


## Deaf translators: What are they thinking?

janis cole ms.

Gallaudet University, [janis.cole@gallaudet.edu](mailto:janis.cole@gallaudet.edu)

Follow this and additional works at: <https://digitalcommons.unf.edu/joi>

 Part of the American Sign Language Commons, Bilingual, Multilingual, and Multicultural Education Commons, Language Interpretation and Translation Commons, and the Semantics and Pragmatics Commons

### Suggested Citation

cole, janis ms. () "Deaf translators: What are they thinking?," *Journal of Interpretation*: Vol. 28 : Iss. 1 , Article 3.

Available at: <https://digitalcommons.unf.edu/joi/vol28/iss1/3>

This Article is brought to you for free and open access by the Department of Exceptional, Deaf, and Interpreter Education at UNF Digital Commons. It has been accepted for inclusion in Journal of Interpretation by an authorized editor of the JOI, on behalf of the Registry of Interpreters for the Deaf (RID). For more information, please contact [len.roberson@unf.edu](mailto:len.roberson@unf.edu).

© All Rights Reserved

## **Deaf translators: What are they thinking?**

**Janis Cole**

Gallaudet University

### **ABSTRACT**

The examination of work performed by Deaf translators in creating translations between written texts and signed languages is an emerging area of inquiry in Translation Studies. Deaf people have been performing ad hoc translations within their community for hundreds of years (Adam, Carty & Stone, 2011; Bartley & Stone, 2008). More recently, Deaf translators have begun to work as paid professionals, creating a new subfield of Translation Studies, one that, to date, is largely unexplored. Using qualitative data, this pilot study examines the thought processes of two Deaf individuals in the rendering of an academic text from written English into American Sign Language (ASL). Early analysis suggests four themes shared by the participants: 1) the importance of preparation; 2) the need for contextualization, 3) moving between literal versus free translation; and 4) consideration of the audience. This data shows that Deaf translators rely on linguistic knowledge and prior translation experience in creating and rendering their translations, a finding that in some respects aligns with studies on the processes of hearing translators. In addition to this, however, Deaf bilinguals appear to draw on a reservoir of extralinguistic knowledge (ELK) developed from their experiences as individuals living within the intersection of two languages, one of which employs a modality that is seldom used by majority populations. The aims of this exploratory study were to examine the thought processes that come into play in Deaf translators' work and to consider new perspectives on Translation Studies from Deaf translators.

### **INTRODUCTION**

The goal of translation is to convert a text created in one language into a different language while retaining the content and spirit of the source text (Bell, 1991a). Translation has been described as an activity that is shaped through the translator's internal mental processes as well as through close engagement with the text (Bell, 1991b, 1994; Gutt, 1991). To date, translation activities and processes have been examined primarily with individuals who work between written texts that are based on spoken languages. However, the work of Deaf translators who render written texts into signed languages has recently begun to gain attention (Leneham, 2007; Stone, 2009; Wurm, 2010).

Despite the limited documentation on the topic, Deaf people have very likely worked as translators throughout history (Adam, Carty & Stone, 2011; Bartley & Stone, 2008; Boudreault, 2005). Records exist of Deaf people coming together to help each other with written and signed translations of various texts (Stone, 2009). This practice continues today as Deaf bilinguals perform ad hoc translations for other members of the Deaf community, working with such materials as media announcements, newspapers, captioned movies, letters, and official documents (Adam, et al, 2001). Ladd (2003) calls attention to the value of such interdependence in his description of the Deaf community as a collective body in which Deaf people have traditionally supported each other in various practical ways (e.g. exchanging manual skills).

In Europe, Deaf translators are employed to render documents, to act as museum guides, and to work with television programs and other public information venues (Adam, 2011). In the U.S., Deaf individuals are frequently called upon to provide translation in artistic genres, rendering written English texts (e.g., theatrical scripts, poems, stories) into American Sign Language (ASL) (Boudreault, 2005; Langholtz, 2004). Despite the scarcity of scholarly articles and publications in this field, there exists a collection of video-recorded translation work by pioneers in the U.S. including such notables as Patrick Graybill, Ella Mae Lentz, and MJ Bienvenu. This is to name only a few whose work has been recorded and preserved.

If, as some hold, translation unfolds through internal and collaborative mental processes (Bell, 1991b; Gutt, 1991), questions arise about what unique processes occur in the minds of Deaf translators. This paper explores the perspectives Deaf translators bring to their work, which may be influenced by their fluency in a signed language, their affiliation with the Deaf community, and/or their experiences in society. Deaf communities exist as linguistic minority whose primary languages are visual and spatial, within the landscape of majority languages that are aural and oral. Historically, Deaf people have been marginalized within society (Lane, 1992) and systematic linguistic oppression of signed languages has been the norm.

Simply stated, the research question is, “What is going on in the minds of Deaf translators?” This exploratory study examines the perspectives of two Deaf participants in the process of rendering a written academic text from English into ASL. The goal was to explore the perspectives (i.e., beliefs, ideologies, and cultural values and experiences) that emerged during the translation process.

## **BACKGROUND**

### **TRANSLATION STUDIES**

Bassnett (2001) tells us that whenever different languages come into contact with one another, the need for translation arises; however, for most of history the study of translation has been viewed as an unscientific pursuit that did not add value to the understanding of linguistic processes (Bassnett, 2008). Translation Studies (TS) began to emerge as a distinct discipline in the 1970s and 1980s, an era in which theory and practice of translation flourished (Venuti 2013; Pöchhacker, 2004). This period saw the birth of numerous journals in the field, reflecting growing scholarship in Translation Studies.

Today, the study of translation is an accepted academic pursuit that contributes to our understanding of the fundamental act of human communication (Bassnett, 2008). Translation is viewed by some as an interdisciplinary endeavor, interwoven with other fields such as linguistics, critical discourse analysis, and sociolinguistics (Munday, 2001; Venuti, 2004). Shored up by theoretical paradigms and technological developments, Translation Studies is now acknowledged as a contributor of critical perspectives on human communication (Bell, 1991a; El-dali, 2011; Gutknecht, 2001; Schaffner, 2004).

According to Levy (1967), translation is, at its core, a decision-making process. The decision-making process in rendering a translation is socially, cognitively, and linguistically embedded (Wurm, 2014). Wolfram (1994) proposes that translation is a socially constructed

activity, which is influenced by its social, cultural, and historical context as well as the translator's knowledge base. In this way, translators are constantly theorizing and generating new ideas and insights that are based on the experiences they bring to the task (Pym, 2010).

While a body of research is now available regarding translation between written languages, few studies have explored the thought processes of Deaf translators working from a written language source into signed language translation (e.g., Stone, 2009; Forestal, 2011). As research begins considering this previously uncharted territory, we are witnessing nascent scholarship on this unique translation process. Moreover, new light is being shined onto the thought processes of Deaf translators working between written and signed languages. In his study "Toward a Deaf Translation Norm," Stone explores this innovative field, including its antecedents and how it is manifested in public places. Stone's research offers insights into the disparate approaches of hearing and Deaf translators when rendering television news broadcasts by demonstrating how Deaf translators incorporate practice sessions. Significantly, Stone (2009) investigates whether a Deaf translation norm has evolved, as increasing numbers of Deaf translators and interpreters (T/Is) work in the mainstream, translating for websites, public services, government literature, and television media.

In Forestal's 2011 work, she focused research efforts on the thought processes of Deaf interpreters by utilizing the Think Aloud Protocol (TAP), borrowed from psychology and cognitive science. TAP is a research method in which subjects are asked to "think out loud," to put into words their thought processes, making visible what is going on in their heads while they are translating (Someren, Barnard & Sandberg, 1994, p. 8). Forestal's approach provides a window into the thought processes of translators, uncovering their "black boxes" – the mental activities involved in translation (Defeng & Cheng, 2007 p. 43).

### **SIGNED LANGUAGE INTERPRETING VS. TRANSLATION**

There are significant differences between the professions and the practices of signed language *interpreting* and signed language *translation*. In the United States, signed language interpreting has been recognized for more than five decades as a practice profession (Boudreault, 2005; Stone, 2009; Forestal, 2011). Organizations and professional associations for signed language interpreters provide training opportunities and credentialing procedures for both hearing and Deaf individuals. However, no similar opportunities have been available to signed language translators (Wurm, 2014). The new and growing sophistication of video recording and streaming technology has led to increased activity by signed language translators and new paradigms for how the work is conducted. For example, Leneham (2007), a pioneer in signed language translation processes, suggests six potential areas of translation, including:

- signed language video to spoken language,
- spoken language to signed language video,
- signed language video to signed language video,
- written text to live signed language,
- written text to signed video, and
- signed language video to written text.

Two additional avenues for signed language translation may also occur: 1) translation that includes the use of International Sign in translation, and 2) translation that occurs from a signed source text to a contextualized signed translation delivered to Deaf individuals who are semi-lingual or without conventional language structure (Boudreault, 2005).

The disciplines of interpreting and translating are in many ways complementary; both signed language interpreting and signed language translation involve linguistic and cultural mediation, and both have the goal of rendering meaning presented in one language (the source) into another language (the target). But each is differentiated from the other by features of timing and form that engage quite different skills. Translation typically involves written (static) texts. The translator has time to reflect, to dissect the text and scrutinize it to identify its meanings and intricacies, to conduct thorough research, and to employ consulting techniques such as discussing the work with others. This allows the translator to make a final analysis and implement revisions with precision, remaining faithful to the content, style, and form of the original text when producing the final target text.

Interpreting, on the other hand, adds a third, intermediary party – the interpreter – to an interaction between two parties (Wadensjö, 1998), and is characterized by immediacy. The interpreter works in an environment that requires immediate, real-time transmission in a spoken or signed modality (Gile, 2009). The interpreter must work quickly, demonstrating real-time comprehension of the minute details of the source language and an ability to provide an accurate target language reformulation of a message (DeRioja, 2015). Thus, an interpreter needs to have knowledge of at least two languages, including not only their grammatical features but also their sociocultural context, in order to interact between two people who do not share the same language and/or the same sociocultural background (Pym, 2010). An interpreter rarely has the luxury of revising an interpretation in the same way as a translator.

In addition to the time constraints of interpretation, the decision-making processes used by interpreters also differ from the processes used by translators, drawing on strategies and tactics that are driven by different constraints (Gile, 2009). As an example, time constraints impose a certain limitation on interpretations. While translators have the luxury of time on their side, this amenity comes with the responsibility of using that time to craft and refine their translation. The translator must scrupulously analyze the meanings of words and phrases, devote a great deal of thought to the audience and culture of the viewers, and consider the context of the situation and the translation purpose (Newmark, 1988). The translation purpose or *skopos* (Vermeer, 1989) is a crucial factor that determines the final shape of the translation (Nord, 1997; Hatim, 2001). The translator must be mindful of decisions regarding the degree of freedom their translation may have from the originating language and be diligent to ensure that personal ideologies do not infiltrate or intrude into the translation (Belhaaj, 1998; Almann, 2013).

While translation primarily refers to work in which both source and target are frozen – that is, written or recorded texts – and interpretation is primarily marked by its ephemeral quality – that is, messages spoken or signed that are rendered in real time (Frishberg, 1990; Napier, McKee, & Goswell, 2010), there also exists a type of translation, sight translation, that can be considered a hybrid of interpretation and translation. In sight translation, an individual renders a frozen source message into a live re-expression in the target language (Agrifoglio, 2004; Rathmann, 2014).

Interestingly, the distinction between the disciplines of translation and interpretation is unclear to many people, although those who explore each more thoroughly come to recognize the differences. Moreover, many interpreters may never have tried their hand at translation, and many translators have had no experience interpreting, despite the complementary nature of the two disciplines (DeRioja, 2015).

### Deaf Bilingual Translators

Deaf bilingual individuals who perform translation work may employ a unique process. Forestal (2011) suggests that such people may be guided by a distinctive cultural and linguistic intuition. Like other bilinguals, Deaf bilinguals possess the ability to code switch and adjust their language use to communicate effectively with others in a number of situations. Moreover, in their everyday lives, Deaf people constantly navigate between the mainstream culture and language and the multitudinous variety of isolects used within their own Deaf community. According to Bell (1994), a translator should have linguistic competence in both the source and target languages; however, as with hearing translators, bilingual Deaf people do not always have a balanced aptitude in both languages. Individuals with varying levels of bilingualism are not automatically unqualified to be translators. On the contrary, they may still create effective translations, but experience constraints due to their levels of fluency and procedural knowledge of translation.

Patrie (2001) was one of the earliest to promote the value of translation skills in the sign language interpreting field. She emphasized the utility of developing translation skills as a step toward becoming an interpreter. Unlike interpreting, translation allows time to examine complete texts, consult resources and make revisions. This process allows the language worker to develop both translation skills and an expanded fund of information that are valuable in themselves but also as foundational resources for real-time interpreting.

One area of inquiry is Deaf individuals' use of formal register and academic language in their ASL translations. English speakers typically receive official classroom education in English grammatical structure, public speaking, and genres. ASL users seldom have a corresponding level of education in their own language.

An academic style of language is different from everyday use of language and even differs from conventional formal language usage (Cummins, 2000). Joos (1961) describes academic English as a formal register of language use with specific applications, both inside and outside the classroom, in lectures, in academic written texts, in workshops, and in other public presentations. These settings all share common knowledge and are characteristic of a formal, higher register level in discourse. Academic language is more abstract, highly formal, and has more specific vocabulary than everyday language. There are conventions about what topics may be discussed, as well as how they are discussed, which differ in structure and vocabulary from everyday registers. Halliday (2004) claims that students who are highly successful in communicating in informal contexts may struggle to communicate using academic language. Bailey (2007) states that academic language proficiency is knowing and being able to use general and content-specific vocabulary, and specialized or complex grammatical structures. All languages, whether spoken, signed, or written, possess an academic register. Each modality requires the language to be presented in a particular

way; words cannot be merely “thrown out” or used haphazardly, as structure and organization are crucial components in this endeavor.

Academic ASL (used in more “professional” or “formal” settings) stands in contrast to social ASL, which is used in everyday non-academic face-to-face conversations (Harris, 2012). Harris (2016) states that the context of the discourse is a major contributor in influencing people’s decisions on how to express themselves. Contextual influences on language decisions are described in a classic 1961 study by Joos about language *register* (or language style) (Harris, 2016, Joos, 1961). However, to date no academic register has achieved widespread use within the system of Deaf education. It has been suggested that conventions for academic use of ASL may become more explicit over time (Harris, 2016), but at present it remains rare for Deaf students to have formal instruction in sign language, which may be the prerequisite stage for broader deployment of academic forms of ASL. Limited educational opportunities present additional challenges in the work of translating academic texts from English into ASL.

## **ELEMENTS OF DEAF TRANSLATION**

At least four factors have been identified in Deaf translation from the literature on American Sign Language interpretation and translation: 1) preparation, 2) contextualization, 3) literal vs. free translation, and 4) audience.

### **PREPARATION**

Preparation is a crucial aspect of work for any interpreter or translator working on a particular assignment (Nicodemus, Swabey & Taylor, 2014). The meaning of a particular text as determined by a translator relates to a number of factors, including prediction skills (Witter-Merithew, Taylor, & Johnson 2002), an analysis of the overall discourse, familiarity with content, thematic events, and schema, and cultural knowledge. It is crucial that translators be aware of these issues and semantic schemas (Winston & Monkowski, 2000). Preparation involves time to do research on a topic, become familiar with vocabulary related to the subject, and analyze meaning of the text within the context in which it was written (Napier, 2002). Napier (2002) postulates that preparation has a critical role in translation.

In sum, preparation is regarded as necessary for effective translation and interpretation. It may be especially important in interpretation due to the immediacy of the message, as decisions must be made in an instant. Translation, on the other hand, allows an individual time to complete each piece of the language-switching process in its entirety.

### **CONTEXTUALIZATION**

Contextualization is beyond translation. It is about framing the content and message in order to make sense of the meaning. The ideal process of translation as well as interpretation, which is the last level of processing, should strive to let go of the form and produce a message that is equivalent in meaning, without linguistic boundaries (Colonomos, 1992). Gile (2009) described contextualization as an approach to information packaging. In contextualization, the interpreter or translator renders the meaning of a particular utterance by making reference to specific situational, linguistic, and cultural factors (Janzen & Shaffer, 2008). Contextualization provides background information in order to support understanding, as well as establishing a framework or schema for

a particular audience. Contextualization may be contrasted with *elaboration* or the addition of information that is not explicit in the source message. Rather than supplying more material to communicate meaning, contextualization provides the context within which meaning is constructed.

The Colonomos model (2015), while labeled an approach to the interpreting process, is also meaningful to translators. Breaking the process into three steps (CRP - Concentrating, Representing, and Planning), this model is deceptively simple. Its middle step is where the heavy lifting occurs: the message is represented (in the interpreter/translator's mind) in the source language, and then represented again in the target language. This is tantamount to visualizing the deep meaning of the source message (other modalities may be substituted for the visual) and moving beyond its form into a level of meaning from which a new text can be created to express meaning identical to the original message. Contextualization, at the center of this process, is the ingredient that makes possible the leap from cognitively representing the message in the source language to representing it in the target language – as it is termed in the Colonomos schema, from R1 to R2. This is not purely linguistic factor: it requires much more than knowledge of the languages. It is about the decision-making processes involved in translation. The Colonomos schema is a way of bringing these processes into conscious awareness; making translators/interpreters mindful of their own reasoning supports and enhances their cognitive strategies.

Gile (2009) proposes the formula ( $C = KL + ELK$ ) to represent the relationship of comprehension (C) to extralinguistic knowledge (ELK) and knowledge of language (KL). His postulation is that while knowledge of language is a basic necessity, it is extralinguistic knowledge that provides the key to comprehending the meaning of an utterance. ELK, Gile states, arises from individuals' processing of their formative experiences, which frame their schema (Gile, 2009) and this influences their linguistic decisions. Schema is a major theme in cognitive linguistics, highlighting the importance of ELK in language use. Arising from past knowledge, personal experiences and cultural background, ELK provides a matrix that allows individuals to understand situations (Alcorn & Humphries, 2007; Bell, 1991) and apply language effectively.

Stone (2009, p.150-164) discussed the different patterns of contextualization created by both Deaf and hearing interpreters and translators in their rendering of the target message. Sequeiros (1998, 2002) examines degrees of implicitness and explicitness in translation – the extent to which transmission of meaning requires the addition or omission of specific terms. Labeling the two poles of this theory “enrichment” and “impoverishment,” Sequeiros discusses structural variations between source and target texts. This has particular significance in relation to English and ASL (Napier, 2002, Cokely, 1992) and is reflected in Colonomos' (2015) work on framing cognitive operations within ASL-English interpretation, where the differences between high- and low-context languages necessitate marked differences in form. (In a low-context language, virtually everything must be explicitly stated, while in a high-context language much is assumed to be already known by the interlocutors.)

In deciding when to contextualize, translators must employ an internal process of negotiation related to the message (Baker, 2006). It has been said that translation encompasses the very bases upon which the source and target cultures are constructed (Gentzler, 2011) and translators “are not only taking something from one culture and carefully bringing it across intact,



but instead are transforming, reformulating, incorporating, making the text one's own, and reproducing it in their own language and on their own terms" (Gentzler, 2012, p.1). Frishberg (1990) suggests that to render a message with equivalence requires internal negotiation by the translator. Thus, the translator must construct and co-construct meaning with the audience and such factors influence a translator's decision of whether to contextualize in a particular translation.

### LITERAL VS. FREE TRANSLATION

Translation is typically identified by two approaches, 1) literal translation (form-based) and 2) free translation (semantic-based). In literal translation, the translator retains the linguistic structure (phrasing, vocabulary) of the original text as much as possible (Crystal 1987, cited in Napier 2002). Conversely, in free translation, the meanings and concepts of the original text are conveyed using forms within the target language, such as typical word order and syntax, and incorporate equivalents for cultural norms and values (Napier, 2002). Napier and Barker (2004) identified a "translation-style spectrum, which demonstrated that the interpreters were either extremely literal or extremely free – or code-switched between literal and free – but were still dominant in one style or the other" (p. 232).

Literal and free translations are affected by the degree of implicit and explicit material in a text. Sequeiros (2002) discussed the notion of pragmatic enrichment and impoverishment in relation to translation. In this translational phenomenon, the process of interlingual translation centers on texts (Jakobson, 1959). Sequeiros' (1998, 2002) descriptions of "enrichment" and "impoverishment" reflect a translator's expression of implicit and explicit material. Enrichment may suggest a translator's decision to make information that is implicit in the source language more explicit in the target language (p. 1070). The process involves putting a source text into its full determinate conceptual representation and then carrying this fully enriched thought into another language. Impoverishment, on the other hand, indicates a translator's decision to do the opposite – to make information explicit in the source language implicit, embedded within the target language (p. 145-146).

Direct translation, also known as literal translation (Vinay & Darbelnet, 1995), by comparison, is not an ideal method for use with ASL and English because the two languages have different syntactic structures. Larson (1984) and Baker (2006) assert that components of meaning are formed, or packaged, into lexical items, and this process of packaging is done differently in different languages. Translation thus involves a process of creating meaning-based expressions in the target language that do not retain the form they took in the source language.

Napier (2002) and Stone (2007) discussed enrichment and impoverishment in the work of signed language interpreters and translators. Today, it is widely held that enrichment and impoverishment are crucial processes in interpretation and translation because they affect the expression of explicit or implicit meaning. This requires the translator to use strategies in order to convey the meaning in the target language with consideration given to cultural factors, as well as the audience's makeup. The overarching issues of pragmatics and linguistic and cultural factors influence how a translator makes decisions in the process of translation, particularly with regard to translating implicit and explicit information. However, the concepts of free and literal translation are still in question and need to be reexamined.

## AUDIENCE

Kussmaul (1995) and Nord (1997) argue that the knowledge, expectations, values, and norms of the target readers will impact the function of the translation. Vermeer (1989) postulates that translators frame their output texts to make sense to the target audience. This is the perspective advanced in “*skopos* theory,” (p. 1) which purports that the translator works in order to achieve *skopos*, or the communicative purpose of the translation for the target audience, rather than just following the source text. To achieve this end, the translator considers the communicative needs and expectations of the target audience within a situational context and socio-cultural environment (Pöchhacker, 2004). The implication of this theory is that the translator’s decisions should not be dominated solely by the source text.

Translators need to filter input utterance through their own understanding of what it means, and choose their target text coding based on what they understand the target audience to know. According to Janzen and Shaffer (2008), the process of co-constructing intended meanings involves possession of shared experience, worldviews, and linguistic knowledge. As a result, translators can choose linguistic items and constructions to represent pieces of meaning. It has been suggested that meaning cannot be transferred directly, but must be constructed and re-constructed (Hatim & Mason, 1990, 2005; Wilcox & Shaffer, 2005).

These issues were taken into account during the construction of this small-scale exploratory study into the linguistic and cognitive processes of Deaf translators. The methods for the study are described in the next section.

## METHODS

Qualitative research methods offer approaches to conduct in-depth analyses of people, activities, and environments in which the researcher can re-construct “the essence of experience from [the] participants” (Creswell, 2014, p. 133). This qualitative case study examined the decision-making processes of two Deaf ASL-English bilingual translators by investigating common themes that arose during the participants’ reflections on translating from a written English source into ASL.

### *Participants*

Two Deaf individuals were recruited to participate in this study. They were selected for participation based on the researchers’ knowledge of their translation experiences. Both participants identified ASL as their dominant language and primary form of communication. Both have worked professionally as actors and, in those roles, have done English text analysis for performances. Both had experience with translation in Deaf theatre productions. In addition, both participants had experience translating literary texts, including children’s books. At the time of the study, one participant was working for a program for the bilingual education of Deaf students, and the other was working in a postsecondary setting. The individuals were recruited for this study for being recognized as translators by members of the Deaf community.

Both participants were female Anglo-Americans. One participant (age 53), Emma Rose, holds undergraduate degrees in American Sign Language and Theatre Arts and a graduate degree in Sign Language Education. The other participant (early 30s), Elizabeth, holds an undergraduate degree in English, a teaching certificate, and a graduate degree in Linguistics.

## MATERIALS

The stimulus material for the translations was an excerpt titled, “The Female Experience,” a written English essay (1,118 words) about the co-educational experiences of Deaf women at Gallaudet University in the 1800s. It was written by a hearing academic, Dr. Lindsey Patterson, a graduate of Gallaudet University who has conducted historical analysis of various co-educational experiences in America. The essay was divided into nine paragraphs, each presented on three different pages in 12-point font. This stimulus material was selected because the same text had been translated for publication in *Deaf Studies Digital Journal* (a video ASL academic journal) within the previous year and the researcher was thoroughly familiar with this particular text.

## PROCEDURES

This study was conducted over a seven-day period. On Day 1, the participants completed three forms: 1) Background Information Form, 2) Consent to Participate Form, and 3) Consent to Videotape Form. The researcher delivered pre-scripted instructions to each participant individually about the study procedures. The participants were informed that this study was designed to examine Deaf translations of a written English text into ASL. They were given the three-page stimulus material for translation and were instructed to produce an ASL translation over the period of one week. The participants were informed that the translations were to be prepared for and delivered to the researcher. The participants were told that they would have access to a teleprompter to deliver their final translation (if they chose).

Using what is known as the Think Aloud Protocol (Bernardini, 1999; Ericsson & Simon, 1980; Jääskeläinen, 1999; Kussmaul & Tirkkonen-Condit, 1995; Rankin, 1988) the participants were instructed to video record their preparation process for producing the translation using a video recording device (e.g., smartphone, iPad, laptop). Specifically, participants were asked to video record, as naturally as possible, the thought processes that arose during the act of translation. The participants were to express any signs in their minds as they completed the task. They were asked to share their thoughts about the meaning and form of the text, to experiment with possible constructions, and to record practice sessions of their translations. Each was encouraged to record all instances of their thinking during the preparation process, and to maintain written notes about their preparation process. Further, participants were instructed to provide their recordings and notes prior to creating their final translation. Ideally, they were to record their thoughts in ASL or English several times a day with the goal of at least 1-2 recordings per day. During Days 2-6, the participants engaged in the preparation process on their own time, following the instructions that were provided during the instruction phase on Day 1.

On Day 7, at the conclusion of the preparation week, the participants came separately to a pre-selected location to render their translation of the text while being video recorded. The researcher served as the audience member for both translations. The room was equipped with a video camera, lights, and a table on which to place the stimulus materials and any notes. One participant placed her notes on the table, while the other transferred her notes from a computer to the teleprompter in order to access her notes. The participants were informed that they could re-do their translation until they were satisfied. The final translations were video-recorded. The translations took approximately one hour and thirty minutes for each participant and both participants revised their translations during the process.

Following the translation process, the researcher interviewed and video recorded each of the participants. The researcher obtained information on the participants' educational background, work experience related to translation, and how they became involved with doing translations. The researcher asked a series of open-ended and probing questions regarding their translation preparation process and how they felt about doing the translation, including the reasons why they made certain decisions. In addition, participants engaged in free conversation following the structured interview sessions. The time for each interview was approximately one hour and thirty minutes. Each participant received a \$15 gift card for her involvement in this study.

## ANALYSIS

The various language products produced by the participants as they worked through the translation were not analyzed in this study because my research question was about the mental processes used in conducting the translation. Therefore, only the data from the last phase of the study, the interviews, were analyzed. The interview data were transcribed into written English by three individuals who are fluent in American Sign Language and English. The individuals were either current students or graduates of an interpreter education program. Upon completion, the researcher reviewed the transcriptions to ensure the accuracy of the work.

The data were subjected to thematic analysis (Braun & Clarke, 2006; Creswell, 2007). From an initial gestalt-style reading of the transcripts – that is, a reading to obtain an overall sense of the texts – the researcher made notes and coded recurrent themes. Taking note of the participants' comments about the relative importance of differing factors, the researcher created categories from the coded segments by identifying patterns of meaning shared by the two participants. Finally, a set of specific interconnecting themes were identified, supported by quotes from the data.

## RESULTS

Four themes emerged from the data: 1) preparation, 2) contextualization, 3) literal vs. free translation, and 4) audience. Each of these themes will be discussed in detail, and supported by relevant quotations from participants.

### **THEME 1: PREPARATION: “GETTING READY WAS BEYOND MY EXPECTATIONS”**

Both participants commented about their preparation for the translation task, indicating that the need for preparation was beyond their expectations.

Elizabeth:

I didn't do any research on the history of the topic. I just went for it. I didn't have time to do the research. If I had more time to do the translation, I would have read more on the references that are listed at the end. One week just doesn't cut it. I would need a month or so to do something like this.

Emma Rose:

I did have to cross-reference the dictionary to make sure I understood the vocabulary in context. I did feel limited by the time constraints. Like I said before, it would have been nice to have more time to work on this. As it was, only one week which was very limiting.

These comments suggest that the time frame was a factor that restricted and limited their preparation. The participants either did not plan sufficient time for preparation or felt that the time allocated was insufficient. Although preparation time is recognized as an integral part of creating a rich translation, the participants appeared to have underestimated the amount of work it would take to ready themselves to render a dense, academic text. Both translators had experienced working in a number of genres, although the idea of translating an academic text was a novel experience for them, which may explain their surprise at the time required for the translation.

Another area of concern was the translators' need to fully comprehend the source text, which would have included activities such as researching the history and context of the article, as well as checking the definitions of various terms in the piece. Further, as discussed earlier, Deaf people often work as a collective, sharing ideas and resources with one another. This may be a critical part of the translation process as well, suggested by Stone (2009), in which he found that Deaf translators discussed their work with one another when possible, rather than in isolation. For example, Elizabeth stated, "If I had more of an empty schedule, I would have probably contacted several different people. Maybe someone who was skilled in theater as well as ASL and English." In the same vein, Emma Rose stated,

I wish I had asked someone to work with me. I didn't do that. It would have been nice to have someone to bounce ideas off of. Maybe two or three other people to collaborate with.  
*I enjoy working collaboratively* (emphasis author).

These comments suggest that Deaf translators regard consulting and sharing their process with others as a part of ensuring successful translations.

## **THEME 2: CONTEXTUALIZATION: "LETTING GO AND HOLDING ON"**

As stated earlier in this paper, contextualization is often needed in the translation process to make meanings clear between languages with different semantic structures. Both participants discussed this in their interviews.

Elizabeth:

The article doesn't make an effort to explain what 'co-education' means in terms of gender, therefore I felt like I had a responsibility to do so. People could probably figure out what it means but you never know.

Emma Rose:

...where a concept represented by one English word requires a lot of contextual understanding...it doesn't say "important" in the original text, that was something I think I could add.

ASL and English differ in the way they represent ideas linguistically, including in morphological structures. This required expansion on the part of the translators in order to capture and convey the meaning of the text. The English term “co-educational,” for example, required the translators to expand appropriately.

In addition to contextualizing lexical items, the participants also faced re-structuring and developing context within sentence structure. Elizabeth mentioned the beneficial use of the video recording of her trial translations. In this way, she was able to more easily detect the syntactic structure that needed re-formulation and contextualization.

Elizabeth:

It makes more sense that the translation is filmed because ASL is a 3-D language. ASL is captured on video (and) the sentence may need to be broken down or some concepts may need to be expanded, for example, with CO-EDUCATION. Little things like that come up, where in English it is assumed and in ASL it has to be made explicit. Or maybe a single sign isn't enough to satisfy the intended meaning in English.

Some Deaf translators may rely on their own knowledge and intuition to influence translation decisions about linguistic choices, syntactic structures, and semantics of a text. This results in a lack of using various tools, such as seeking available information to guide decisions in the translation process.

### **THEME 3: LITERAL VS. FREE TRANSLATION: “WHAT’S MY DEGREE OF FREEDOM?”**

Both participants indicated awareness about whether to keep their translations close to the English structure in the source text or to aim for an ASL-based translation. Both felt that because the source text was an advanced academic text, they could potentially lean toward depending on the English; however, there were different views on how literal the translation should be. They reported that their intended audience may not understand a translation from English into a more literal English-based translation. One participant pondered whether she should construct her translation more toward ASL or English syntactic structures. The participants also mentioned feeling uncertainty and a lack of confidence over the choices they must make in their translation, being unsure while doing the translation, and feeling concern that they wouldn't get it right.

The participants' comments in regards to whether their translation should be more literal or free is illustrated in the interview comments below:

Elizabeth:

I had all of these different sign choices going through my head but wasn't sure exactly where on the English-ASL spectrum I should approach the text from. Should I go more literal or conceptual? I felt it was important to respect the author's intent and text and so felt an inclination to lean toward creating an English-like translation product. Sometimes, for academic purposes, it's better to do a literal translation, but at the same time it might not make sense to the audience. Those were the kinds of dilemmas I found myself in.

Emma Rose:

I felt as though the English and ASL blended in a composite of the two. If I were d to leave the English, I would memorize it.

In the interview both participants stated that they had no experience with translating an academic text, and both were unfamiliar with what a translation of this type should look like.

Elizabeth:

This is the first time I've dealt with an academic text format. The language use is different. Rather than having translated the text sentence by sentence, maybe I should have focused more on just one paragraph.

The translators also addressed how they organized their ideas in creating the target language translation. For example, they stated that they were unsure of how much restructuring of the source they were permitted to do in creating a target language translation.

Emma Rose:

English text has a specific structure so, in order to reorganize, I feel I have to memorize it. I'm not saying memorize it word-for-word, but for example the meaning of one sentence may be dependent on something that came before it. You have to know the text well enough to be able to restructure the translation. Though I am not sure how much of restructuring it can be done.

Emma Rose:

I felt totally constrained by the English sentence structure.

These comments reflect comments by Venuti (2013) and Gentzler (2001) that describe the primary difference between literal and free translations as being either word-for-word or sense-for-sense. A translator's decision to craft a translation as literal or free on the continuum between the two extremes is dependent upon a number of factors such as linguistic, cultural, and personal factors. Each of those factors exerts a direct and crucial influence upon the process and decision-making of interlingual translation. In a literal translation, an attempt may be made to keep the word choice and syntactic structure as close as possible to that of the target language, even to the point of disregarding whether it makes sense in the target language.

Parts of the text may also cause confusion on the part of the translator. One participant seemed more comfortable with translating with a focus on overall concepts, with an ability to navigate between ASL and English grammatical features. The other participant believed an academic text should be aligned with English grammar. She admitted that she is unfamiliar with the concept of ASL having an academic register, and so she would not have been aware of the ASL linguistic features to craft a translation of that nature.

This type of comment supports Mason's (1990) view that a translator's attitudes and decision-making are subjective and directed by textual factors including, purpose, audience, and source-target text function. In addition, translators' decisions reflect their own sociocultural background, beliefs, and ideological knowledge (Wong & Shen, 1999).

#### **THEME 4: AUDIENCE: “WHO’S WATCHING ME?”**

Both participants expressed a high degree of awareness of their target audience when preparing the translations. However, they were not presented with information about their target audience, so the participants stated that they imagined who their target audience may be. Elizabeth chose to craft her translations for a hypothetical audience with minimal educational experiences, as this is a group which would not normally have access to the information explored in the text. Emma asked, “Who is my audience? Is my audience the general public? Is it for a classroom?”

Translators consider the needs of their target audience. Deaf individuals, being part of a minority linguistic and cultural community, have a predisposition to adjust their communication styles to meet the linguistic needs of others. They use various means of language contact such as code switching in order to effectively communicate with other people. This ability is something Deaf people, as bilinguals, seem to develop quickly, almost as an innate ability performed unconsciously. A translator must consider their target audience in regard to whether the members are, for example, of a particular educational or grassroots community. This awareness may in some cases arise as an afterthought, rather than a deliberate planning strategy employed during the translation process.

Both participants commented that it was difficult to craft their translations and make decisions, as they were not sure which audience to translate for. It is promising to see that they both recognized this, as they understood the value of a translation and how the audience they are interacting with may impact their translation decisions.

Elizabeth:

I had to take the audience into consideration. I wasn’t too sure who the audience was so I created a target group in my own mind.

Emma Rose:

Who is my audience? Is my audience the general public? Is it for a classroom, to teach a history lesson?

Vermeer (1989) points out that when a translator begins the process of translating, they must have a particular purpose in their mind for any given situation. When this has been constructed by the translator, the translator will determine how to manipulate it in order to fit the audience. A translator, then, must envision how best to present the information to other people. There are many factors at play when making such decisions, and, as previously mentioned, translators have the advantage of time. A translator may use this time in order to determine precisely who their audience is, while an interpreter may not have this luxury. The participants in this study did not, however, have this information available to them. The purpose, then, was one constructed for them without a real social context.

#### **CONCLUSION**

This exploratory study examined factors that influenced the decision-making process of two participants when rendering an academic text from English into American Sign Language. The



study suggests ways that these participants shaped their work and the thought processes during the translation process. The four themes identified through the analysis were preparation, contextualization, literal/free translation, and audience. Each theme represents a consideration in the participant's overall scope of practice. The interview data demonstrated that the participants had some similar perspectives about these four themes.

Because the participants in this study lacked training and formal education as translators, they both appear to rely to some degree on "linguistic instinct" about how to translate effectively, but given training and greater familiarity with theories of and approaches to translation, it is possible that their work might achieve a deeper level of meaning transference and that they would make different decisions in their work. Becoming more familiar with issues such as style and register might have enabled them to have an improved conceptualization of their own decision-making process, potentially leading them to make different decisions about their work.

Finally, it is worth noting that technological changes have significantly affected the work of translators. In signed language translation, innovations in video recording and streaming technology allow translators to successfully produce and preserve their translations, for viewing by future translators. In addition to this historical purpose, such recordings allow use of the TAP approach; translators can view and review their own processes, refining their skills at each iteration.

A number of important questions about translators remain to be addressed. What skills are required to be a successful Deaf translator? How can Deaf translators capture their collective and individual processes? Do the personal experiences of a Deaf translator contribute to any cultural, political, linguistic, or social elements of their translation decision-making? Future studies involving greater numbers of participants could more closely address the work that Deaf individuals do, what Deaf individuals know about translation, and what underlying issues lead translators to make decisions. These questions may be useful to construct a theory of norms in translation (Toury, 1995), regarding the phenomenon of Deaf translators' decision strategies in order to understand what common knowledge is shared in a given situation. Of particular interest would be further examination of the participants who have never had formal training. Translation is recognized as one of the most challenging linguistic tasks performed by humans. Some suggest that formal training is necessary in order to prevent meaning from being "lost in translation" between languages. Future research holds the promise of influencing research and training of Deaf translators.

## REFERENCES

- Adam, R., Carty, B. & Stone, C. (2011). Ghostwriting: Deaf translators with the Deaf community. *Babel*, 57(4), 375-393.
- Agrifoglio, M. (2004). Sign translation and interpreting: A comparative analysis of constraints and failures. *Interpreting*, 6(1), 43-67.
- Almanna, A. (2013). Extra-linguistic constraints & parameters in the translation process: A descriptive study. *World Journal of English Language*, 3(3), 27-36.
- Bailey, A.L. (2007). *The language demands school: Putting academic English to the test*. New Haven, CT: Yale University Press.
- Baker, M. (2006). Contextualization in translator-and interpreter-mediated events. *Journal of Pragmatics*, 38(3), 321-337.
- Bartley, A., & Stone, C. (2008). Deaf interpreters in the community: The missing link. Meeting of Conference of Interpreter Trainers, San Juan, Puerto Rico.
- Bassnett, S. (2008). *Translation studies* (3<sup>rd</sup> ed.). New York: Routledge.
- Bassnett, S. (2001). *Translation studies*. New York: Routledge.
- Belhaaj, A.E. (1998). *The process of translation: factors, tasks and challenges*. Saudi Arabia: Umm Al-Qura University Press.
- Bell, R. (1991a). *Translation and translating: Theory and practice*. New York: Longman Group Inc.
- Bell, R. (1991b). *Translation theory: Where are we going? META*, 31(4), 403-415.
- Bell, R. (1994). *Translation and translating: Theory and practice*. London, UK: Longman.
- 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>
- Boudreault, P. (2005). Deaf interpreters. In T. Janzen (Ed.), *Topics in signed language interpreting: Theory and practice* (pp. 323-355). Amsterdam: John Benjamins.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Cokely, D. (1992). *Interpretation: A sociolinguistic model*. Burtonsville, MD: Linstok Press.
- Colonomos, B. (2015). *Integrated model of interpreting supplemental notes and diagrams*. Retrieved from <http://www.diinstitute.org/wp-content/uploads/2016/03/IMI-Supplemental-Colonomos-2015.pdf>

- Colonomos, B. (1992). *Processes in interpreting and transliterating: Making them work for you*. Westminster, CO: Front Range Community Range.
- Creswell, J.W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4<sup>th</sup> ed.). Thousand Oaks: Sage.
- Creswell, J.W. (2007). *Qualitative inquiry & research design: Choosing among five approaches*. Thousand Oaks, CA: Sage.
- Crystal, D. (1987). *The Cambridge encyclopedia of language*. Cambridge, UK: Cambridge University Press.
- Cummins, J. (2000). Language proficiency in academic contexts. In J. Cummins (Ed.), *Language, power, and pedagogy: Bilingual children in the crossfire* (pp. 57-85). Clevedon, England: Multilingual Matters.
- Defeng, L., & Cheng, M. (2007). Monologue vs. dialogue Verbal reporting: Research subjects' perceptions. *Journal of Translation Studies*, 10(1), 43-56.
- DeRioja, L. (2015). *What is the difference between translation and interpreting*. Oxford Dictionary. Retrieved from: <http://blog.oxforddictionaries.com/2015/04/difference-interpreting-translation/>
- El-dali, H. M. (2011). Towards an understanding of the distinctive nature of translation studies. *Journal of King Saud University-Languages and Translation*, 23(1), 29-45.
- Ericsson, K.A., & Simon, H.A. (1980). Verbal reports as data. *Psychological Review*, 87(3), 215-251.
- Forestal, E. (2011). *Deaf interpreters: Exploring their processes of interpreting*. Unpublished dissertation. Capella University, Minneapolis, MN.
- Frishberg, N. (1990). *Interpreting: An introduction*. Silver Spring, MD: RID Press.
- Gentzler, E. (2012). Translation without borders. *Translation: A Transdisciplinary Journal*, 1(1) (1-8). Retrieved from <http://translation.fusp.it/articles/translation-without-borders>.
- Gentzler, E. (2011). Macro-and micro-turns in translation studies. *Translation and Interpreting Studies. The Journal of the American Translation Interpreting Studies Association*, 6(2), 121-141.
- Gentzler, E. (2001). *Contemporary translation theories* (2<sup>nd</sup> ed.). New York: Routledge.
- Gile, D. (2009). *Basic concepts and models for interpreter and translator training*. Amsterdam: John Benjamins.
- Gutt, E.A. (1991). *Translation and relevance: Cognition and context*. Oxford, UK: Blackwell.

- Gutknecht, C. (2001). Translation. In M. Aronoff & J. Miller (Eds.), *The handbook of linguistics*. Oxford, UK: Blackwell.
- Halliday, M.A.K. (2004). *Translation and relevance: Cognition and context*. Oxford, UK: Blackwell.
- Harris, R. (2016). Harris, R.L. (2016). Sign language as an academic language. In P. Boudreault & G. Gertz (Eds.), *The Deaf studies encyclopedia*. Thousand Oaks, CA: Sage.
- Harris, R. (2012). Academic language in the ASL community. *Deaf Studies Digital Journal*, 3. Retrieved from [http://dsdj.gallaudet.edu/index.php?issue=4&section\\_id=2&entry\\_id=149](http://dsdj.gallaudet.edu/index.php?issue=4&section_id=2&entry_id=149)
- Hatim, B., & Mason, I. (2005). *The translator as communicator*. London, UK: Routledge.
- Hatim, B. (2001). *Teaching and researching translation*. Edinburgh, Scotland: Person Education Limited.
- Hatim, B., & Mason, I. (1990). *Discourse and the translator*. London, UK: Longman.
- Humphrey, J.H., & Alcorn, B.J. (2007). *So you want to be an interpreter? An introduction to sign language interpreting*. Seattle: H & H Publishing Co.
- Jääskeläinen, R. (1999). Tapping the process. Finland: University of Joensuu.
- Jacobson, R. (1959). On linguistic aspects of translation. *On Translation*, 3, 30-39.
- Janzen, T., & Shaffer, B. (2008). Intersubjectivity in interpreted interactions: The interpreter's role in co-constructing meaning. In J. Zlatev (Ed.), *The shared mind: Perspectives on intersubjectivity*. Amsterdam: John Benjamins.
- Joos, M. (1961). *The five clocks*. New York: Harbinger Books.
- Kussmaul, P. (1995). *Training the translator*. Amsterdam: John Benjamins.
- 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>.
- Ladd, P. (2003). *Understanding Deaf culture: In search of Deafhood*. London: Multilingual Matters.
- Lane, H. (1992). *The mask of benevolence: Disabling the deaf community*. San Diego, CA: Dawn Sign Press.
- Langholtz, D. (2004). Deaf interpreters today: A growing profession. *WFD News*, 17(1), 17.
- Larson, M. L. (1984). *Meaning-based translation: A guide to cross-language equivalence*. New York: University Press of America.

- Lenehan, M. (2007). Exploring power and ethnocentrism in sign language translation. *Babel: Journal of the AFMLTA*, 41(3), 4-12.
- Levy, J. (1967). *Translation as a decision process*. The Hague: Mouton de Gruyter.
- Munday, J. (2001). *Introducing translation studies*. New York: Routledge.
- Napier, J., McKee, R., & Goswell, D. (2010). *Sign language interpreting: Theory and practice in Australia and New Zealand* (2<sup>nd</sup> ed.). Sydney: Federation Press.
- Napier, J., & Barker, R. (2004). Accessing university education: Perceptions, preferences, and expectations for interpreting by Deaf students. *Journal of Deaf Studies and Deaf Education*, 9(2), 228-238.
- Napier J. (2002). *Sign language interpreting: Linguistic coping strategies*. Coleford, UK: Douglas McLean Publishing.
- Newmark, P. (1988). *Approaches to translation*. New York: Prentice Hall.
- Nicodemus, B., Swabey, L., & Taylor, M. M. (2014). Preparation strategies used by American Sign Language-English interpreters to render President Barack Obama's inaugural address. *The Interpreters' Newsletter*, 19, 27-44.
- Nord, C. (1997). *Translating as a purposeful activity: Functionalist approaches explained*. Manchester, UK: St. Jerome Publishing.
- Patterson, L. (2008). The women of Kendall Green: Coeducation at Gallaudet, 1860-1910. In B. Greenwald & J. V. Van Cleve (Eds.), *A fair chance in the race of life: The role of Gallaudet University in Deaf history* (pp. 85-112). Washington, DC: Gallaudet University Press.
- Patrie, C. (2001). *Translating from English: Study Set*. San Diego, CA: Dawn Sign Press.
- Pöchhacker, F. (2004). *Introducing interpreting studies*. New York: Routledge.
- Pym, A. (2010). *Exploring translation theories*. New York: Routledge.
- Rankin, J.M. (1988). Designing thinking aloud strategies in ESL reading. *Reading in a Foreign Language*, 4(2), 119-132.
- Rathmann, C. (2014). Curriculum and design of the Deaf interpreter training program in Germany: An analysis. Paper presented at the *First International Symposium on Signed Language Interpretation and Translation Research*. Washington, DC, Gallaudet University, March 28-30.
- Schaffner, C. (2004). Metaphor and translation: Some implication of a cognitive approach. *Journal of Pragmatics*, 36(7), 1253-1269.

- Sequeros, X.R. (2002). Interlingual pragmatic enrichment in translation. *Journal of Pragmatics*, 34, 1069-1089.
- Sequeiros, X.R. (1998). Interlingual impoverishment in translation. *Bulletin of Hispanic Studies*, 75(1), 145-157.
- Someren, M.V., Barnard, Y. & Sandberg, J. (1994) *The Think Aloud Method – A practical guide to modelling cognitive processes*. London: Academic Press.
- Stone, C. (2009). *Toward a Deaf translation norm*. Washington DC: Gallaudet University Press.
- Stone, C. (2007). Deaf translators/interpreters' rendering processes the translation of oral languages. *Sign Language Translator and Interpreter*, 1(1) 53-72.
- Toury, G. (1995). *Descriptive translation studies and beyond*. Amsterdam. John Benjamins.
- Venuti, L. (2013). *Translation changes everything: Theory and practice*. New York: Routledge.
- Venuti, L. (2004). *The translation study reader*. New York: Routledge.
- Vermeer, H. (1989). Skopos and commission in translational action. In L. Venuti (Ed.), *The translation reader* (3<sup>rd</sup> ed.) (pp. 227- 238). New York: Routledge.
- Vinay, J.P., & Darbelnet, J. (1995). *Comparative stylistics of French and English: A methodology for translation*, trans. and ed. J.C, Sager and M.J. Hamel, Amsterdam: John Benjamins.
- Wadensjö, C. (1998) *Interpreting as interaction*, London, UK: Longman.
- Wilcox, S., & Shaffner, B. (2005). Towards a cognitive model of interpreting. In T. Janzen (Ed.) *Topics in signed language interpreting: Theory and practice* (pp. 27-50). Amsterdam: John Benjamins.
- Winston, B. & Monkowski, C. (2000). Discourse mapping: Developing textual coherence skills in interpreters. In Roy, C. (Ed.), *Innovative practices for teaching sign language interpreters*. Washington, DC: Gallaudet University Press.
- Witter-Merithew, A., Taylor, M., & Johnson, L. (2002). Understanding the meaning of texts and reinforcing foundation skills through discourse analysis. In C. Nettles (Ed.) *Proceedings of the 17<sup>th</sup> national conference of the Registry of Interpreters for the Deaf: Tapestry of our worlds* (pp. 177-196). Alexandria, VA: RID Publications.
- Wolfram, W. (1994). *A framework for decision-making in translation*. *Topics in language resources for translation*. Amsterdam: John Benjamins.
- Wong, D., & Shen, D. (1999). Factors influencing the process of translation. *Translators' Journal*, 44(1), 78-100.

- Wurm, S. (2014). *Deconstructing translation and interpreting prototypes: A case of written-to-signed-language translation*. New York: Routledge.
- Wurm, S. (2010). *Translation across modalities: The practice of translating written text into recorded signed language: An ethnographic case study*. PhD Dissertation. Heriot-Watt University, Edinburgh, Scotland.