be “tricky ... ambiguous” (Participant A) if the HI lumped the information together.

While the HI and HC were talking to each other about this particular section, Participant A noted about the HC’s “poker face with a serious expression” (Participant A), with the HI listening intently. The same participant was concerned that their body language and the length of the discussion would cause the DC to wonder what was being communicated. While Participant B continued to observe the HI’s use of numerical indexing, indicating that there were “three things to explain, [the participant planned to] separate each one ... [and] ask the HI to stop [to] allow [more time] to interpret those three things [individually]. [The participant] would ask the HI [to give] each one at a time, rather than pour all three at once” (Participant B). He would write down each concept in a manner “so that reference could be made to them when interpreting the concepts, rather than just signing away ... [as] the DC could possibly get lost in the information and become overwhelmed” (Participant B). He stated that each point would be separated on sheets of paper placed side by side.

Observation of Participant B’s body language revealed that he was stressed as his hands visibly tensed while watching the HI. He wanted the HI to “use more pacing and to look at [him] for checking in” (Participant B). Contemplating further, the participant said that he would make graphs and drawings as the meeting progressed. Additionally, he would monitor the DC’s “understanding of the different components by following his responses. If [he] saw that the DC was not understanding something, [he] would tell the HI to hold it and allow [him] to clarify or repeat” (Participant B) to assure accuracy in the interpretation.

Participant C explored ideas on how the information would be expanded on the three items, pointing to three fingers, and stated that he would explain the premise of government agencies and their requirements. The participant added that reference to these laws would be expanded on “what they are and what they require ... [The participant] would work on expanding that information in a way that would match the DC’s language ... [and] give it point by point” (Participant C). Holding up his non-dominant hand, Participant C said that he would index on his fingers for listing, and work on each point and its objective that would indicate to the DC that it was a systematic process.

While listening to the HI for the criteria, Participant E hesitated to write notes, and instead started to use numerical indexing. The participant then realized that the HI had given him all three points, and he had already forgotten the first one and should have written them down. At that juncture, Participant E indicated that there would be a request to the HI to repeat the information by cuing with numerical indexing to let the HI know which point to repeat. Participant E noted that the three criteria were not related to each other or sequential, so numerical indexing would simply function as a guide for the DC to anticipate how many points would be covered, and to allow the DC to ask for further details. This participant planned to utilize reiteration, an expansion technique after going through each component, checking for the DC’s comprehension and retention of the information.

Participant F used similar techniques such as numerical indexing, note taking, use of space and interruptions to ask for clarifications or pauses. This participant indicated frustration with the pace of the HI and a desire for the information to be parceled out in smaller chunks or pause as cued by the DI. Participant F was hesitant to stop the video,

hence the frustration, and ultimately stopped the video to share thoughts about the process occurring at the moment. He commented about the body language of the HC and the HI and wondered what was happening between the two of them. The length of the time that the HC was speaking was too long for this participant to handle, as he said that the HI surely “can hold a lot of information ... [The participant] need[ed] more pauses with smaller pieces of information. The HI will have to notify the [HC] ... to break up the information more ... [and] stop... more often” (Participant F). The same participant shared his frustration regarding the amount of information coming at him from the HI, as he could not keep up with writing notes, watching the HI and retaining the information at the same time. Back to the video, he exclaimed by using a temporal aspect of ASL that the HC was talking too long. This participant’s impatience escalated to the point that he cried out to the HI on the video, “wait ... time out ... hold it ... moving on too fast ... wow ... I am lost ... am done for” (Participant F). Apologizing to the interviewer, this same participant laughed and started to play the video again. Before playing the video, he stated that he had to interpret the information to the DC and expressed a wish that “[the HI] would stop long enough to allow time to interpret. [He] needed to be able to work on the first one” (Participant F), then the second criteria and so on. The amount of information was difficult to retain, as there were “too many details ... [the HI] needs to separate the ideas one at a time. [The HI] goes through each one too quickly” (Participant F). Participant F stressed that it was imperative that the DC receive all the information. He repeated what was said earlier directly to the HI,

I prefer you to give me one idea at a time. Then [you] ... explain to the HC ... to explain one thing, stop, and wait for the HI to convey to me to interpret to the DC. Then we go from the DC to me and then the HI can go on to the next ... one thing

at a time for this to go through the whole process consecutively. I know it makes it go on for a long time but this is important (Participant F)

for the DC to have all this information. The *talking* to the HI continued,

You don't ask the HC to pause. You did stop him for clarification, which is a good [thing] to do. However, can I interrupt you for clarification? This is hard. I have to tell [you] to pause repeatedly until you finally ask [the HC to] ... do it in a step-by-step manner with more pauses. (Participant F)

This type of conversation occurred throughout the rest of the TAP activity as Participant F expressed the need to discuss with the HI as a team member how to work together through this meeting. The participant kept saying that he wanted to tell the HI to "hold on or slow down...this may be negative towards you when I [tell you] to hold on or slow down. I will change it to the sign, WAIT-A-MINUTE" (Participant F). The same participant complained that "the HI was fidgeting with her hands and [he asked the HI] to keep them still as this was caus[ing] a distraction for [her], thinking [the HI was] signing something" (Participant F).

As the HI continued talking with the HC, apparently asking for clarification, this same participant exclaimed, referring to the HI and HC,

I know HI is not a live person. If [the HI] was live, I would gently tap the table to get her attention as a cue. With this video, I can't interrupt her. How can I do that? I have to make the pauses myself so that I can work with each piece and interpret them. The DC and I can watch the HI, then I would have to stop [the HI] and interpret to DC what that meant, pause again, explain again, and so on to go through each point. The two are not live persons. Nothing I can do about that... I am lost. (Participant F)

Regarding the context and related vocabulary, all the participants talked aloud more about the process that was occurring and their experiences. The concepts and goals within the context of FHA became secondary. During their TAP related to vocabulary, several themes cropped up. One theme was related to how they would check to see

whether the DC was familiar with the signs for that particular vocabulary. Following that, the TAP revealed thinking about how the vocabulary and concepts would be expanded through contextualization in ASL and which techniques would be utilized. Subsequently the participants considered how to obtain the information when they needed the HC to provide more details regarding the specific vocabulary in question.

Benefits of FHA-insured loans. After the explanation of the general eligibility requirements for FHA, the next topic was a discussion of the benefits of acquiring an FHA-insured loan. Participant A was not prepared for the change in focus as he kept asking the HI, “Do you mean there is more than one [loan]? Do you mean there is one program with different types of loans? Do you mean there are criteria for the different loans? I don’t understand” (Participant A). Playing back the video, this participant continued attempting to establish the HI’s frame of reference for assistance with framing the interpretation. He took the opportunity to replay the video for more clarity and repetition to contemplate ways of conveying the information. Based on his world knowledge and prior experience on the purchase of a home as well as past interpreting assignments, Participant A reflected on the process of buying a house to guide the techniques for expansion. He indicated how the three topics would be broached: being a first-time buyer, the amount of down payment and monthly payments by using numerical indexing and contrastive space in ASL as well as contextualizing each point. Participant A turned to where the DC would be sitting and demonstrated how he would convey the information by holding up his non-dominant hand to indicate three distinct items and moved towards three different spatial areas in front of him wherein he would elaborate on the information piece by piece.

Using similar processes with contrastive space, Participant A discussed how he would give examples of different interest rates, rather than just one rate, for expansion. The same was done for dollar amounts to provide a visual range of the procedures of making a deposit towards the cost of a house. Explaining how the number of years for payment would be divided into monthly payments, the immediate central space close to him showed making monthly payments. He ended up looking towards the DC to check in for understanding. This was primarily how this participant proceeded through the remainder of the meeting.

With the drawings and graphs on the sheets, Participant B was prepared to use them for following up with additional information regarding the down payment, interest rates and monthly payments by adding new sheets. He explained further that

One sheet [would be] about the down payment..., the next sheet with the mortgage payment, and so on. This way steps that need to be done could be shown. When it comes to explaining where the money goes, [the participant] would write it down as well as interpret. It depends on the DC and his level of comfort. If it was overwhelming, [I] would write them down... I would ask for copies of the papers that the HC and HI have, so I can use them for myself. This way the HI or I would add [notes]... That is a possible technique. I know how Deaf people think to make things clear [which] is the use of pictures, graphs, lists, and papers to see how they fit into the scheme. So with that paper, I could write around it. (Participant B)

Seeing that the next part was associated with credit and credit history, Participant B asserted that he would expand on these concepts through his interpreting and would place them “side by side to keep them separate” (Participant B). With the next section on the video, he exclaimed that the HI was “explaining something... buying a house... happen ... wait, I would ask to stop... Hold on. Here we are talking about money. Something about being in debt ... need to put that down” (Participant B). Here this participant discussed “list[ing] ways of getting money” (Participant B) to get a down

payment such as gifts from his family. The same participant added that he would refer to the sheets made out earlier and show the new sheet, demonstrating how the sheets would be set up for referencing.

At the next juncture, Participant B pronounced that he needed to stop the video as the HI was already moving to the next point. On the video, they were now talking about payments and what happens if the DC is not able to make payments. He maintained that the information couldn't be all "on one sheet of paper [as] would be too confusing... This way the interpretation would be more paced and organized" (Participant B). He exclaimed,

Whoa, There are so many things to point out. Here I will jot them down as we go – the different rates, different kinds of loans, and so on. Whew. I will ask HI to pause here. We are working consecutively but here we need to hold it. I have to do a lot of contextualizing by expanding on all these and go through all these points to make sure that [the DC] understands them as we go through [this] step by step. When the DC is satisfied, I will tell [the HI] to start again. (Participant B)

Participant C stopped the video few times to discuss how the information about the loan, down payment and the management of monthly payments would be divided and then expanded by use of space, separating the three concepts. A comment made by the same participant was that the HI appeared to condense the information, based on his observation on the length of time the HC had spoken on the different parts. Participant C expressed concern that he needed to have more details to assist in his contextualization. Again, it was mentioned how it seemed that the message from the HI seemed to be a shorter version of what the HC expressed. Participant C continued discussing how contrastive space and expansion would be utilized to contextualize interest rates, fixed interest rates, direct benefits, and options for protection from foreclosure or bankruptcy.

Participant C restated about the HI's process of interpreting in terms of how much information the HC seemed to be conveying and that what the HI relayed to him did not seem to be equal. The participant noted that in the forthcoming part the HI was using numerical indexing while he was listening to the video that indicated that there would be different points to be covered. When Participant C got the information from the HI, it was not exactly what was predicted, rather it was new information related to the differences between FHA's and other banks' interest systems.

Watching the video again, Participant C exclaimed that the HC was going on too long on one part and pointed out when the HC should pause. "Even the HI was having a hard time retaining all the information and was trying to use listing for the different points [and] asking for repetition" (Participant C). Participant D went through this part rather quickly in comparison with his counterparts, however comparatively he took more notes during this section than the other participants. This participant envisioned the areas of information that the DC might have difficulties with and inquired about them as he felt he might not be clear enough in the interpretation, based on his own understanding of the information. The same participant was unsure about some areas and expressed that more explanation was needed such as "when they say flexible, how flexible is flexible? That has to be clear when you consider the cultural mediation ... and that [he didn't] know what they meant" (Participant D). While taking notes, Participant D said, "All those points [expressing impatience as he was] sure the Deaf person would need further clarification" (Participant D). The participant said that her

prediction is that possibly the Deaf consumer might say, well, give me more information, elaborate on those two points... Everything else so far is clear, but

those two points are a little hazy for me... They said they're willing to work with the Deaf consumer. (Participant D)

Participant E put in a lot of reflection regarding the concepts and terminology and how these would be contextualized. The participant expressed a concern about being able to retain the information, as well as the DC's ability to remember the different points covered so far. The DC would be inquired if he was able to remember these points.

Participant E wanted to be sure that the DC would keep foremost in his mind that the HC's goal was "to advise him that FHA would be beneficial for him... as FHA could meet his needs" (Participant E). At the juncture, Participant E

would make reference to the HC and not use first person anymore. It is the loan officer who is offering the services. [He] would point to the HC to direct the DC's attention to him. [He didn't] want the DC to think [he] was advising him... [and] that the HC was the one who [was] clearly making an offer of the services that are a good match for him (Participant E).

The same participant wanted to inform the HC about the need for clarification and explanation as he wanted "the officer to realize the DC's world knowledge or the lack thereof" (Participant E), related to this specific meeting. Participant E did not want the sole responsibility, attempting to interpret the different concepts when more explanation was needed from the HC. This technique would allow the HC to be

more involved in the process, rather than exclude him and try to do all the explaining [as] that prevents the HC [from knowing] his level of knowledge, not to let the HC think [the DC] is not smart. The DC is smart; [the DC] just doesn't know everything. (Participant E)

As the meeting went on, Participant E commented about checking with the DC
was

comprehending the information and [to] allow [the DC] to ask questions. With [the DC's] affirmative feedback..., [the participant would] move on to the next part until [the DC] show[ed] negative responses. Then [the participant] would

have to back up to fix it or what [the DC] needed to understand ... adaptations [to be made]. (Participant E)

Participant F expressed impatience and frustration as he exclaimed,

There is a run on here. I can't see any separate ideas... Oh, boy, talking about the first point, HI is going on too long... [Holding up second finger] hold on, if you don't mind, go back to the first one, if you don't mind. The second thing is more complicated. ...HI is listening [to] HC, not looking at me [while he is waving to get HI's attention]... [The] HI showed ... some struggles through facial expressions while trying to remember [what] the HC said... I will wait for [the HI] to finish [up] with the HC... I will tell to stop [and tell the HI] ... to start with the first thing and stop when [she was] done with that part and to do the same with the second, third, and so on. (Participant F)

Participant F asked the HI for a time out several times throughout this section. He asked the interviewer how he could stop the HI, laughing. At that point, the same participant brought up the idea that he may need to have a second Deaf interpreter with her. His frustration remained through the rest of this section as he exclaimed,

I [would tell the HI] in the beginning that if it was like this with not having pauses as I would like ... I cannot be effective. I would be doing a lousy job of interpreting and it would not be fair to the DC. There have to be changes within this process... [or] we would be at an impasse... I feel that I have been pretty good as an interpreter. However, with this non-stop flow of information, I feel frustrated, overwhelmed, and incompetent. I am more concerned about the DC and how that would affect him. [The DC] needs to get the information and is waiting for me to interpret. [The DC] is watching all this... me [as a DI], the HI, the HC, the whole thing. He would think that the most incompetent person of the four of us in this meeting is me [shrugging shoulders and smiling]. (Participant F)

History of Federal Housing Administration. As a note of interest, the FHA loan officer cited a historical fact regarding the year Federal Housing Administration was founded and the number of years it granted assistance. Three participants made a light note on this fact as they stated that it would be interpreted as a side note. Three other participants made no comment, regarding the historical fact. While not mentioning anything about it, one participant wrote a note, stating "FHA – 34 years in biz.

Experienced/reliable, trustworthy” (Participant F). It is not known if the other two participants overlooked or chose to ignore that piece of information.

Refinance. The subtopic on refinancing as an option for homebuyers who were previously assisted by FHA was mentioned in only one sentence. Refinancing, as Participant A commented, was something that was done after the home had already been bought, and he contemplated the interpretation of that concept. Participants C and D made similar comments, let it pass, waiting for the next part. Participant B stated, “Refinance? This is different from what we have been discussing... [It will be] set up as a separate feature...” (Participant B) and interpret that later. Participants E and F did not mention anything about refinance. It is not known whether this was an oversight or a deliberate omission on their part.

Types of Housing

This last section encompassed the types of housing that buyers could purchase with FHA-insured mortgages. “Now we are talking about different kinds of housing Participant B articulated, “I will have to explain about [these] as a component by itself... Gee, this is a lot of information to go through” (Participant B). Participant E, along with four other participants, indicated that more pauses would be needed for clarification and additional time to review the types of housing. Participant A felt the discussion between the HC and HI was “rather long, ... [noting that the HI was] asking HC about something... maybe something complicated ... if [the HI] had to ask him ... questions,...[he] will have to pay attention” (Participant A). Noticing the HI holding up four fingers, signifying that there would be four items, the same participant anticipated what the topic might be and had no clue that it was related to housing. Not being able to

predict what the types may be, he missed the first two. While struggling with some of the types of housing, due to terminology, this participant missed the objective of this topic. Recovering by watching the video again, he was able to figure out how to effectively interpret about the types of housing.

Participant C observed the HI using numerical indexing and said that an explanation of the process would be provided to the DC

why the [HC and HI] were discussing with each other. It [was] important[to] relay... what [was] happening as [the DC] can see the two talking... It was critical to keep that bond with the DC and keep him informed. The DC should not feel left out. (Participant C)

Participant C stated he would wrap up that discussion with a list of what the DC can and cannot buy, which is similar to what the other participants stated. Five participants discussed techniques for contextualization for interpreting. The techniques discussed were use of descriptive classifiers, comparisons and contrasts, contrastive space and reiteration, all of which are linguistic properties of ASL.

Participation F stopped the video few times and declared the need to ask the HI if the information was correct before conveying it to the DC. Demonstrating his frustration with laughter, Participant F was concerned about how the HI might feel about him due to many interruptions; however, he stressed that accurate information was necessary for effective interpreting. His further comments, regarding this issue, were

[He] was feeling more accountable than [the HI]. It was [her] responsibility, [her] duty, to explain and interpret all this to the DC... the HI may not like that; but [he has] to interrupt ... for clarifications. [He] felt like [the HI] was dumping it all on [the DI]. Likewise, [the HI] might feel [he] was interrupting her all the time. (Participant F)

Closing of meeting. The meeting ended quickly with the HC saying that there would be a review after the break that caught most of the participants off guard. There

was no indication that the meeting was ending as all the participants questioned whether the meeting was over or not. Half of them were unsure if the DC would actually have a chance to ask questions following the break. Right at the end, Participant C reiterated that he would not have accepted the job due to not being familiar with this type of situation. Throwing his hands in the air with a smile, Participant F declared that the meeting was over.

Pauses of video. During the Think Aloud Protocol Activity (TAP), the participants were allowed to stop the video any time they needed to, as well as play back the video (only the part they needed to review). The times that the participants stopped the video was recorded during the translation of the videos. There were a total number of 120 pauses made by the six participants. It was observed that the reasons for the pauses were to think aloud further about what was transpiring on the video, their processes, to vent or write notes.

Participants A and C had the highest number of pauses, 42 and 40 respectively, while Participant B had the lowest number, five. The median of the pauses were from Participants E and F, which were 15 and 18 respectively. Participant D did not stop the video at any point; however, he took notes while the video was still playing. It is not known if this participant chose not to stop the video or forgot about the option of stopping the video.

The sections on the video within the TAP activity were meeting the Deaf consumer, meeting the HI and the HC, introduction of the meeting and purpose, criteria for eligibility, benefits of FHA-insured loans, an historical fact about FHA, refinancing, types of housing, and the closing of meeting. During the opening section of the video, the

introduction of the Deaf consumer, Participant C was the only one who stopped the video seven different times to share his thoughts. These thoughts were regarding the DC's experiences with DIs, school attended, his lack of understanding of FHA, whether this was a legal situation, the DC's understanding of the goal of the meeting, need for information to guide the DC's decision about FHA and responding to his question about the DI's own experience on buying a home. Aside from Participant C, three participants stopped at the end of that section for thinking aloud their reactions that were similar to Participant C's.

The pauses in the next section, meeting the HI, were to express reactions towards the HI and the dialogue between the HI and HC. Three of the participants stopped the video twice in this section, and one participant stopped it three times. Two participants thought aloud as that particular section played. The next topic was the introduction of the meeting and it triggered three pauses, the lowest number of all the sections.

The longest section, benefits of an FHA-insured loan, had 63 pauses (53%), the highest number from the total of 120 pauses. This topic required more discourse analysis about interest rates, down payments, insurance on mortgages from FHA, credit and bankruptcy, thus necessitating the participants to consider prediction, strategies for deliberating with the HI, interpreting to the DC and vent their feelings. Pauses were also needed to inquire for specific details or clarification. The second longest section in this TAP activity was a discussion on FHA's criteria. Twenty-one pauses (18%) were made during this segment. The pauses were used to discuss how the HI should work with the participants in terms of chunking the information differently or when they wanted to

convey the material to the DC, as well as for the other reasons mentioned in the previous paragraph.

As an endnote, the total percentage of the three sections; criteria, benefits and types of housing, was 82%. That left 18% (24 pauses) of the 120 pauses made during the six sections: meeting the Deaf consumer, meeting the hearing interpreter, introduction of the meeting, historical fact, refinance, and closing of the meeting. To reiterate, the last three sections were very brief, thus only one pause would have sufficed if needed by the participants, as noted by the five pauses out of the 24 for the combined sections.

Table 5. *Highest Number of Pauses of Video in Sections of TAP Activity*

Participant	Number of pauses	Criteria for eligibility	Benefits	Types of housing
A	42	8	25	2
B	5	1	1	0
C	40	7	17	6
D	0	0	0	0
E	15	4	6	2
F	18	1	14	3
Total of pauses	120	21	63	13
Percentages	100	18	53	11

Notes During TAP Activity

Four of the participants made notes during the TAP activity as seen in Appendices A, D, E, & F. The sheets show that the participants attempted to write down key points. Two participants started with names of the federal agency, as they were trying to multi-task with writing and watching the video at the same time, and did not pursue further writing in order to remain focused on the video and thinking aloud, although there were few attempts to continue taking notes. The other two participants took comparatively more notes than the first two, ended up with a full sheet of key points. In the debriefing interview, the four participants explained that normally they would take notes for assistance when referring to the key points while conveying the information.

One participant did not attempt to take notes. In his exiting interview, a comment was made that in “real life interpreting” (Participant C), he would take notes depending on the Deaf consumer and the type of situation. The sixth participant showed indication of writing a few times but did not follow through, with the reasoning that it was difficult to watch the video and think aloud simultaneously.

Retro-Debriefing Interview

The participants remained for the third phase, retro-debriefing interview, giving them an opportunity to add additional thoughts in retrospect to the Think Aloud Protocol activity. Moreover, the interview provided a means for them to have closure with the entire study. The five questions in this interview asked of the participants were of their thoughts after completing the TAP activity; further thoughts about the interpreting

processes during the activity; any difference as if in an actual assignment; suggestions and advice for Deaf interpreters; closing comments (Appendix B).

Thoughts After the TAP Activity

The participants were asked for their thoughts after completing the TAP session. The participants found the topic to be complicated, requiring them to do research and preparation ahead of the assignment as was the norm for their work. “The more knowledgeable I am [about specific topics], the better I can interpret” (Participant A), as stressed by Participant A, was his justification for research and preparation. Not being familiar with this topic, they would ask for access to the materials from the HC.

Participant F declared that otherwise, he would

not accept the job beforehand. It just wouldn’t be fair to the Deaf person for [the DI] to go in a job... not knowing anything about it. It is not fair to the hearing consumer either as the HC is responsible for explaining these things. (Participant F)

One participant had a similar reaction, stating that since he had experienced “the process of buying a house... and interpreted workshops related to mortgages, [he] felt confident... Otherwise, [he] wouldn’t have accepted” (Participant C) this assignment.

As participants reiterated, this type of situation required more interaction with the HI or HC for repetition, clarification, explanation, or specific details. Regardless of “consecutive interpreting ... [the assignment was still] a struggle” (Participant A), as put by Participant A; the other three participants expressed similar thoughts. Two participants felt comfortable with this topic due to personal experience and prior interpreting work; however, they commented that there was a need for longer pauses and techniques to work with the HI on the process of organizing the information due to its complexity.

Based on the premise that this critical meeting would affect the Deaf consumer's decisions, all six participants expressed concern about whether their interpretation would be effective. They strongly expressed the importance for the DC could make informed decisions. They did not want to “throw [the information] at him through each part without processing” (Participant B).

Participant D's concern was on “how to organize the information – the details ... [and] how clear that information... [would be] portrayed” (Participant D) and he “predict[ed that] possibly more elaboration [would be] needed on the information” (Participant D). On the same thread of thought, this participant stated that the hearing interpreter elaborated too much on some of the items, especially about housing, though acknowledging that the HI did not know the DI's expectations of her as a team member and the teaming process. The statements from the other participants were similar about the necessity for contextualization from either the HI or the HC, including strategies to inform the HI of their needs. Not having specific examples made this participant feel that his “interpretation [would be too] open... as there were many dependent factors that the interpretation would be affected and not clear” (Participant A). Adding to that comment was that “in the hearing discourse, the information is more generalized whereas in ASL discourse, we use contextualized information for better understanding” (Participant C).

For all the participants, it was crucial that they strategize with the HI on the presentation of the information in manageable parts and retaining the text for interpreting. All the participants reaffirmed that the HI should monitor the DI's demands for pauses, delivery of the information, clarifications, repetition and expansion,. Without the DI and HI functioning as a team, monitoring the flow of the interpretation, the “constant

interruptions... would make it tougher” (Participant E) for all parties involved. For most of the participants, the situation was challenging as

The video seemed to go on without pausing. Even [with] pauses on the video, [she] needed more [and longer] pauses or a way to talk to the interpreter. There was no opportunity to discuss with or to ask the team interpreter for clarification on specific things. (Participant F)

These issues would be resolved through a “working relationship” (Participant E) with the team. Half of the participants commented that they could work with this interpreter; however, they needed to access to the HI and develop strategies for teaming together.

Regarding the Deaf consumer, the participants needed additional background about his world knowledge and experience with finances and housing. Two of the participants “deduced from his introduction and how well the DC signed that he seemed like a responsible person” (Participant D) and that he would take it onto himself to inform the DI when more information was needed. As all participants mentioned, it was imperative that the DC’s purpose of being there was foremost in mind throughout their interpreting. They expressed concerns about whether the DC would feel left out of the process while the DI was struggling with receiving the information.

Additional Thoughts About the Interpreting Processes During TAP

Continuing with the retro-debriefing objective, the question asked the participants for further thoughts about the interpreting processes that they did during the TAP session. The purpose of this question was to spur further thoughts about their experiences during the TAP activity. Some replies were commensurate with those in the earlier question. Some comments brought in different perspectives related to interpreting processes, strategies and resources. Focusing on the teaming aspect, Participant B stated that a pre-

conference meeting with the hearing interpreter (HI) was mandatory to get accustomed to the HI's signing style and discuss team strategies and "teaming processes and how to work with the hearing... and Deaf consumer" (Participant B). During the pre-conference, he would ask the HI, who had already met the hearing consumer, "about his goal for this meeting and all the information" (Participant B). The same participant questioned whether the HC had employed Deaf interpreters previously (Participant B). Looking at the overall picture, Participant D said, "He felt good about the environment... the professionalism ... [they]... seemed to complement each other... the professional conduct... However, it [was] how the information was processed that worr[ied] [him]" (Participant D).

Participant F resonated what he said earlier that

if I knew beforehand..., I would read the materials and maybe go to the bank... and have someone explain to me. If there were someone who knew about this, I would ask for... an explanation [and] find out [about] their services... [and] requirements.... I could read the information... Maybe I would tell the referral agency that I am not qualified for the job and... to hire someone who [was] familiar with the process of buying a house or... [with] FHA. (Participant F)

Regarding the Deaf consumer (DC), Participant B expressed a desire to "interact with him to see how he communicates... While interacting, [the participant] would envision how that would apply to interpreting" (Participant B). In further consideration of the Deaf consumer, Participant C did not feel the need to do any drawings, based on his assessment of the DC's language and confidence that the interpretation would match the DC's language.

Reflecting on the TAP activity, Participant E remarked that retaining the information was difficult due to thinking aloud and hoped "for smaller parts of the information to work with and to have frequent pauses" (Participant E). This participant

learned that he could decide “when a pause was needed [to analyze about making] connections with the different subtexts ... to process the information..., [and] predict what could be forthcoming” (Participant E).

Any Difference if in Actual Assignment

The next question in this retro-debriefing interview asked the participants if and how they would have handled this situation differently in an actual interpreting assignment. The purpose of the question was to have them envision how they might have conducted themselves differently. This question provided a means for the participants to work from a different perspective to supplement what they discussed in their previous responses.

Participant C emphasized that he needed to know in advance “whether it [was] for consultation or going through the application process... What would the meeting entail? What would occur during the meeting?” (Participant C). A concern this participant had about the information-gathering element of the application process was that the Deaf consumer might “be resistant to these questions as they are personal and [the DC] would not want the DI to know about his income. [He] would respect his ... [the DC’s need for] privacy and how [he] could make that known to [the DC]” (Participant C). Continuing in the same line of thought, the same participant accentuated that it was vital to develop a relationship with the DC in their initial meeting where the DC could “trust me as a DI ... [and to inform the DC] that all the information... would remain confidential” (Participant C).

Participant D emphasized that advance research was obligatory. This participant researches relevant systems, laws, proceedings and terminology in advance of the

assignments on the internet. Based on experiences with interpreting, this participant knew that “the DC would have a lot of questions. Deaf people like to ask many questions... Deaf people need a lot of examples and [he] wouldn’t [be able to] give any examples because [she] wasn’t familiar with the subject” (Participant D).

As he mentioned during TAP and in the previous question, Participant B reiterated that he would ask the HC for the materials and would lay them out for visual referencing for the DC. In addition, he stated with some hesitancy, then boldly, that a meeting with the HI would be demanded where they could develop a “working relationship” (Participant B). The basis for that was that... it was best that they “bond[ed] ... and go in... as a team” (Participant B).

In this section, four participants brought up a discussion about how the information was divided, and the amount and length of the pauses. Their concern was that they were not able to stop the HI when they needed a pause, clarification, or to write notes, as well as to break up the parts into smaller or larger chunks. “Those chunks required a lot of work in terms of memory and processing” (Participant E). They would be interrupting the HI and HC constantly, disrupting the flow between all the parties. “[He] felt ignored... as [the HI] kept going without checking in on [the DI]... [He] noticed that not once did the HI explain to the HC the process in which there would be times she would be taking more time to explain to [the DI]... [the HI] just kept things rolling” (Participant F).

Suggestions and Advice for Deaf Interpreters

Continuing with the debriefing interview, the next question delved into what suggestions or advice they would provide to Deaf interpreters. The second part of the

question asked the participants what they would suggest to DIs for effective work with interpreting. This question was a pathway to shift the participants' focus away from themselves and to glean a broader perspective of their work as Deaf interpreters.

The professional attributes that Deaf interpreters should possess, as stressed by the participants, are sensitivity, flexibility, adaptability, patience, confidence, language competency, interpersonal skills, and research skills. The participants accentuated that being flexible would allow for adaptability with different consumers and situations, as consumers vary in terms of communication, language, education, and world knowledge. Participant D concurred and mentioned that there should not be any assumptions about what the DCs may or may not know. The same participant said the same professional qualities applied to effective teaming with a hearing interpreter.

Being confident and doing one's best along with interpreting and interpersonal skills was the advice imparted by Participant A. He emphasized that DIs should have world knowledge, understanding of their own worldview, competencies in language and interpreting as well as research skills for job preparation. Participant E's comments echoed that of Participant A, adding that respect, professionalism, and honesty were important for both teaming and working with Deaf and hearing consumers.

Professional development was highly valued by Participant C as it was mentioned that Deaf interpreters should "take workshops and more workshops, learn more ... about interpreting [, and]... self-analysis" (Participant C). He recommended that a conference for Deaf interpreters should be held, hopefully in the near future, to "share [their] expertise and knowledge" (Participant C). Similarly, Participant B asserted that DIs should collaborate in sharing techniques and experiences from their work, which would

greatly enhance their knowledge and skills. Furthermore, there should be training on teaming processes with Deaf and hearing interpreters. Participant C stressed that many hearing interpreters

are reluctant to working with DIs as a team. They don't know how to team... All this time, hearing interpreters had been teaming with other hearing interpreters. Then, boom, [they are] now working with DIs [which] is different for them. The process between a hearing-hearing interpreter team and between a Deaf-hearing interpreter team is much different. There is a need to analyze that more. We need to find what is effective or not effective and why. Then we [learn] how to team together. (Participant C)

Closing Comments

The final question asked the participants if they had anything further to add to their comments before ending the interview. The question was to provide the participants an avenue to close the debriefing and last component of the three-phase research study. All the participants provided endnotes in this final question.

Participant E ruminated about Deaf consumers and stated that it was crucial (for effective decisions on his choices for techniques and processes for interpreting) to know

how they sign, ... their style of communication, [understanding of] the terms discussed in this assignment,... their background, ... their experiences, education level, their work life, their home lives, their economic status, observations of who they are, ... all of that inclusive information [as that] would help with [his] predictions [and avoid] assumptions. (Participant E)

Participant D stressed that the same should be done with hearing interpreters, “to get a feel for them” (Participant D) through a discourse to assess “their signing skills and world knowledge in terms of working with DIs, work experience, professionalism and teaming aptitudes [and] that DIs should coordinate” (Participant D) the teaming processes, including conferences. Concerning hearing consumers, Participant E included

that it was vital to ascertain whether they had worked previously with Deaf interpreters and were knowledgeable about Deaf people and Deaf culture.

Participant E concluded that groundwork was the key for Deaf interpreters and that research was necessary for them to be prepared for anything that may arise during an assignment, reiterating from the previous questions in this debriefing interview.

Participant F emphasized that training and preparation for Deaf interpreters were crucial to understand the processes of interpreting and teaming; it was imperative that they were knowledgeable about specific aspects of their assignments. Using the legal system as an example, the same participant explained that if a DI had a court case related to divorce, knowledge of the proceedings for divorces within the legal system would be a requisite. In juxtaposition to Participant E's comments, Participant F stressed that patience, honesty, assertiveness, and professionalism were requisites for the DI to employ while negotiating with the HI in pre-conference meetings on the teaming process, cues such as eye gaze, head movements, and other signals to use within the team. Additionally a post conference is necessary for feedback, as "there may be some unresolved issues ... to be aired out... [in case they] work together again" (Participant F).

"Monitoring the Deaf consumer's ... comments and back channeling through his non-manual signals, body language, and how he replies" (Participant A) was a critical part of the interpreting processes. This participant stressed that monitoring provides a guide for the DI to determine whether the interpretation was effective. Additionally, Participant B stated that it was important to evaluate the DC's comprehension via their interaction, and utilize techniques during the process such as drawing, gesturing, role-play, use of notes and expansion (Participant B).

Participant F brought up two issues regarding interpreter referral agencies and rationales for hearing interpreters' request for a DI. His advice was specifically directed to DIs on accepting assignments from referral agencies on the basis of their qualifications, readiness or experience for specific situations, even if these agencies implore the DIs to accept the assignments. In addition to the rationale for requesting DIs due to language, communication, or physical needs, Participant F emphasized that hearing interpreters sometimes request a DI because they are simply not being able to understand the DC. The HI may not know how to handle or interrupt a Deaf person who is signing in an emotional or agitated state. This same participant explicated that the DI, with the formative experience of growing up Deaf, would know "when to interrupt ... how to handle [the DC's] emotions and rapid signing [with] strategies" (Participant F). As an endnote, the same participant underscored the fact that "some interpreters have jewelry on, such as big rings and bracelets, which is very distracting. It is not easy for a Deaf person to tell a hearing person to remove the jewelry... as [the person] would look back at the Deaf person] disapprovingly" (Participant F).

Five of the participants shared their experiences about the TAP process. Not having this type of experience beforehand, Participant A reflected on the possibility of TAP being included in a curriculum, as it seemed to provide materials "to practice for the real world" (Participant A). The process of TAP made this participant realize that he was "thinking about the What ifs ... [and] on how much of the information [was] interpreted correctly, not [to] allow [him]self to get distracted" (Participant A). Another participant stated that the TAP experience facilitated a view into his decision making processes and

provided a greater awareness of how many decisions were made and whether they were spontaneous or not (Participant E).

Reflecting on his experience with TAP, participant B considered this an excellent way to research the work of DIs, as there is a need for more studies and their resultant data in this area. He strongly felt that the work of DIs was more complicated than hearing interpreters as the DIs are required to use different approaches and strategies with different Deaf consumers. The same participant also questioned whether the work that Deaf interpreters do was interpreting or if it should be considered something entirely different. In this thread, Participant C expressed having enjoyed the TAP process and commented that it would assist immensely with teaching and increasing knowledge and skills.

Sharing his insights about TAP, Participant D discussed how he grew up without communication with his family, and always wondering what was going on within the family. This participant consistently had to “do a lot of guesswork” (Participant D) to guide predictions on what might happen, based on the observations of people’s actions. He questioned whether that was related to the formative years of Deaf interpreters and if that could be researched with other Deaf interpreters.

As mentioned in the opening paragraphs of this chapter, the purpose of this three-phase study with six participants who were certified Deaf interpreters with a minimum of five years of interpreting experience was to discover the steps, strategies, and resources Deaf interpreters employ to ensure effective interpretation. The three-phase study entailed a preliminary interview, Think Aloud Protocol, and a retro-debriefing interview.

The culmination of Chapter 4 will now lead to Chapter 5 with its interpretation of the results, conclusion, and implications for further study.

CHAPTER 5. RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

This three-phase study demonstrated the dynamics of Deaf interpreters at work on a specific task utilizing the Think Aloud Protocol, a preliminary interview and a retro-debriefing interview. Six certified Deaf interpreters with five years or more of interpreting experience participated in this study. The Think Aloud Protocol was utilized as a research method to glean data from the participants on their thoughts, strategies, and resources for effective interpreting. As stated in Chapter 1, the research questions in this study asked the following: What steps do Deaf interpreters use in their work to ensure effective interpretation? What strategies and resources do Deaf interpreters use while working on the analysis for interpretation?

This chapter will discuss the results based on the findings from Chapter 4, conclusions derived from those results, and recommendations for future research. The recurring themes in Chapter 4 were gleaned from the data analysis of the translations of all phases of the study. The first part of the three-phase study, a preliminary interview with open-ended questions was to explore the DIs' educational background; including how and why they chose this field. There was also an inquiry regarding their interpreter education and professional development as a Deaf interpreter. Second, Think Aloud Protocol (TAP), as a research instrument, provided a means to look into the thought patterns of DIs working through the steps to an effective interpretation. Last, a retro-debriefing interview was conducted to facilitate the participants' ability to contribute additional thoughts about their TAP activity and an avenue for closure to their part in this study. Triangulation of the results from TAP and the interviews were based on the

comparisons of the processes demonstrated in TAP and the interviews that occurred before and after TAP.

Results

Background Information of Participants

Gender, age, ethnicity, deaf family members. The ratio of the six participants' gender in this study, 67% females (4) and 33% males (2), is commensurate with the NCIEC's national survey of Deaf interpreters (2008). Of the 196 respondents to the national survey, 62% were female and 38% were male (NCIEC, 2008). With regard to ethnicity, the participants in this study (100%) were Caucasian that closely correlates to the national survey's ethnic composition of 88% Caucasian, 4% Asian, Black, or other, 4% Hispanic, and 4% unknown (NCIEC, 2008). None of the participants in this study had blood-related Deaf members in their immediate family, which was in contrast to the results of the national survey where "less than half (43%) [of the 196 respondents] had no Deaf family members" (NCIEC, 2008, p. 6) and that the majority of DI respondents had some family relationships within the Deaf community, especially extended family and siblings" (NCIEC, 2008, p. 6). This may not have much impact on the effectiveness of the participants as interpreters as it appears that the key for acquiring language, culture, and communication competence took place during the participants' formative years in their educational programs and postsecondary education.

Years of experience, certification and education. This study required that the participants be nationally certified and have at least five years of experience working as interpreters. As stated in the previous chapter, the range of experience was five to thirty-

two years with the median of 13 years. The years averaged between the six participants were 16.3 – 16.8 years. The national survey results (NCIEC, 2008) showed a greater range of years of experience: 67 of the 196 respondents (34%) had zero to five years of experience, 46 (24%) between six to eleven years, and 71 (36%) 12 to more than 15 years.

According to the national survey (NCIEC, 2008), 3% (five of the 196 respondents) had both interpreting certifications (RSC and CDI); thirty respondents (15%) had ASLTA certification. In this study, 100% of the participants were certified interpreters. One participant (17%) had all three certifications (RSC, CDI, and ASLTA). It should be noted that the national survey (NCIEC, 2008) had respondents who were both non-certified and certified, as its primary purpose was to gather data on the status of all Deaf interpreters working in the field. This study had a different scope, which was to study Deaf interpreters who were already certified and in possession of a minimum of five years of experience, to discover what steps, strategies and resources they deemed necessary for effective interpretation.

Postsecondary education. Five participants (83%) had a postsecondary education with a bachelor's degree; four (66%) had a master's degree while one had a high school diploma (17%). The NCIEC survey (2008) reported that of the 196 respondents, 19% had a high school education, 12% had an associate's degree, 19% a bachelor's degree, and 34% a master's degree. As noted in Chapter 4, all the higher education degrees held by the participants in this study, with the exception of one bachelor's degree, were related to helping professions. The NCIEC national survey did not delve into the type of degrees the respondents held.

Formative experiences. All six participants had attended a variety of schools and educational programs for Deaf children, exposing them to a gamut of educational, cultural, and social experiences, all of which are critical formative experiences for a Deaf interpreter. These formative experiences are considered attributes for Deaf interpreters, and were acknowledged as such in a focus group study with Deaf interpreters in 2007 (NCIEC, 2009) and substantiated in NCIEC's Deaf Interpreter Competencies (2010). Thus, the six participants' educational experiences were a critical element of the formative experience required to be effective Deaf interpreters. Likewise, the types of higher education institutions for interpreter education were influential in their formative experiences as DIs. It is imperative to note that all the participants were drafted to interpret or facilitate communication for other Deaf students and members of the Deaf community, and were strongly encouraged by those individuals to become interpreters; otherwise, they would not have considered a career in interpreting.

Interpreter education and professional development. Five of the participants received formal interpreter education at higher education institutions while one participant attended workshops geared for those who aspired to become Deaf interpreters. All participants expressed frustration with the lack of training to further their general interpreter education and the same lack of training for specialized settings such as medical, legal, and mental health. They shared their concerns about ensuring the effectiveness of their work and enhancing their knowledge and skills for developing strategies and resources. All the participants expressed the critical need for greater scale and frequency in the provision of interpreter education, mentoring programs,

opportunities for collaborative discussions, and professional development specifically targeted for Deaf interpreters.

Settings. All the participants interpreted primarily in the following settings in order of frequency: medical, legal, and mental health. Conversely, as discovered in the national survey (NCIEC, 2008), the order of frequency of settings where respondents worked as DIs were legal, mental health and medical. These results, based on the participants' experiences and responses, indicate a critical demand for Deaf interpreters, again emphasizing the need for training in those milieus (NCIEC, 2008). As far as interpreting for Deaf-blind consumers, the national survey (NCIEC, 2008) showed that 62% of the respondents have interpreted for this population. Of the six participants in this study, five have worked with Deaf-blind consumers, which is 82%, compared with 62% in the national survey. The Northeast area holds one of the largest populations of Deaf-blind people (National Task Force on Deaf-Blind Interpreting, 2008); hence, there are more opportunities for DIs to work with Deaf-blind consumers.

Drafted as Deaf interpreters. The results from the interview question related to motives for the participants' decisions to become interpreters bore interesting fruit. They all indicated that they were drafted as interpreters by members of the Deaf community who would depend on them for translating and interpreting as described in the literature review in Chapter 2. All the participants were encouraged and influenced by members of the Deaf community and other Deaf interpreters, indicating that there exists a cultural norm of *gatekeepers* who decide on who are qualified to be interpreters (Bienvenu, 1991, Boudreault, 2005; Stone, 2005). These participants often found themselves in that role, as quoted in the literature review, “without expressly being asked, as a ‘relay’ or

‘facilitator’” (Boudreault, 2005, p. 324), which seemingly was encouraged by Deaf persons who trusted the participants with their immediate communication needs. This raises the question of who determines the base qualifications of Deaf interpreters that needs further exploration on the hypothesis that the gatekeepers deemed them effective interpreters.

Think Aloud Protocol. As noted in the literature review of Chapter 2, TAP has been a popular method for research in the field of translation, especially in Europe. TAP has also been used as a teaching instrument to demonstrate processes related to translation of printed texts. It appears that this is the first study to use TAP for research purposes in interpreting from a video specifically in the field of American Sign Language and English, aside from the dissertation written by Stone (2005), which primarily studied translation activities by Deaf translators utilizing printed texts. In that study, translations were rendered by Deaf translators in preparation for a television news program, and were from written English to British Sign Language (Stone, 2005).

Thus, this study may be the first one in which Deaf participants, who were certified interpreters, had the task of interpreting information imparted from a hearing interpreter on video. In actuality, the hearing consumer spoke in English and the hearing interpreter relayed the information in American Sign Language, thus incorporating an extra process into the norm of translating or interpreting between two languages. Subsequently, the Deaf interpreter was to interpret the information in the language and style best suited for the Deaf consumer. On the video, the hearing consumer was visible, sitting beside the hearing interpreter. The Deaf interpreters who participated in the study observed the interaction between the hearing consumer and hearing interpreter, albeit the

participants, being Deaf, did not know what was being discussed. This was deliberately included in the Think Aloud Protocol activity to discern whether interaction between the hearing consumer and hearing interpreter could affect the team process between the DI and HI or the DI's interpretation for the Deaf consumer.

The interpretation was done consecutively, thus the hearing consumer would convey sections of information and then pause to allow the hearing interpreter to relay the information in ASL for the DI to process for interpreting to the Deaf consumer. The hearing consumer would wait before moving on to the next section until the hearing interpreter completed the delivery to the participants. The Deaf consumer was not seen in this video; however, the participants briefly *met* the Deaf consumer on video prior to the assignment. There was no interaction between the Deaf consumer and the Deaf interpreters involved in this study, whereas a “real-life” situation that would allow further assessment of the Deaf consumer's background, communication and language.

Think Aloud Protocol experiences. It is critical, at this juncture, to make an empirical observation regarding the Deaf participants' metacognitive processes, and how they seemed to have been affected by thinking aloud in American Sign Language (ASL) while watching a video of a hearing interpreter signing. Even with several reminders to *sign aloud* at the initiation of this exercise, they tended to either wait several seconds or until the video was stopped before starting to think aloud in ASL. Most of the participants indicated that it was difficult to focus on the process of interpreting and to sign aloud simultaneously. Four of the six participants attempted to write notes while viewing the video and thinking aloud, and stopped the video for the purposes of writing notes and thinking aloud. Two made attempts to write notes in the beginning, then did not pursue

further note taking, though they explained in the debriefing interview that in actual interpreting situations they would take notes. One participant did not stop the video while taking notes; however, this affected how much thinking aloud he did. In contrast, when translating printed text, there are no constraints with thinking aloud in a spoken language and writing notes during the process of translating. The resulting awareness is that it was critical for DIs to make time to take notes during the team process without constraint, requiring the other parties to wait until the DI has made the necessary notes for accurate interpretation.

The participants were allowed to stop the video any time during the TAP. Most of the time, five participants waited until they stopped the video before starting to think aloud. On numerous occasions, three or four of the participants began their Think Aloud process while the video was playing. They stopped the video while the hearing interpreter was still relaying the information or at the end of the respective component of information from the hearing interpreter who then focused on the hearing consumer to receive the next component of the information. This was noted in Chapter 4 and in the translations of the TAP activity.

Most of the time, the participants would nod to indicate a listening behavior while watching the video. Subsequently they would stop the video to Think Aloud about what had just occurred or been conveyed during that section of the video, and what went through their minds regarding the process or what they needed for effective interpretation of that chunk of information. Taking pauses gave them time to express their thoughts before resuming the video. Pauses were used frequently, and more in some parts than others, depending on the complexity of the information as discussed in Chapter 4. Only

one of the six participants alternately signed aloud and took notes without stopping the video. On the face of these observations, TAP was a relatively new experience for all the participants, and statements from the participants in their exiting interviews support these observations.

Consideration must be given to the fact that these participants saw the source information relayed to them from the hearing interpreter only one time as is the norm with interpreting, with the option of a second viewing of a specific segment for clarification, as instructed and permitted during the TAP. Again, it is important here to note that translators work with printed text that can be reviewed repeatedly. When interpreting, the source is given only once, through either spoken English or American Sign Language. In addition, in this study's design, there was no opportunity for the participants to do any pre-conferencing prior to the "assignment to confer with the hearing consumer as a team, to discuss processes of working as a team and to glean additional information pertaining to the situation.

Based on the findings of the data analysis in Chapter 4, interpreting is a multifaceted activity, further complicated for the Deaf Interpreter when working with a hearing team member, hearing consumers and Deaf consumers. During this complex activity, the Deaf participants expressed their thoughts related to team processes, techniques and strategies for interpreting the material, decision-making processes, power dynamics within the interpreting team, interpersonal relationships with the Deaf consumer and hearing interpreter, and the need for assessment of the Deaf consumer and the hearing consumer. Issues of depth of involvement and relationship with the Deaf consumer emerged as well.

Moreover, the TAP activity revealed the thought processes on strategies related to pre-conferencing, preparation, interpreting processes, note taking, internal dynamics for team processes, rhetorical and discourse analysis of the information, framing, and discourse reconstruction of the relevant information into ASL. Resources that were revealed through the participants' thought processes were research, study, and preparation prior to the assignment. Additionally, the TAP activity and the interviews revealed how effective interpretation could be best achieved through Deaf and hearing interpreters working as a team, not as separate entities.

Assessment of the Deaf Consumer

All the participants stressed that assessment of the Deaf consumer (DC) prior to the interpreting assignment was a vital factor for effective interpretation and smooth inter-relational dynamics among all involved parties. A recurring theme emerged, which was a concern about whether the DC's language and communication needs would be accommodated. A pre-assignment assessment would entail consideration of the DC's use of both ASL and English and his "non-linguistic behaviors" (Eldredge, 2004, p. 137) through his discourse organization in ASL, Deaf-world experiences, communication styles, age, gender, educational background, occupation, world knowledge, related experiences, and knowledge of the topics in question for the interpreting assignment, along with the DC's understanding of the purpose and expectations of the meeting.

During the assessment, the DIs would note his sign vocabulary related to this milieu and his comfort with the inquiry process that is normally part of the specific setting, especially in light of sensitive information that would be elicited, such as personal effects, experiences of services with Deaf interpreters or interpreters in general.

Regarding the inquiry process, discourse approaches differ between ASL and English (Eldredge, 2004; Napier, Carmichael, & Wiltshire, 2008); thus, the DIs would need to determine the DC's understanding of the differences in the inquiry practices between the two discourses. This assessment would guide the DI's interpretation in framing the approach of the questioning. In conjunction with meeting with the DC, the role of the DI would be discussed, along with what the DC could expect and how the DC would be part of the team process. This critical point was expressed by most of the participants.

The participants indicated that background information was an important resource in determining the needs of the DC. Knowing whether this meeting with the DC had been rescheduled due to ineffective communication at a previous meeting or was a continuation of a prior meeting with a different DI was critical for two of the participants. Such information would enable them to investigate what had transpired at the previous meeting and what communication difficulties occurred, if any. In addition, these two participants requested information on effective techniques for interpreting and communication that were used in the prior meeting from the previous DI-HI team, if that was the case.

Assessment of the Hearing Consumer

Four participants deemed that assessment of the hearing consumer (HC) was also necessary for their work to be successful. In the pre-conference, the DI would be able to determine the HC's background and personality, power dynamics, expectations and objectives for the meeting. Any written materials such as forms, policies, and files would be perused for assessment and discourse objectives for contextualization purposes. The conference with the HC would be advantageous for the DI and HI to discuss teaming

processes and how the HC could become an active participant of the team to further enhance the efficacy of the meeting.

Team Processes

Foremost in the minds of the participants were compatibility with the hearing interpreter, and how the HI would respond to the DI as a team member. As maintained by all the participants, a pre-conference with the hearing interpreter was essential, contributing towards the effectiveness of the interpretation in which the team would collaborate on the “co-construction of meaning” (Janzen, 2005. p. 332) through effective team processes. The participants’ primary concern was that without collaboration within the team, in other words, “collaborative interpreting” (Mathers, 2009, p. 74), the Deaf consumer would suffer the consequences. As indicated by the empirical observations of the participants’ visible reactions and comments, the hearing interpreter and the hearing consumer meeting without the DI was a break in protocol that put the DI at a disadvantage in many ways. Collaboration with the hearing interpreter and “interdependence” (Hoza, 2010) with the team should begin with a pre-conference for the DI and HI to discuss team dynamics and processes prior to meeting with the hearing consumer, not the hearing interpreter going solo to the HC, as stressed and mandated by the majority of the participants. As the participants stressed throughout the TAP activity and in the retro-debriefing interview, collaboration would contribute towards the team members’ accountability to each other and augment the efficiency of the team processes and interpretation.

Not having the ability to collaborate with the HI or the HC would lead to a breakdown of the team, creating a dependence of the DI on the HI. It would also create

“dissonance” (Kushalnagar & Rashid, 2008, p. 51) between the team members, so there would be no way to assure trust, team building, and avenues for feedback. Such dependence would diminish the DI’s role as a team member that would inevitably lead to unnecessary breakdowns in the communication among all the parties. These breakdowns and miscommunication, as indicated by the participants, would lend themselves to perpetuating a pejorative view that some hearing consumers and some hearing interpreters may have towards DIs. The majority of the participants stated these concerns frequently both during the TAP activity and the exiting interview.

The comments and the empirical observations of the participants indicated relief upon learning that the hearing interpreter on the video had worked with DIs previously, and that the HC had experienced working with a DI-HI team. The relief was less about not having to explain the nuts and bolts of how to work with a full team; it was more about the reassurance of knowing the HI’s attitude towards the DI in terms of being an equal member of the team rather than being perceived as an additional “client” (Kushalnagar & Rashid, 2008, p. 50). Hearing interpreters are “accustomed to interpreting with Deaf individuals who are in the client role” (Kushalnagar & Rashid, 2008, p. 50); thus, working with Deaf interpreters “create(s) some discomfort for some [hearing] interpreters... [as] the new dynamic change in roles” (Kushalnagar & Rashid, 2008, p. 50) now requires the hearing interpreter to make attitudinal adjustments. The adjustments meant that the Deaf interpreters are now part of the decision-making processes, relinquishing “the communicative power” (Kushalnagar & Rashid, 2008, p. 50) to the Deaf interpreters, whereas historically the HIs had been making these decisions by themselves.

Power Issues Between the Team Members

As previously noted, the power dynamics within the interactional relationship between the DI and HI, explicitly and implicitly stated by the participants, profoundly affected their thought processes as they worked through the TAP activity. Their experiences were highlighted in the retro-debriefing interview as they discussed their thoughts on power issues. As Participant C fittingly put it, many hearing interpreters do not know how to team and work with DIs. For so many years, they “had been teaming with other hearing interpreters, then *boom*, [they are] now working with DIs” (Participant C) and this same participant stressed that there was a need for training and research on team processes between DIs and HIs. Another participant stated that the DIs should have similar training for collaborative team processes to assure that “both [the DIs and HIs] are on the same page” (Participant B).

From a historical perspective, Deaf people have been translating and interpreting for each other for centuries, as mentioned in Chapter 2 (Bauman, (2008); Boudreault, (2005); Forestal (2005); Stone (2005). Hence, Deaf persons are accustomed to having communicative power among each other as they worked towards assuring that everyone was *in the know* within the Deaf community. The participants’ comments and behavior suggested that they were willing to share the communicative power with the HI as part of the team process, as the primary goal was successful communication between the DC and HC. The participants were adamant that pre-conference meetings with the hearing interpreter and hearing consumer must always be part of the protocol for the team to familiarize themselves with the parties involved, with a particular focus on the DC, along with the specifics of the setting and the physical environment in which the meeting would

take place. Following this protocol would enable the DI to be on equal footing with the HI for the decision-making processes that occur within the team both prior to and during the interpreting processes, to create a dynamic equivalent of the message.

The participants stated it was vital that during the pre-conference meeting, the team come to a consensus on strategies to employ during the meeting. Team protocol would entail discussion of the assessment of both the Deaf and hearing consumers, the assignment itself, the setting, in addition to the preparation, collection of materials (if any), and sharing knowledge, both personal and professional, about the assignment. Following the analysis of the above, the team would predict and discuss what may transpire during the meeting to be ready for any additional types of interpreting strategies that might be needed.

Strategies and Resources

As indicated in Chapter 4, techniques and strategies for effective consecutive interpretation must be discussed by the DI and HI during a pre-conference meeting. The triangulation of participants' comments pointed out that such strategies included perusal of documents, management of information flow, division of the text into larger or smaller chunks based on the needs of the DI or DC, team monitoring and support, procedures of clarification and contextualization or organization of the information. Most of the participants stated that the team would develop cues to inform each other when clarification, expansion, writing of notes, a pause for more time or an internal team conference was needed. The cues, discourse flow, and turn taking would be based on signaling behaviors normally employed by Deaf persons (Eldredge, 2004). Furthermore, monitoring of the DC's accessibility to the information and its meta-messages, along with

the “linguistic, pragmatic, and social meanings” (Hoza, 2007, p. 40) was critical for the DIs in this study. Thus, agreed-upon strategies were needed to assure that these meanings were contextualized and included into the interpretation. Therefore, the team must consider and discuss a variety of techniques and strategies, such as notes, charts, drawing, use of visual aids and props, role-play, contextualization, and any other necessary adaptation of communication.

As discussed in the literature review in Chapter 2, “intercultural competence” (Olk, 2002, p. 122) is a requisite proficiency for Deaf interpreters to possess, as effective interpreting requires linguistic and cultural lenses. These lenses entail native or native-like competency in ASL and Deaf-world cultural experiences (NCIEC, 2010). Jungwha (2003) stressed that the target message demonstrated effectual interpretation when various methods and techniques were utilized during the interpreting process.

The responses of the participants gave a strong indication that strategies and techniques became a secondary concern when the communicative power and power issues came into play between the DI and HI. Without any team processes or a working relationship with the HI, any use of the strategies and techniques would be set to fail. The DI’s ability to coordinate and negotiate team processes would enable the DI-HI team to effectively apply the strategies and techniques that were planned during the pre-conference. Additionally, the linguistic, discourse, and cultural components of ASL would be employed to smooth the process of discourse analysis for effective interpretation, as per the research questions, when the DI was able to coordinate and negotiate the team processes, discourse flow, signaling behaviors and other strategies agreed-upon by the team and the DC or HC.

Additionally, whether from personal experience, global knowledge, professional training, knowledge of the related policies and technical vocabulary, or experiences through prior interpreting work, the use of schemas was deemed a vital resource for the DIs, as stressed by the participants. The schemas allow for discourse flow of the text into manageable units through which the context and the event are best understood. Furthermore, these schemas or cognitive maps contribute toward retaining the critical components of the message in the interpretation for the Deaf consumer, assuring message equivalence. Assignment preparation, research, and perusal of the materials used in such meetings are a necessity for the participants. Moreover, the participants deemed that the creation of a mental simulation of the team dynamics, interpreting processes, technical vocabulary, prediction of any subtopics, monitoring of the DC's comprehension of the information and involvement of the meeting through interactional discourse among all the parties were critical for effective interpretation. Adding to the research question on what resources DIs needed to ensure effective interpretation, there was a strong indication from the participants that DIs also must possess Deaf-world knowledge of discourse as a fundamental competency and resource as part of language and cultural competencies (NCIEC, 2010).

Discourse Analysis

The participants indicated, through their comments and number of pauses, that they had a difficult time analyzing how they would put the information together to make logical connections. When the HI would give them the text piece by piece, the comments by the participants regarding this situation implied a perception that they felt English was being held at a higher premium than ASL due to the discourse flow and turn-taking

processes seemingly based on English discourse (Tannen, 1986; Eldredge, 2004; Hoza, 2008; Kushalnagar & Rashid, 2008). The results of the participants' numerous pauses, reactions and comments about the different sub-texts as noted in Chapter 2 demonstrated a strong indication for the potential of disjointed discourse for interpretation, due to lack of access to the entire text for discourse organization and structuring into ASL (Eldredge, 2004). This is analogous to receiving few pieces at a time without having the full picture or schema of the puzzle. Without such a cognitive map (Zhoa, 2004), discourse analysis and organization for interpretation into ASL would be incoherent to both the DI and DC.

As the coordinator of the team, the DI would have been able to access the desired information from the text to maintain intelligible discourse structure by making connections between the parts of the text and subtexts. Not being able to coordinate the team process would lead to disjointed communication within the team, as the participants would be unable to negotiate the conveyance of the information in light of its discourse structure and contextualization. During the TAP activity, it became clear that the inability of the DI to control the flow and access to the information was influenced by several factors. These factors were the lack of monitoring and sharing of the responsibility by the team interpreter, the disruptive flow of the text through the HI, and not being able to induce pauses to the HI or HC for additional information, repetition, or clarification.

Participant B made an emphatic point when he stated, "Just give me the materials and I will lay them out in front of me. This way I can think how to set up the information for the interpretation." This statement represented comments made by all the participants. To reiterate, availability of materials, pre-conferencing, conferencing during the meeting among all parties and management of the processes by the DI are requisites for successful

interpretation and interaction. With all the pieces in place, effective discourse organization and framing of the text can occur, allowing for the processing and constructing of the information into ASL with accurate application of linguistic and cultural components, as indicated by Jungwha (2003). The participants said that they needed the ability to assess the amount of the text, based on specific items to be interpreted by conferring with the HI and the HC. They had no control in deciding how to break down the text in the manner they needed to process for interpreting purposes to make the connections between the parts, which led to frustration with the inability to do proper discourse analysis for effective interpretation. There were concerns expressed by the participants that the message would appear disjointed to the DC. An initial pre-conference with the HI, then with the team with the HC was a strong mandate from all the participants. The DI taking on the role as a team coordinator to negotiate the interpreting processes among all parties would enable the interpretation to be more cohesive and ultimately more effective in terms of discourse organization of the text. As coordinator, the DI would also facilitate the logistics, seating arrangements, team dynamics and interpersonal relationships with all parties involved. In this manner, any potential conflicts between the DI and HI would be dispelled because they would be coordinating and managing the negotiation and processes to ensure a level playing field for the Deaf consumer.

Issues of Involvement With the Deaf Consumer

Effective interpretation would enable the Deaf consumer to make “informed decisions” (Participant A), thus, it was crucial that the Deaf consumer be fully involved with the understanding of what was happening between the parties and be allowed to ask

for repetition, clarification or any other questions. Through implications of the participants' reactions and comments regarding the Deaf consumer, it can be said that the participants were concerned that the process would marginalize the Deaf consumer. As a component of the consecutive mode of interpreting, turn taking was required for each party, thus, the DC was on the receiving end of the interpretation. This clearly illustrates how marginalization could occur for the DC, DI or both. The participants expressed concern regarding how much the DC was involved in the meeting. The participants indicated through their responses that they needed to convey to the DC what was happening in the process and assure the DC that he was still part of the meeting to avoid any such marginalization. They wanted to enable and empower the DC to understand and hence, participate fully, during the meeting.

Most of the participants indicated that they would inform the Deaf consumer (DC) what was happening in the interactive dialogue between the hearing interpreter and the hearing consumer, and subsequently between the DI and HI. The Deaf consumer would be provided opportunities to understand the processes of interpreting and the roles of both the Deaf and hearing interpreters. Bonding with the DC was critical for developing inter-relational dynamics to assure that the DC was fully involved in the meeting. Many of the participants implicitly stated that an interactive dialogue was a critical component for the DC and the DI to allow for interactional discourse (Napier, Carmichael, & Wiltshire, 2008) as part of the interpretation process.

Referential Context From the Deaf Consumer

In the Deaf consumer's introduction, he shared his educational and family background, his wife being Deaf, his rationale for the meeting, his unfamiliarity with

FHA's services and policies, and his prior use of a DI for different purposes. The sharing of information between the DC and DI is known as "referential context" (Eldredge, 2004, p. 133), a critical part of ASL discourse, which has a role in asserting the DC's identity and "insider status" (Eldredge, 2004, p. 126) with the DI. Deaf people often "undertake ... interactional routines when meeting ... someone new" (Eldredge, 2004, p. 131). Based on the participants' observations, they were able to determine the DC's use of ASL, his Deaf-world experiences, and his application of referential context for "establishing [his] connection to the Deaf-world" (Eldredge, 2004, p. 130). The status, as established by the DC, was critical for the participants to determine a proper distribution of power and solidarity between the DC and DI, including the HI and HC, which would allow the DI's interpretation to be representative for both the DC and HC (Tannen, 1986). The DC asked the participant as the DI in the *meeting* if he had bought a home. Three participants replied that they would respond affirmatively; one participant added that he would offer that he had basic experience, and then move on with the meeting. These three participants felt the affirmative response was part of building trust and bonding with the DC and understood it would guide the DC's framing of the DI's role as an interpreter, especially in the context of his main objective for having this meeting (Tannen, 1986). The DI's willingness to share some referential context guided the DC's connectedness to the DI's identity with the Deaf-world experience, which would allow the DC to trust the DI in being able to frame his interpretation, based on his own experience or knowledge. A fourth participant debated what to do with that question, as the participant wanted the DC to bond and trust him; yet, he felt unsure if it would be appropriate to reply to the DC's question. This participant had the least years of interpreting experience, compared with

the other participants who had more than 13 years of experience, all of whom replied affirmatively to the DC's question.

Conclusions

Through the triangulation of the preliminary interview, TAP activity, and retro-debriefing interview, themes related to the research questions emerged from the data analysis of this three-phase study. With the questions of this study focusing on the steps that Deaf interpreters apply in their work to ensure effective interpretation and strategies and resources they use while working on the analysis for interpretation, the results brought to light numerous factors through several recurring themes. These themes were categorized as follows: background information; postsecondary education; formative experiences; interpreter education, mentoring, and professional development; drafting of Deaf interpreters; TAP experiences; assessment of the Deaf consumer and hearing consumer; team processes; strategies and resources; discourse analysis; power issues between the team members; issues of involvement with the Deaf consumer; referential context from the Deaf consumer.

Based on the triangulation of the results and recurring themes, the participants defined a paradigm, the “dialogic discourse-based interaction[al]” (Pöchhacker, 2004, p. 79) model for their work as Deaf interpreters teaming with HIs. The dialogic discourse-based interactional model also included the fundamentals of assessments of the Deaf consumer and the hearing consumer in which the participants outlined the specifics of the assessment for both parties. The practices that the participants as Deaf interpreters demanded within the DI-HI team were coordination and negotiation of team processes

through an interactional relationship to deliver strategies and resources effectively to ensure collaboration between the team for co-constructed interpretation using the consecutive mode of interpreting. Through such an interactional relationship within the DI-HI team, the power issues would be diminished and both the DI and HI would be on equal footing throughout the assignment. Without a functionally effective team, the interpretation would be ineffective for both parties. The “shifting positionality” (Cokely, 2005, p. 3) has created resistance among hearing interpreters to change how they worked within DI-HI teams. This paradigm shift has created a fundamental need for research on effective approaches on team processes and curriculum development for retraining of hearing interpreters to work in DI-HI teams, especially in settings that mandate consecutive interpreting, as substantiated by the participants’ comments.

The recurring themes pointed out that such a dialogic discourse-based interactional model would create a “socio-cognitive framework” (Zhoa, 2004, p. 110) for effective discourse analysis to allow the interpretation to be “naturalistic [or] real life” (Zhoa, 2004, p. 110) for the DC. The use of ASL discourse would be part of the interaction within the socio-cognitive framework, allowing the DC to have the “least cognitive effort” (Gile, 1995, p. 75) to comprehend the interpretation. As the participants stressed throughout, the DC has the right to feel part of the process, as it is the role of the DC to have the ability to reflect on what had been interpreted to him (Stone, 2005). This model would provide the DI more control of the team process (Stone, 2005; Zhoa, 2004), as the DIs would take on the norms of community interpreters. Based on the comments and experiences of the participants, only Deaf persons who have experienced relaying or communicating for other Deaf people during their formative and adult years and have

been supported by the gatekeepers of the Deaf community to be their community interpreters should consider interpreting as a career option. Through this research, the dialogic discourse-based interactional model can now be viewed as best practice for Deaf interpreters in settings that necessitate consecutive interpreting. Furthermore, there is a critical need for professional development and mentoring programs explicitly designed and geared for Deaf interpreters on a larger scale.

Recommendations

While designing this research process, utilizing the preliminary interview, Think Aloud Protocol, and retro-debriefing interview, the researcher's goal was to successfully glean data from the participants, who were certified Deaf interpreters with more than five years of working experience in the field. This qualitative study was based on the results from six participants from the Northeast region of the U.S. The number of the participants in the study is admittedly small. As mentioned in Chapter 1, one of the limitations of the study was that randomness was limited due to being focused in the northeastern coastal states; thus, generalization towards other regions in the U.S. was diminished. It is critical to state that there is no known data on the population of DIs in the different regions of the country; however, it has been empirically observed that the northeastern region of U.S. has a higher number of DIs than the other regions. However, the research was designed to allow their views to have considerable weight on what is deemed critical for effective interpretation with employment of processes, strategies, and resources for Deaf interpreters.

This study could be expanded to include a larger number of Deaf interpreters; however, the time and effort required for a larger study would place much stress on the researchers. Additional research is needed on the team processes, team dynamics and decision-making processes between the DI and HI, as this study focused only on half of the team – the DI. Thus, the next recommended step is to have a few teams of DIs and HIs work on a given task, employing the TAP and retro-debriefing interview to glean further data on the team interactions and dynamics resulting in an effective interpreting process. The requirements would be minimal, especially if both team members are nationally certified and have previously worked together.

It is recommended that further research be conducted with Deaf interpreters regarding their ages and years of interpreting experience. The age and types of experiences with interpreters, as variables, need to be explored, given that Deaf interpreters are also consumers of interpreting. Depending on their age and experience with interpreters, they may have been exposed to different service models of interpreting, some of which are “mainstream translation [and interpretation] norms” (Stone, 2005, p. 236); thus, potentially affecting how the Deaf interpreters make decisions on their interpretation, team dynamics, and processes that, in turn, have potential repercussions on the efficacy on their work. Another variable that needs to be researched are with DIs who have Deaf parents and those who do not and how their processes may differ or be similar in their socio-cognitive framework. Finally yet importantly, research is needed on DIs’ ethnicity or racial status as their multi-cultural formative experiences more likely have affected their discourse styles, resulting in a different socio-cognitive framework. Research would enable these DIs to apply their socio-cognitive framework for

interpreting for the diversified populations within the Deaf community. Likewise, there is also a “need for more research on Deaf interpreters, their development, processes, decisions on ethical dilemmas, teaming processes, perspectives of Deaf interpreters about their work and publications by Deaf persons themselves” (Participant C).

Furthermore, training for “reacculturation” (Bruffee, 1996, p. 66) towards a “community-based model” (Bartley & Stone, 2008) aligned for DIs and DI-HI teams need to be researched and developed to reframe the interpreting process to incorporate and apply the dialogic discourse-based interactional model as outlined by the participants. The reacculturation would guide the DIs to shift from the mainstream model of interpreting. Training for hearing interpreters would guide them to be reacculturated toward collaborating with Deaf interpreters as equal partners, with the DIs coordinating the team processes. This will require a social transformation, taking on a new dialogic discourse-based interactional model of teaming and interpreting. Moreover, it is strongly recommended that there be further examination and research into the “DI competencies” (NCIEC, 2010), established by NCIEC’s Deaf Interpreters Work Team, and how those competencies could be incorporated into the dialogic discourse-based interactional model.

REFERENCES

- Bartley, A., & Stone, C. (2008, October). *Deaf interpreters in the community: The missing link?* Paper presented at the meeting of Conference of Interpreter Trainers, San Juan, PR.
- Bauman, H. L. (2008). Introduction: Listening to deaf studies. In H. L. Bauman (Ed.), *Open your eyes: Deaf studies talking* (pp. 1-34). Minneapolis: University of Minnesota Press.
- Bernardini, S. (1999). Using Think Aloud protocols to investigate the translation process: Methodological aspects. Retrieved on February 20, 2008 from <http://www.rceal.com.ac.uk/workingpapers/bernardini.pdf>
- Bienvenu, M.J. (1991, August). *Relay interpreting*. Paper presented at meeting of Registry of Interpreters for the Deaf Conference, Bethesda, MD.
- Bienvenu, M.J., & Colonomos, B. (1992). Relay interpreting in the 90's. In L. Swabey (Ed.), *Proceedings of Eighth National Convention of the Conference of Interpreter Trainers, USA*, 69 – 80.
- Boudreault, P. (2005). Deaf interpreters. In T. Janzen (Ed.), *Topics in signed language interpreting: Theory and practice* (pp. 323-355). Philadelphia, PA: John Benjamins.
- Bruffee, K. (1999). *Collaborative learning: Higher education, interdependence, and the authority of knowledge* (2nd ed.). Baltimore, MD: Johns Hopkins University Press.
- Cerney, B. E. (2004). *Relayed interpretation from English to American Sign Language via a hearing and deaf interpreter*. Unpublished doctoral dissertation, Union Institute, Cincinnati, OH.
- Cokely, D. (2005). Shifting positionality: A critical examination of the turning point in the relationship of interpreters and the deaf community. In M. Marschark, R. Peterson, & E. Winston (Eds.), *Sign language interpreting and interpreter education* (pp. 208-234). New York: Oxford University Press.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage.
- Creswell, J.W. (2005). *Education research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.

- Dey, L. C. (2009). The role of deaf interpreters: Investigating what deaf interpreters experienced. *RID Views*, 26(1), 43. Alexandria, VA: Registry of Interpreters for the Deaf.
- Eldredge, B.K. (2004). The role of discourse in the assertion of deaf-world identities. In B.K. Eldredge, D. Stringham, & M.M. Wilding-Diaz (Eds.), *Proceedings of Deaf Studies Today: A kaleidoscope of knowledge, learning, and understanding*, 1, 125-156.
- Ericsson, K.A., & Simon, H.A. (1993). *Protocol analysis: Verbal reports as data*. Cambridge, MA: MIT Press.
- Forestal, E. (2006). Effective practices for teaching deaf interpreting processes. In E. M. Maroney (Ed.), *Proceedings of the 16th National Convention Conference of Interpreter Trainers*, USA 11-14.
- Forestal, E. (2005). The emerging professionals: Deaf interpreters, their views and experiences on training. In M. Marschark, R. Peterson, & E. Winston (Eds.), *Sign language interpreting and interpreter education* (pp. 208-234). New York, NY: Oxford University Press.
- Gerloff, P. A. (1988). *From French to English: A look at the translation process in students, bilinguals, and professional translators*. Unpublished dissertation, Harvard University, Boston.
- Hansen, G. (2005). Experience and emotion in empirical translation research with think aloud and retrospection. *Meta*, 50(2), 511-521.
- Hoza, J. (2007). How interpreters convey social meaning: Implications for interpreted interaction. *Journal of Interpretation*, 39-68.
- Hoza, J. (2010). *Team interpreting as collaboration and interdependence*. Alexandria, VA: RID Press.
- Humphries, J. H. & Alcorn, B. J. (2007). *So you want to be an interpreter: An introduction to sign language interpreting* (4th ed.). Amarillo, TX: H & H.
- Jääskeläinen, R. (1999). *Tapping the process*. Finland: University of Joensuu.
- Jansen, T. (2005). Interpretation and language use. In T. Janzen (Ed.), *Topics in signed language interpreting: Theory and practice* (p. 332). Philadelphia, PA: John Benjamins.
- Jungwha, C. (2003). The interpretive theory of translation and its current applications. *Interpretation Studies*, 3, 1-15. Retrieved October 2, 2008 from http://wwwsoc.nii.ac.jp/jais/kaishi2003/pdf/01-choi_final_.pdf

- Kegl, J., McKinley, F., & Reynolds, D. (2005). The role of deaf interpreters: Lessons from the past and a vision for the future. *Interpres*, 18(4), 16-18.
- Kussmaul, P., & Tirkkonen-Condit, S. (1995). Think aloud protocol in translation studies. *TTR*, 8(1) 177-199. Retrieved February 20, 2008 from <http://id.erudit.org/iderudit/037201ar>.
- Kushalnagar, P., & Rashid, K. (2008). Attitudes and behaviors of deaf professionals and interpreters. In P.C. Hauser, K.L. Finch, & A.B. Hauser, (Eds.), *Deaf professionals and designated interpreters: A new paradigm* (pp. 43-57). Washington, DC: Gallaudet University Press.
- Langholtz, D. (2004). Deaf interpreters today: A growing profession. *WFD News*, 17(1), 17. Helsinki, Finland: World Federation of the Deaf.
- Li, D. (2004). Trustworthiness of think aloud protocols in the study of translation processes. *International Journal of Applied Linguistics*, 14(3), 301-313.
- Mather, C. (2009). Modifying instruction in the deaf interpreting model. In J. Napier (Ed.), *The International Journal of Interpreting*, 1, 68-76.
- Mathers, C.M. (2009). *The Deaf interpreter in court: An accommodation that is more than reasonable*. National Consortium of Interpreter Education Centers. Retrieved July 1, 2010, from <http://diinstitute.org/wp-content/uploads/2008/10/Deaf-Interpreter-in-Court.pdf>
- Massachusetts Commission for the Deaf and Hard of Hearing. (2009). *State certification levels for deaf interpreters*. Retrieved March 1, 2009, from www.mass.gov/mcdhh
- Mindess, A. (1999). *Reading between the signs*. Yarmouth, MA: Intercultural Press.
- Napier, J., Carmichael, A., & Wiltshire, A. (2008). Look-pause-nod: A linguistic case study of a deaf professional and interpreters working together. In P.C. Hauser, K.L. Finch, & A.B. Hauser (Eds.), *Deaf professionals and designated interpreters: A new paradigm* (pp. 22-42). Washington, DC: Gallaudet University Press.
- National Consortium of Interpreter Education Centers. (2009). *Analysis of deaf interpreter focus group discussions*. Retrieved February 15, 2011 from http://www.nciec.org/projects_activities/national_projects/deaf_interpreti
- National Consortium of Interpreter Education Centers. (2009). *National Survey of Deaf Interpreters Analysis*. Retrieved February 1, 2009, from http://www.nciec.org/projects_activities/national_projects/deaf_interpreti

- National Consortium of Interpreter Education Centers, (2010). *Deaf interpreter competencies*, Retrieved June 1, 2011, from http://www.nciec.org/projects_activities/national_projects/deaf_interpreti
- National Task Force on Deaf-Blind Interpreting. (2008). *Deaf-blind interpreting: Many paths on the road*. Retrieved February 15, 2011, from http://www.nciec.org/pr_ntfdb.html
- Nesbett, R.E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, 84(3), 231-259.
- Olk, H. M. (2002). Translating culture: A Think Aloud protocol study. *Language teaching research*, 6(2), 121-144.
- Padden, C., & Humphries, T. (2005). *Inside deaf culture*. Cambridge, MA: Harvard University Press.
- Pöchhacker, F. (2004). *Introducing interpreting studies*. New York: Routledge.
- Quigley, S. P., & J. P. Youngs (1965). *Interpreting for deaf people*. Washington, DC: U.S. Department of Health, Education, and Welfare.
- Registry of Interpreters for the Deaf Professional Standards Committee. (1997). *Standard practice paper: Use of a certified deaf interpreter*. Retrieved April 28, 2007, from <http://www.rid.org/UserFiles/File/pdfs/120.pdf>
- Ressler, C. (1998). *A comparative analysis of a direct interpretation and an intermediary interpretation in American sign language*. Unpublished master's thesis, Gallaudet University, Washington, DC.
- Rydning, A.F. (2000). *TAPs (Think aloud protocols): A useful method in throwing light on the translation process*. Retrieved October 3, 2008, from <http://www.duo.uio.no/roman/Art/RF11/Rydning.doc>
- Seleskovitch, D. (1986). Interpreting versus translating. Paris: *Actes du Congres de l'association des traducteurs americains*, 369-376.
- Seleskovitch, D. (1978). *Interpreting for international conferences*. Washington, DC: Pen and Booth.
- Someren, M. W., Barnard, Y. F., & Sandberg, J.A.C. (1994). *The think aloud method: A practical guide to modeling cognitive processes*. London, England: Academic Press
- Stone, C. (2005). *Towards a deaf translation norm*. Unpublished dissertation, University of Bristol, Bristol, UK.

- Stone, C. (2005). Deaf translators on television: Reconstructing the notion of 'interpreter'. In N. Meer, S. Weaver, J. Friel, & K. Lister (Eds.), *Connections 4 proceedings*. (pp. 65-79). England: University of Bristol.
- Stone, C. (2007). Deaf translators/interpreters' rendering processes the translation of oral languages. In G. Turner (Ed.), *Sign language translator and interpreter*, 1(1) 53-72. Manchester, England: St. Jerome.
- Stone, C. (2007). Deaf access for deaf people: The translation of the television news from English into British sign language. In J. Cintas, P. Orero, A. Remael (Eds.), *Media for all: Subtitling for the deaf, audio description, and sign language. (Approaches to translation studies series)*, (pp. 71-88). Amsterdam, Holland: Rodopi.
- Tannen, D. (1986). *That's not what I meant!: How conversational style makes or breaks relationships*. New York, New York: Ballentine.
- Taylor, K.L., & Dionne, J. (2000). Accessing problem-solving strategy knowledge: The complementary use of concurrent verbal protocols and retrospective debriefing. *Journal of Educational Psychology*, 92(3), 413-25.
- Texas Division of Assistive and Rehabilitative Services (2009). *State certification levels for deaf interpreters*. Retrieved March 1, 2009, from www.dars.state.tx.us/dhhs/bei
- Wilcox, P. (2000). Dual interpretation and discourse effectiveness in legal settings [Special issue]. In Turner, G. & Kegl, J. (Eds.), *The bilingual/bimodal courtroom. Journal of interpretation*, 7(1), 89-98.
- Zhao, R. (2004). *Process of translating: A comparison of expert and student translators translating an expository text from English to Chinese*. Unpublished dissertation, Carnegie Mellon University, Pittsburgh, PA.

APPENDIX A. INTERVIEW QUESTIONS

The interview questions were developed by the researcher and were used for the first-phase of the study.

Interview Questions

1. What is your age?
2. Are you Deaf or Hard of hearing?
3. Do you have any Deaf family members? If so, which members are Deaf?
4. What are the names of the schools of Deaf attended? Name as many as possible.
5. What college degree(s) did you have, if any? From where?
6. What Interpreter certifications do you have? Name all. Any other certifications?
7. How did you become a Deaf Interpreter? Why did you get interested in being a Deaf interpreter?
8. How long have you been working as a Deaf Interpreter?
9. Is interpreting your full-time or part-time occupation?
10. How many hours do you interpret per week or month?
11. What kinds of interpreting do you do or have you worked in? (Tell as many as possible) Which settings do you work in most of the time?
12. Which types of interpreting do you like best? Why?
13. Tell me about your training for your work as a Deaf Interpreter? Your professional development?
14. What are your future plans as a Deaf interpreter?
15. Is there anything you would like to say or add before we move to the next part?

APPENDIX B. RETRO-DEBRIEFING SESSION

Debriefing session

In this session after the TAP session was completed, the participants were asked follow-up questions that were developed by the researcher.

1. Could you tell me what thoughts you have after completing the TAP session?
2. Are there further thoughts about the interpreting process that you did during the session?
3. Would you have done it differently if you were interpreting in an actual assignment? Can you tell me what it is?
4. Are there suggestions or advice that you would like to give to Deaf interpreters?
What would you advice on effective ways for interpreting?
5. Is there anything you would like to say or add before we close?

Thank you so much for your contribution!

APPENDIX C. CERTIFICATES OF TRANSLATION



Supplemental Form J

If yes, list the translated documents: Informed consent form and the instructions for the participation in the study. Note that both the written consent form and instructions are available for the participants to use both or select one over the other. The participants are bilingual and may be more comfortable with one, the other or both.

Section 2: Translated Documents

1. Indicate which documents require translation.

<input checked="" type="checkbox"/>	Informed Consent
<input type="checkbox"/>	Informed Consent—Parent or Legally Authorized Representative
<input type="checkbox"/>	Child Assent
<input type="checkbox"/>	Permission Request Letter(s)
<input type="checkbox"/>	Research Brochure/Description
<input type="checkbox"/>	Cover Letter(s)
<input type="checkbox"/>	Instrument(s)
<input type="checkbox"/>	Advertisements or Flyers
<input checked="" type="checkbox"/>	Other Documents—Please specify below.

2. Provide the translator's name and contact information. Have the translator sign and date the certificate.
Note: The translation and back-translation must be done by two different translators, working independently. The researcher **cannot** certify the translations.

Eileen Forestal, certified interpreter through Registry of Interpreters for the Deaf (eforestal@aol.com)

3. Provide the back-translator's name and contact information. Have the back-translator sign and date the certificate.

Cynthia Napier, certified interpreter through Registry of Interpreters for the Deaf (cyndergirl59@msn.com) Natalie Atlas, certified interpreter through Registry of Interpreters for the Deaf (Caneel3@aol.com)

Certification of Translation To be Signed by the Translator	
I certify that I have performed the translation of the above documents for the referenced project.	
Printed Name of the Translator	Signature of the Translator
Date	
Certification of Back Translation To be Signed by the Back-Translator	
I certify that I have performed the back-translation of the above documents for the referenced project.	
Printed Name of the Translator	Signature of the Translator
Date	

Certification of Translation


To be Signed by the Translator

I certify that I have performed the translation of the above documents for the referenced project.

Printed Name of the Translator

Eileen Forestal

Signature of the Translator



Date

7-29-11

Certification of Back Translation

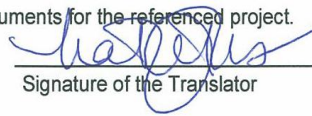
To be Signed by the Back-Translator

I certify that I have performed the back-translation of the above documents for the referenced project.

Printed Name of the Translator

NATALIE ATLAS

Signature of the Translator



Date

7/28/11