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## Language Preferences of Deaf Employees at the Department of Defense

Trisha H. Montgomery  
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Language Preferences of Deaf Employees at the Department of Defense

By  
Trisha H. Montgomery

An Action Project Submitted in Partial Fulfillment of the

Requirements for the Degree of

**Master of Arts in Interpreting Studies  
and Communication Equity**

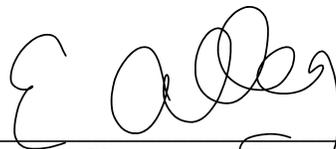
**St. Catherine University  
St. Paul, Minnesota**

May 2018

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**Signature of Program Director  
Erica Alley, PhD**

Date: **6/3/18**

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**Abstract**

In the last 10 years, the workplace setting has become a new research topic in the field of signed language interpreting. This research, an adapted study from Birr (2010), looked at the language preferences among Deaf employees at the Department of Defense (DoD). Participants assessed an interpretation from spoken English to American Sign Language (ASL) and a transliteration from spoken English to contact sign. They then provided feedback regarding the two language models and which language model they preferred for each of eight specific settings commonly found in the federal government environment. This study considered various factors influencing the language preferences among Deaf employees. Quantitative analysis indicated that age, gender, educational background, and/or Deaf family members had no significant impact on participant preference. However, qualitative analysis showed that the setting influenced the language preference among the majority of the participants. Categories identified were pace of interpreter, details of the message, terminology, understanding of the overall concept, and importance of the presented information. Data suggests that settings influenced participant's language preference in the workplace.

## Introduction

Copious research has focused on the spoken language conveyed to Deaf people in various settings such as video relay service (VRS), legal, medical, and education, yet little research has focused on the language(s) Deaf employees prefer in the workplace. With the extensive research in the sign language interpreting field that has been dedicated to the languages used in educational settings, it is logical to examine the next phase of a Deaf<sup>1</sup> person's life, the workplace environment. Hauser, Finch, and Hauser (2008) focused on the concept of the Deaf professional working with a designated interpreter; however, the primary emphasis of their research was on the *relationship* between the Deaf professional and the designated interpreter, “an interpreter who is intimately familiar with the Deaf person's work” (Hauser, Finch, & Hauser, 2008, p. 4). Correspondingly, Watson's (2016) work looked at the experiences of Deaf employees in both deaf and hearing workplaces. It is critical for research to collect data directly from deaf people to document firsthand their experiences.

It was Dickinson (2017, 2010) who first delved into the topic of the workplace and the sign language interpreter's role regarding workplace discourse. Koester (2010) defined workplace discourse as “interactions occurring across all kinds of occupational settings,” including businesses and institutions (p. 5). Gathering data from Deaf professionals on their language preferences in a professional environment is a critical missing piece to the research on workplace communications among Deaf employees. Researching Deaf employees' language

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<sup>1</sup> In this paper, the use of an uppercase “D” represents individuals who are culturally Deaf. They use sign language as their primary mode of communication and identify with Deaf culture, which has a shared language, behaviors, and values, rather than identifying as disabled.

preference in the workplace is an essential issue to address, since it can better assist interpreters in providing appropriate services that benefit Deaf professionals. The research can also potentially improve the relationship between the Deaf and interpreting communities by reinforcing collaboration and teamwork in this setting.

The relationship between Deaf employees and interpreters is a complex one. Hauser et al. (2008) described this relationship in terms of a “marriage” in which communication is key to a successful relationship. The Deaf professional/designated interpreter relationship is an example of how communication is conveyed in the workplace. It is critical that the designated interpreter know each Deaf professional’s language preference in specific settings in order to provide the appropriate type of interpreting required. Not all Deaf employees want the same mode of communication in the workplace; some prefer American Sign Language (ASL) while others prefer a more English-influenced system called contact signing (Lucas & Valli, 1992). Deciding on what form of interpretation a person wants is a decision that can be very personal for the Deaf individual. This study identified patterns from the data regarding when and why Deaf employees wanted ASL and/or contact signing.

This study solicited Deaf employees at the Department of Defense (DoD) to evaluate an interpretation in ASL and a transliteration using contact signing. For the purpose of this research, contact signing refers to an English-based signing system that uses ASL signs in English syntax with visible English words displayed on the mouth (Quinto-Pozos, 2007). After viewing the interpretations, the Deaf employees then answered questions regarding the two interpretations and their communication preferences in specific workplace situations.

The data collection answered the question, “What do federal Deaf employees want conveyed in the workplace?”, which led to more questions. The data, through the constant comparative method, led to the following questions and potential future research topics:

- Does the federal workplace setting impact what language mode a Deaf employee prefers work compared to other settings, such as the doctor’s office, VRS, or the classroom?
- Is the federal workplace the same as any other workplace setting (e.g., private business) in how Deaf employees want the spoken message conveyed?
- Does working with dedicated government interpreters (as opposed to having community/freelance interpreters) change the dynamics in how services are provided to Deaf employees?
- Is one type of interpretation preferred more than others in a specific setting?
- If there exists a preference, what are the reasons for that preference?
- Does geography influence Deaf federal employees’ language preferences?

An assumption in the interpreting community is that Deaf people who have Deaf family members prefer ASL-only interpretations, or that those who grew up oral or who learned ASL later in life want only English-based signs. What if the type of interpretation, ASL or an English influenced sign, was not based on the Deaf person’s background, but rather on the type of setting where the interaction occurs? How would that, if in any way, change an interpreter’s preparation for an assignment?

Language is always a concern to be aware of. William Stokoe’s pioneering research in the 1960s proving ASL as a stand-alone, bona fide language (Armstrong & Karchamer, 2009) was a breakthrough; ASL was often referred to as “broken English” up until even the early 1980s (Garey & Holt, 2007). It is important to emphasize this research is not about judging anyone’s

language or communication preferences. Rather, it focuses on how Deaf employees' language preferences can assist interpreters in better understanding and providing top-notch interpreting services that fit the employees' needs and preferences.

This critical study and its research answers will allow sign language interpreters working for the government to navigate this environment in similar ways as how educational interpreters navigate educational settings or other settings.

### **Literature Review**

Educational interpreting is a prevalent topic in signed language research. The next logical setting after education would seem to be the workplace, yet the field of signed language interpreting is just beginning to study this setting. To better understand the workplace setting, it is important to recognize multiple factors such as employees' experience and educational backgrounds, along with their day-to-day communication preferences, when considering providing appropriate interpreting services. Deaf employees who use sign language in the workplace have various options for the types of interpreting services they receive. Moody (2011) succinctly pointed out that "consumers' expectations vary depending on the situation and on their conception of the process of interpreting" (p. 44).

This study explored language preferences in the workplace among Deaf DoD employees, specifically focusing on interpreting from spoken English into sign language (whether ASL or contact sign). Humphrey and Alcon (2001) defined interpretation as "the result of taking a source language message, identify[ing] meaning and speaker intent by analyzing the linguistic and paralinguistic elements of the message, then making a cultural and linguistic transition and producing the message into the target language" (p. 7.23). Transliteration is "the process of taking a message and expressing it in a different form of the same language" (Humphrey & Alcorn, 2001, p. 7.6).

Again, research on Deaf people's language preferences in their workplaces is only just beginning. This study adapted Birr's (2010) research regarding Deaf employees' language preference in a professional setting at Gallaudet University. Birr built upon Livingston, Singer, & Abrahamson's (1994) research, which compared the effectiveness of interpretation and transliteration provided to deaf college students at LaGuardia Community College in New York.

The results showed that most students had better comprehension of the information presented when working with an ASL interpreter, even though they had said they preferred transliteration (Livingston et al., 1994). Birr's (2010) research found that Deaf professors at Gallaudet University preferred ASL interpretation, although, almost all said they could understand both ASL and contact sign.

Birr (2010) studied 20 Deaf professors out of a sample size of 93 Deaf faculty members (approximately 22%). The professors watched a video of an English source text signed by a nationally certified interpreter in ASL and contact sign. Birr (2010) concluded:

Qualitative analysis showed that prominent reasons for preferring ASL were greater clarity, more facial expressions, and less work needing to be done on the part of the viewer. Qualitative analysis also showed that prominent reasons for preferring contact sign were the importance of vocabulary, more fingerspelling, structural preference, lack of interpreter skill and/or knowledge, and allowing the viewer to have access to the English source and letting the viewer decide how to interpret that information. (p. 2)

### **The Workplace**

For the purposes of this study, "workplace" is defined as a government facility. The Washington, D.C. metropolitan area is home to the U.S. federal government. With the proximity of Gallaudet University to the nation's capital, there are plenty of federal employment opportunities for Gallaudet graduates (GPO, 2000; The White House, 2010). Executive Orders 13163 and 13548, signed by President Clinton and President Obama respectively, increased the hiring of federal employees with disabilities (GPO, 2000).

Workplace discourse is an important aspect to this research as described by Koester (2010, as cited in Dickinson, 2017). Like Dickinson (2010, 2017), Koester relayed the

importance of both relational talk (also referred to as small talk) in the workplace by building relationships and with transactional talk. Sign language and spoken language often converge in the workplace for Deaf employees communicating with hearing employees. Written English, via emails, memos, written notes, or even instant messaging, is a constant reminder that English is the language of business (Koester, 2010). Communication in the workplace is an important aspect of an employee's career, especially since supervisors and others in a position of power and authority typically use what they know of an employee's communication to make judgments about potential promotions and assignments (Tannen, 1995). This knowledge is critical to Deaf employees; settings can influence the type of language Deaf people use (Davis, 2003; Kelly, 2001; Siple, 1997). Communication Service for the Deaf (CSD) states on its website that 70% of Deaf people are underemployed or unemployed ([www.csd.org](http://www.csd.org)); this is primarily due to the fear and misconceptions managers and supervisors possess about communicating with Deaf employees. This fear underscores the importance of discourse in the workplace.

Dickinson's (2017, 2010) research on Deaf professionals in the United Kingdom was the first comprehensive look at Deaf employees in the workplace. The underlying content of this research can be applied to Deaf professionals in the United States. Issues Deaf professionals faced as mentioned in the research included communication barriers and workplace culture. A particular problem Dickinson identified that is relevant to the current study is small talk at work and how, if at all, small talk can influence interpreting services provided to Deaf professionals. Another influential factor in workplace discourse with Deaf employees is humor (Dickinson, 2010, 2017). Humor is one example of how relational talk builds rapport (Dickinson, 2010, 2017; Koester, 2010), which is one way the interpreter can help facilitate small talk. Next, the topic of Deaf people and employment will be explored.

## **Deaf People and Employment**

Teachers in residential schools were some of the earliest Deaf professionals (Kushalnager & Rashid, 2008). Due to a swing in the educational philosophy in the late nineteenth century moving from sign language to spoken language, teaching was no longer viable work for many Deaf people who did not speak (Gannon, 2011; Geary & Hott, 2007; Tucker, 2011). Residential schools for deaf people taught vocational skills, such as printing and woodworking, in addition to domestic subjects, to “prepare” Deaf people for manual labor (Kushalnager & Rashid, 2008; Van Cleve & Crouch, 1989). Other blue-collar jobs included the automotive and manufacturing industries; there were few in managerial or sales positions, likely due to communication issues (Vernon & Andrews, 1990). At the turn of the century, the federal government started hiring Deaf people, but in 1906, the U.S. Civil Service declared Deaf employees could no longer work for the government (Van Cleve & Crouch, 1989). The National Association of the Deaf (NAD) protested and two years later, President Theodore Roosevelt repealed the guidelines ensuring that Deaf people had the “right to work for their country” (Geary & Hott, 2007, 29:26). In fact, during World War II, there was an uptick in Deaf employment when hearing men went off to war, with many jobs needing manpower back in the States (Kushalnager & Rashid, 2008).

However, once the men returned home from war, jobs became scarce again. Meanwhile, deaf education was seeing its pendulum swing back to using ASL for instruction in the classroom, making teaching once again a viable career (Kushalnager & Rashid, 2008). Conversely, the passage of federal laws during the 1970s-1990s facilitated greater access to employment opportunities for Deaf people.

Section 504 of the Rehabilitation Act of 1973 protected against discrimination for people with disabilities in federally-funded educational institutions or in federal institutions. In 1990, the Americans with Disabilities Act (ADA) outlawed discrimination in the employment, public services, public accommodations and telecommunications sectors (Geary & Hot, 2007). With the passage of the ADA, Deaf people found themselves with increased access to communication in the workplace via sign language interpreters (Legal Rights, 2015). This led to an increase in employment opportunities for Deaf people everywhere in the nation, but especially in the Washington, D.C. metropolitan area.

The passage of such laws not only increased employment for Deaf people, but also legitimized the sign language interpreting field as a respectable, necessary profession. This helped create an influx of interpreter training programs around the country to meet the demands of sign language interpreters. Although a bit vague in its wording of “reasonable accommodations,” the ADA dictates that Deaf people in the workplace have the right to equal access to communication with the assistance of “qualified” sign language interpreters.

With the ADA requiring the provision of interpreting services in the classroom as well as the workplace, more Deaf people have the opportunity to earn a higher education and therefore greater career opportunities. Enhancing these opportunities is the advancement of computers, which has helped equalize communication access and has created job opportunities in the computer industry (Vernon & Andrews, 1990).

### **Deaf Community and Deaf Culture**

Deaf people share an identity through the use of language (ASL). Deaf people view themselves as a linguistic minority and reject the label from the majority culture English-

speaking as being disabled (Garey & Hott, 2007). From a cultural perspective, the “disability” refers to a language barrier with the linguistic majority.

Shared experiences also tie the Deaf community together, such as experiences of oppression and audism. Such misconceptions about Deaf people’s abilities have historically been rampant, even at Gallaudet University, the world’s only liberal arts university for deaf people. In 1988, students, staff, faculty, and community members engaged in a week-long campus shut-down in protest of the university board of trustees’ decision to hire a hearing person (who did not have any experience with ASL or the Deaf community) over two Deaf, experienced university administrators as university president. The historical protest ended with the appointment of I. King Jordan, the first Deaf president of Gallaudet University since its inception in 1864.

To fully understand the importance of Deaf employees’ language preference in the workplace, it is important to recognize the diversity of language use within the Deaf community.

### **Influences on Language Use Diversity within the Deaf Community**

Worth discussing is how Deaf adults first acquire language, either signed or spoken, and the impact of that experience when in the workplace. Most Deaf people are not born into the Deaf community (Malcolm, 2005; Padden & Humphries, 1988); approximately 90% of deaf individuals are born into hearing families who speak the language of the majority (Garey & Hott, 2007) — in the United States, that is English.

**Early years.** The family dynamic is important because it has a significant influence on the myriad languages used by Deaf children. Several factors cause deafness: heredity, illness, and premature birth (Vernon & Andrews, 1990). People who are born deaf are labeled congenitally deaf, those who become deaf before acquiring spoken language are prelingually deaf, and those who lose their hearing after developing spoken language are postlingually deaf.

Another category are late-deafened adults, people who become deaf later in life, usually as adults.

The earlier a child is identified as having a hearing loss, the more successful the child acquires language once exposed to it. Hearing parents of a deaf child have the ultimate decision on which language the child is exposed to. Since doctors' opinions carry enormous weight with parents who often know little about deafness or the Deaf community, the medical community heavily influences parents' decisions regarding the communication method for their child.

In the medical field, health professionals often view deafness as a defect, rather than a cultural community and therefore the emphasis is to fix what is broken (Humphries, Kushalnagar, Mathur, Napoli, Padden, Rathmann, & Smith, 2017; Van Cleve & Crouch, 1989). This pathological view typically advocates for deaf children to learn spoken language (Gannon, 2011; Humphries et al., 2017) to assimilate into a society that uses spoken language — in the United States, English. In fact, Alexander Graham Bell supported the oral method for Deaf education, where deaf students are required to use their voices to talk, often at the expense of sign language. He also was a staunch proponent of eugenics (in this case, the eradication of deafness) and preventing deaf people from marrying other deaf people to reduce the chance of additional deaf offspring (Gannon, 2011; Lane, 2005; Padden & Humphries, 1988; Van Cleve & Crouch, 1989; Vernon & Andrews, 1990).

This history and oppression has been at the forefront of many Deaf people's experiences. Furthermore, a common fear parents have is if their deaf child uses sign language, the child will not learn to speak. No research shows that the use of sign language hinders a child's ability to learn how to speak (Humphries et al., 2017; Litowitz, 1987).

**Deaf education.** Once a child is identified as deaf, parents must make a decision which educational approach to use with their child. Deaf education is not without controversy due to the debate between the sign language and oral approaches (Gannon, 2011; Padden & Humphries, 1988; Tucker, 2011; Van Cleve, 2016; Van Cleve & Crouch, 1989; Vernon & Andrews, 1990). The type of educational background a Deaf person experiences can reinforce the languages they use. Deaf students often transfer from one setting to another regarding the type of educational approach. Depending on the students' circumstances, it is possible for a Deaf child to start at a Deaf school (Tucker, 2011), and finish in a mainstream program or vice versa.

**Deaf schools.** After the founding of the American School for the Deaf in 1817 in Hartford, Connecticut (Tucker, 2011; Van Cleve & Crouch, 1989), other states followed suit in establishing Deaf schools, primarily residential. One of the reasons residential schools are so cherished in the Deaf community is that the schools are one of the primary places where Deaf children first learn the language, values, and behavior of Deaf culture. At Deaf schools, students share experiences, stories, and languages. Even during the oralist movement during the twentieth century, dorms at Deaf schools continued to serve as havens for sign language and Deaf culture (Gannon, 2011; Van Cleve & Crouch, 1989).

From 1817 to 1880, Deaf teachers taught Deaf children at Deaf schools. In 1880, the International Congress on the Education of the Deaf held its second annual conference in Milan, Italy, known as Milan 1880. At this conference, 164 educators (five from the United States, all of whom endorsed sign language) endorsed a ban on sign language in deaf education, choosing instead oralism (Van Cleve & Crouch, 1990). Deaf teachers who did not speak were forced from the classroom since they were unable to teach speech (Tucker, 2011). The oral method hit its pinnacle in 1919 when 80% of the instruction of Deaf students was without any form of sign

language (Van Cleve & Crouch, 1989). Meanwhile, back in the United States, the Deaf community established the nation's oldest civil rights organization, the National Association of the Deaf (NAD), to combat the attack on sign language. This swing in the philosophy in educating Deaf individuals has had a lasting impact on the workforce in terms of what type of language Deaf adults use, either ASL or an English-influenced sign system.

Stokoe's recognition of ASL as a language independent from English changed the way Deaf people viewed themselves (Gannon, 2011) and how they received instruction. Stokoe's work also legitimized the teaching of Deaf students in ASL, and the pendulum was slowly swinging back to instruction in ASL. This meant many Deaf teachers were able to go back to teaching in the classrooms. Yet even today, mainstream opinions continue to influence these specialized schools with the pendulum swinging between the two approaches of sign language and oralism.

**Mainstream programs.** Deaf education has not been limited to Deaf schools. With the oralist movement of the twentieth century (Gannon, 2011; Geary & Hott, 2007), mainstream programs emerged especially in the public school systems, specifically due to the passage of Public Law 94-142 in 1975, the Education for All Handicapped Children Act (now known as Individuals with Disabilities Education Act, or IDEA). P.L. 94-142 protected students with disabilities from discrimination in the school system and stated that all children were entitled to a "free and appropriate education" at no cost to the student or parents in the "least restrictive environment" (LRE) (Tucker, 2011). The idea of LRE concerned the Deaf community because parents were moving their Deaf children from Deaf schools to mainstream programs, where their children had an interpreter assigned to them for the full school day. Mainstream programs, even today, ranged from a deaf student in a regular classroom with an interpreter to a self-contained

class where other deaf students were present. Depending on the type of mainstream program and the accommodations provided, a deaf student might find himself/herself interacting with hearing students — but usually not. A Deaf student often went from being in a classroom directly interacting with Deaf peers to being isolated as a result of the communication barriers often found in mainstream settings. Parents, on the other hand, were now able to keep their Deaf child home to attend the local school rather than sending the child to a residential school that often was a few hours away. Regardless of whether the Deaf child attended a Deaf school or a school in their local school district, the debate over which location provided the least restrictive environment continues to this day.

Public school systems invented visually coded systems in the 1950's to teach Deaf children English including tense markers (e.g., -ed, -ing), suffixes, and prefixes. Examples of English in a visual mode include Manually Coded English (MCE), Seeing Essential English (SEE I), and Signing Exact English<sup>2</sup> (SEE II) (Malcolm 2005; Kelly, 2001; Neumann Solow, 2000). However, the signs used in these systems are not always based on meaning and therefore are not to be confused with ASL.

### **Diversity of Language Preferences for Effective Communication**

Different groups use *sign language* to represent different types of signed communication. Some Deaf people often refer to an English-influenced signing as Pidgin Sign Language (PSE), a reference to ASL signs in English syntax. However, Lucas & Valli's (1992) research showed that signed languages do not follow traditional spoken pidgin languages and therefore coined the term *contact sign* to better represent the idea for signed languages when they come into contact

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<sup>2</sup> Signing Exact English (SEE) is a coded sign system invented in the 1960s as a method to teach English to deaf children (Kelly, 2001).

with spoken languages. Quinto-Pozos (2007) stated that contact sign happens when ASL mixes with spoken English and the workplace is one example of where that can happen. As coworkers learn signs, in the beginning it is common for contact sign to occur. As Malcolm (2005) points out, a telltale sign that contact sign is in use, is the use of mouthing of English words.

**Communication styles.** Due to the various deaf education models, Deaf adults have a range of language preference. Contact signing occurs when Deaf people (ASL users) communicate with second language users of ASL, and the signs tend to have more English characteristics than those of ASL. Because 90% of Deaf people come from a non-Deaf family, some form of English is used to communicate in the home. Hearing parents, who learn ASL to communicate with their Deaf child, may use some ASL signs but in English word order. Deaf people may use contact signing in educational settings (Lucas & Valli, 1992). In a mainstream setting, it is possible the interpreter uses contact signing.

Kelly (2001) and Siple (1997) cite Kannapell's (1982) six communication styles within the Deaf community. These communication styles emphasize the various communication needs of Deaf people.

**ASL monolinguals:** Deaf people who are comfortable expressing themselves only in ASL, and in understanding only ASL. They have no skills in [signed or written] English.

**ASL-dominant bilinguals:** Deaf people who are more comfortable expressing themselves in ASL than English and are able to understand ASL better than English (either printed or signed English).

**Balanced bilinguals:** Deaf people who are comfortable expressing themselves in both ASL and (signed and written) English, and who are able to understand both equally well.

**English-dominant bilinguals:** Deaf people who are more comfortable expressing themselves in English, and who are able to understand English (in printed English or signed English) better than ASL.

**English monolinguals:** Deaf people who are comfortable expressing themselves only in English (in oral or signed English) and in understanding English (in printed or oral or signed English). They have no skills in ASL.

**Semi-lingual:** Deaf people who do have some skills in both English and ASL, but are not able to master either language fully. (Kannapell, 1982, p. 24)

The communication styles Kannapell identified can serve an essential role for interpreters in providing interpretations. Understanding of the type of communication style a Deaf person prefers or uses likely can help dictate the type of interpreting style provided and the type of processing skill interpreters used to convey the message. Colonomos identified four levels of processing information: lexical, phrasal, sentential, and textual (as cited in Kelly, 2001; Malcolm, 1992). Lexical processing includes words and idiomatic expressions. Phrasal allows the chunking of information before processing the message. Sentential processing works at the sentence level or complete thoughts. Finally, textual processing deals with the whole text, including but not limited to the speaker's intent, discourse, and genre. The processing levels to deliver the message between interpretation and transliteration are different (Kelly, 2001; Malcolm, 1992). Interpretation occurs at the latter levels of processing while transliteration occurs at the earlier levels of processing. Interpretation maintains less of the English form while transliteration maintains more of the English form (Malcolm, 1992). Sign language interpreters provide both interpretation and transliteration (Humphrey & Alcorn, 2001), and "transliteration requires skills that are very different from ASL interpreting" (Viera & Stauffer, 2000, p. 96).

Sign language interpreters provide both interpretation and transliteration (Humphrey & Alcorn, 2001). Viera & Stauffer (2000) stated, “transliteration requires skills that are very different from ASL interpreting” (p. 96). Interpretation occurs at the sentient and textual levels of processing while transliteration occurs at the lexical and phrasal levels of processing (Kelly, 2001; Siple, 1997). Interpretation maintains less of the English form while transliteration maintains more of the English form (Malcolm, 1992).

To better understand what features transliteration possessed, Winston’s (1989) research followed one deaf college student who worked with a sign language interpreter providing transliteration for one semester. The research studied techniques used by transliterators (Viera & Stauffer, 2000). A technique that student’s interpreter chose was to produce signs that showed pluralization by reduplicating them instead of adding an –s or –es at the end of the word or sign. The interpreter signed more than once to show pluralization instead of fingerspelling the word with an -s or -es or signing and adding the letter -s at the end.

Bailey (1997) conducted an informal survey of deaf and hard of hearing people in the Washington, D.C. area to rank transliteration features. Out of 11 features identified, the top three reported were clear mouth movements, conceptually accurate signs, and English word order; verbatim translation was tied for seventh with natural gestures (as cited in Viera & Stauffer, 2000). Viera & Stauffer (2000) continued Bailey’s informal work on what deaf and hard of hearing individuals preferred regarding transliteration. Participants nationwide completed surveys asking what transliteration meant to them. The 11 features were: clear mouth movements, conceptually accurate signs, English word order, facial expression, processing time, affect, natural gestures, verbatim, use of space, SEE signs and ASL signs.

For sign language interpreters to provide effective communication, it is pertinent to discuss the types of national certifications for sign language interpreters regarding their qualifications. The Registry of Interpreters for the Deaf (RID) has changed its definition of transliteration at least three times since its inception (Kelly, 2001). The following definitions of interpretation and transliteration provide a better understanding of the difference.

**Interpreter certification.** The RID is a national agency that provides resources and certification status for sign language interpreters. Table 1 is a list of the past certifications RID offered to its members since 1972.

*Table 1 Historical List of RID Certifications*

<b>Past Certifications</b>	<b>Years offered</b>
Comprehensive Skills Certificate (CSC)	1972 - 1988
Masters Comprehensive Skills Certificate (MCSC)	1972 - 1988
Interpretation Certificate (IC)	1972 - 1988
Transliteration Certificate (TC)	1972 - 1988
Certificate of Interpretation (CI)	1988 - 2008
Certificate of Transliteration (CT)	1988 - 2008
NAD-RID National Interpreter Certificate (NIC), NIC Advanced, NIC Master	2005 - 2011

According to the RID website ([www.rid.org](http://www.rid.org), 2015), starting in 1972, the Comprehensive Skills Certificate (CSC), Masters Comprehensive Skills Certification (MCSC), Interpretation Certificate (IC) and Transliteration Certificate (TC) were granted upon those who demonstrated

the ability to interpret between ASL and spoken English (sign-to-voice) and transliterate between spoken English and a form of English-based signs (voice-to-sign). If the interpreter mastered both interpretation and transliteration, the interpreter earned the CSC and MCSC. If the interpreter mastered in either interpretation or transliteration but was weaker on the "reverse" (sign-to-voice) scores, the interpreter earned only that certificate (IC or TC).

In 1988, the Certification of Interpretation (CI) and the Certification of Transliteration (CT), replaced the original certifications, with updated examinations. The examinations were unique in that they carried equal weight. With this change, interpretation and transliteration were separated. This exam required that an interpreter be able to master voice-to-sign and sign-to-voice in either interpretation or transliteration.

Table 2 shows the list of past NAD's certifications. From the 1990s until 2002, the NAD offered its own certification process: (NAD III [generalist], NAD IV [advanced], and NAD V [master]) after which NAD and RID combined to create a joint certification, the National Interpreter Certification (NIC). The NIC offered three certification levels: NIC, NIC Advanced, and NIC Master. In 2011, the NIC, sans the levels, became the latest certificate provided to sign language interpreters in both interpretation and transliteration skills.

*Table 2 Historical Lists of NAD Certifications*

<b>NAD</b>	<b>1991 - 2005</b>
Level 1 – Novice I	Non-certified
Level 2 – Novice 2	Non-certified
Level 3 - Generalist	Certified
Level 4 - Advanced	Certified
Level 5 - Master	Certified

The various certifications over the years have reinforced the idea that both skill sets, interpretation and transliteration, are critical for sign language interpreters to possess. These skills have historically enabled interpreters to provide appropriate services based on the Deaf consumers' needs and preferences. While the Deaf community is small in number, it possesses a wide variety of language use, and therefore, its interpreting preferences are diverse.

## **Methodology**

This study used the grounded theory and the constant comparative method to understand Deaf employees' language preference. Grounded theory uses codes, concepts, categories, and theory to analyze data (Allan, 2003) and produce a theory based on this data (Hale & Napier, 2013). Participants answered general questions about an interpretation and a transliteration of the same source material, with the answers providing rich qualitative data regarding language preferences. By looking at the participant recordings, concepts emerged regarding their given feedback, such as the interpretation pace and details of the message. In grounded theory, categories are derived from the concepts (Allan, 2003). Kolb (2012) noted that the constant comparative method uses raw data that is continually reviewed to identify themes. By viewing the recordings of the participants, concepts and categories emerged in this study, which used both qualitative and quantitative approaches for data analysis. The participants' feedback contained themes identified using the constant comparative method.

### **Participant Recruitment**

Potential participants, a sample size of 45, received a solicitation email (Appendix A) and 11 participated. For those who responded to the solicitation email, they received a follow-up email that contained the consent form (Appendix B) and the participant background form (Appendix C). Prior to recording, the participants submitted both forms.

The research garnered usable data from the participants. Since the participants were Deaf employees of the Department of Defense (DoD), their responses to the interview survey directly applied to the research question of what language preferences Deaf DoD employees wanted in the workplace. The survey consisted of each participant watching two excerpts, one of an interpretation and the other of a transliteration of the same spoken English source material. The

Deaf employees answered questions (Appendix D) after each video to elicit participant preferences and the reasons for their preferences. The responses to the survey identified themes regarding ASL and contact sign. As a result, this data can be applied to the type of interpreting services provided in the workplace.

### **Source Material**

The source material was a pre-recorded live event of U.S. Secretary of Defense General James Mattis addressing the federal workforce. The original event lasted approximately one hour, but the excerpt selected for the study participants was seven minutes in length. His speech included military terminology, storytelling, idioms, and humor. The scholarly but inspirational speech was intended to inspire the workforce, and the selected excerpt captured the dense material and aforementioned attributes.

Military terminology examples included the battlefield (cyber, air, ground, sea) and rank of military members. Idioms are often difficult to interpret between languages, but often are used to show range of a language and often can be the difference between interpretation and transliteration (discussed further in the “Findings” section). In terms of humor, which Mattis sprinkled throughout his speech, Tray (2005) noted how interpreters created frames in their native language (English) and Deaf actresses created frames in their native language (ASL) emphasizing the difference in how humor is framed. Dickinson (2017) recognized the importance of humor in the workplace as well.

The selected interpreter model was a Child of Deaf Adults (CODA), whose first language was ASL. She was a certified interpreter at the NIC-Master level and was a DoD staff interpreter with whom the Deaf participants were familiar. She worked full-time as an interpreter for 16 years, seven specifically in the government setting as a staff interpreter, the last four of these

seven years in the DoD. The primary investigator (PI) met with the interpreter model several times to discuss how to present the two approaches (ASL and contact sign). Winston's (1996, 1998) definition of transliteration and interpretation, which RID used for its examinations, was used as the model for this study. The ASL version included:

- processing at the phrasal-to-sentential levels,
- using ASL non-manual markers,
- using space for subject-object agreement, and
- using conceptually accurate signs.

The contact sign version included:

- processing at the lexical-to-phrasal level,
- using conceptually accurate signs,
- producing English syntax and clearly visible English words on the mouth, and
- using space for subject-object agreement.

The interpreter model studied the seven-minute video and transcript for approximately two weeks. For the ASL excerpt, she glossed the transcript, and for the contact sign excerpt, she clarified terminology with the PI.

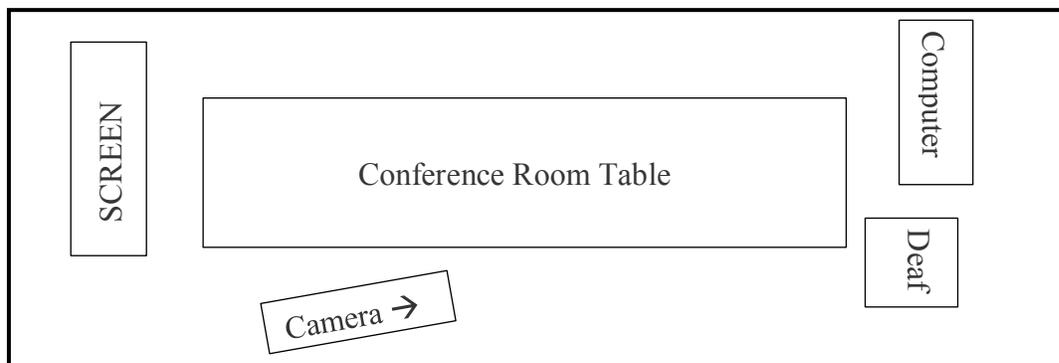
One-hour sessions gave participants time to read, watch, and answer the different sections of the survey. For each session, the participant was the only person in the room, and watched one video file that had approximately 25 minutes of material broken down into six sections:

- 1) A seven-minute excerpt (either of interpretation or transliteration),
- 2) Questions in sign language about the excerpt they just viewed (Appendix D),
- 3) A 7-minute excerpt of the same source material (either interpretation or transliteration of what they did not view the first time),

- 4) The same questions in sign language, this time focusing on the second excerpt they just viewed (Appendix D),
- 5) A scrolling transcript of the source material, and
- 6) Questions in sign language comparing the first excerpt to the second and asking which excerpt the participant preferred in various work settings (Appendix E).

After each section, the screen faded to black before transitioning to the next section. Prior to each set of questions, the interpreter appeared on screen to sign the instructions for the questions and logistics. These instructions were in written English on the screen as well after each question.

The room set-up required one camera to record both the participant, watching the video on a large screen at the other end of the room, and the video at the same time. This set-up allowed for greater analysis of the Deaf employee's reaction throughout the process. The Deaf employee faced a large screen on the wall across the room (See Figure 1). The computer to the participant's right displayed the same video as on the large screen. The participant and the computer screen were recorded in the same frame at the same time.



*Figure 1.* Room layout. This figure indicates how the room was set up during each session.

The participant could pause the video to answer the questions using a computer. Prior to the start of the session, the PI provided a scripted description of the process (Appendix F) and demonstrated how to pause the video. The PI confirmed the participant understood the process,

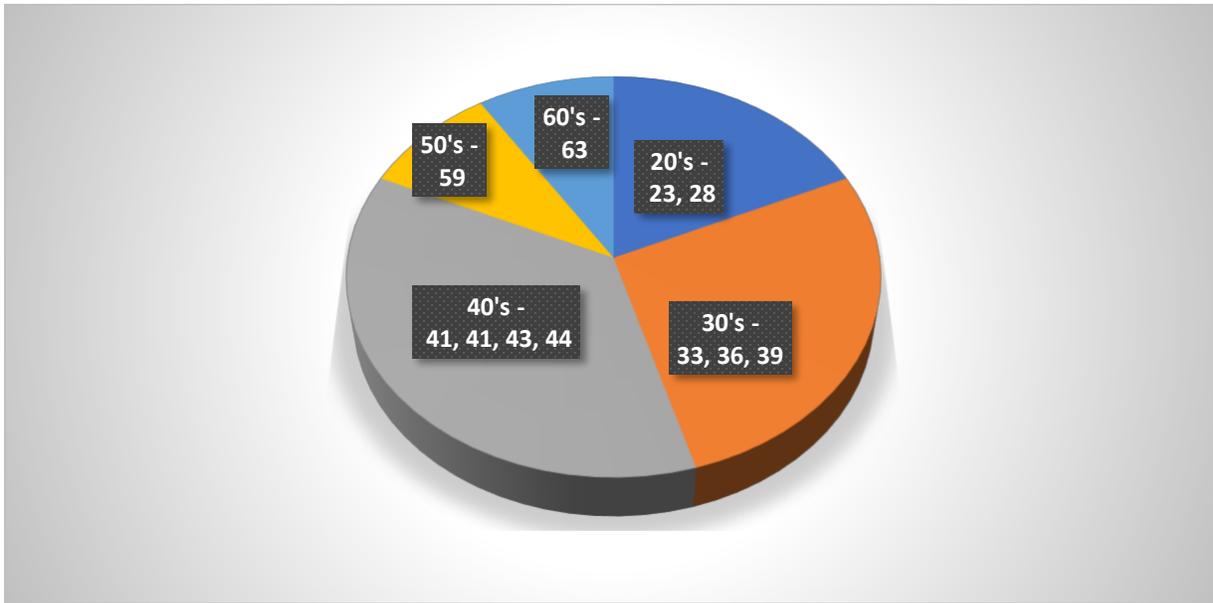
started the camera, and left the room to start the session. Once participant was finished, the participant left the room and notified the PI. The PI came back into the room to stop the filming, which was recorded to an SD card that was later downloaded as an mp4 file.

### **Results and Discussion of Findings**

The PI selected pseudonyms to protect the participants' identities. The 11 participants in the study equate to approximately 24% of the Deaf DoD employee population in the Washington, D.C. metropolitan area. Before discussing the findings, it is important to discuss the participant demographics.

Seven participants described themselves as either white or Caucasian, one chose both white and Native American, one chose Asian, and two responded with non-traditional answers ("Homo Saipan" and "human"). It was difficult to determine if the participants were representative of the DoD's Deaf employee population as the researcher did not have access to that data. However, race did not have a significant influence on language preferences.

Participant ages ranged from 23 to 63 years (see Figure 2). The average age was 41 years, which by coincidence, was also the median and mode of the participants' ages. While the total ratio of male to female of the potential participants was 60% male to 40% female, the gender ratio of the sample population was the opposite at just under 40% male to just over 60% female.



*Figure 2.* Participant age range. This figure shows the range in age among the participants.

Age did not seem to affect the participants' preferences for contact sign or ASL. The data showed that the two oldest participants, 59 and 63, did not have a preference between the two styles; see Table 3. One reason for this may be that with age, they had a sense of compromise based on their experience, being willing to accept whatever was offered. Another reason may be that the two oldest participants, based on their experience, preferred elements from each style. On the other hand, the participants aged 49 and younger had definite preferences. Six preferred contact sign, while three preferred ASL. This may be due to having lived in the era of public laws mandating reasonable accommodations. Many of them grew up with mandated individualized education programs (IEPs) that spelled out accommodation they were to receive in the educational system.

*Table 3 Preference by Age*

<b>Language Preference</b>	<b>20s</b>	<b>30s</b>	<b>40s</b>	<b>50s</b>	<b>60s</b>
Contact Sign	1	3	2	0	0
No preference/preferred elements of both	0	0	0	1	1
American Sign Language	1	0	2	0	0

Table 4 shows a breakdown by gender on language preferences. Out of the 11 participants, the female participants had a slight higher preference for contact sign over ASL with a ratio of 4:3. The male participants, however, were evenly split between ASL and having no preference/preferred elements of both; preferred elements of both meant that neither contact sign or ASL was chosen, but both were stated as necessary.

*Table 4 Preference by Gender*

<b>Language Preference</b>	<b>Male</b>	<b>Female</b>
Contact Sign	2	4
No preference/preferred elements of both	2	0
American Sign Language	0	3

The educational background of the participants, as shown in Table 5, showed that all 11 participants had either a bachelor's degree or a master's degree. Seven possessed a graduate degree and four had a four-year degree. Four of the seven with graduate degrees preferred contact sign, while bachelor's degree holders were evenly split between ASL and contact sign.

Table 5 Preference by Educational Background

Language Preference	Graduate Degree	Bachelor degree
Contact Sign	4	2
No preference/preferred elements of both	2	0
American Sign Language	1	2

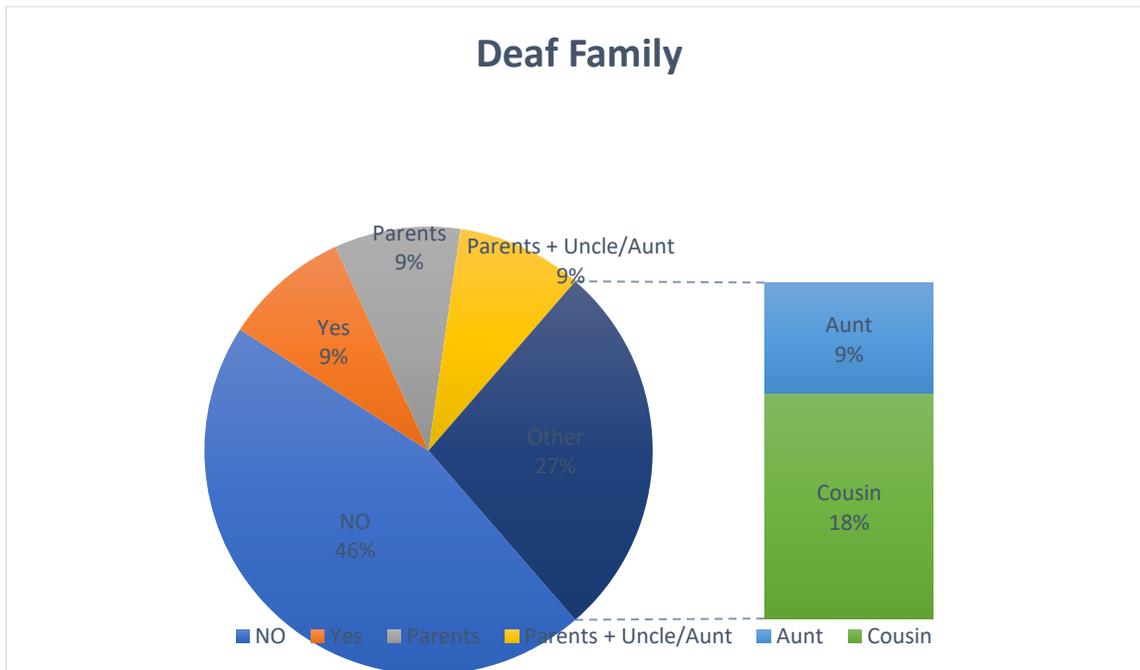


Figure 3. Preferences by family. This figure shows how many participants had Deaf family members.

Six participants had a Deaf family member (mother, father, aunt, uncle, and/or cousin), although one did not specify which relative was Deaf. Table 6 identifies language preferences among participants who reported having Deaf family members. Out of the six participants with Deaf relatives, two preferred the ASL excerpt, three preferred the contact sign excerpt, and one stated no preference/preferred elements of both. For the remaining five participants who had no Deaf relatives, one preferred ASL, three preferred contact sign, and one stated no preference/preferred elements of both.

*Table 6 Preference by Deafness in Family*

	<b>American Sign Language</b>	<b>No preference/preferred elements of both</b>	<b>Contact Sign</b>
Deaf Relatives	2	1	3
Non-Deaf Relatives	1	1	3

Table 7 shows the language preference based on the primary language of the participant. Out of the 11 participants, six stated that American Sign Language was their primary language while five identified English as their primary language. Out of the five who identified English as their primary language, two had Deaf family members and three did not. English was not defined either as spoken or written. An interesting note is that one participant who has Deaf family members, identified English as his primary language and preferred contact sign at work.

*Table 7 Participant's Primary Language*

<b>Primary Language</b>	<b>American Sign Language</b>	<b>No preference/preferred elements of both</b>	<b>Contact Sign</b>
ASL	3	1	2
English	0	1	4

The data indicated that age, gender, and having deaf relatives did not have any significant influence on the participant's language preferences. This confirmed Kelly's (2001) assertion that consumers' preference for transliteration is based on setting and not by age or gender.

*Table 8 Quantitative Consumer Preferences*

<b>Language Preference</b>	<b>Participants</b>
American Sign Language	3
No preference/preferred elements of both	2
Contact sign	6

Table 8 quantifies consumer preference. Out of the 11 participants, three preferred ASL, six preferred contact sign, and two either had no preference or preferred elements of both.

Although Birr's (2010) research on language preference of Deaf professors at Gallaudet University showed a higher preference for interpretation versus transliteration, this research study indicated the opposite, a stronger preference for transliteration versus interpretation in the workplace. Furthermore, the data showed that in the workplace, the majority of the participants preferred contact sign to ASL because of the terminology used in the workplace.

Participant Gina's comment may shed the best light on the results: "If it's the first time the word comes up, maybe use English and then after that use ASL. Maybe if I don't understand something in English, then use ASL for me to understand. It depends on the situation, too." The idea of shifting between ASL and English depending on the Deaf individual's understanding is a novel one. Kannapell's (1982) communication style list reinforces the idea that Deaf employees can shift between ASL and contact sign. When asked about which language Deaf employees preferred during specific settings, participants who responded, "It depends," also noted that terminology was a top reason. It was important to the participants to know the specific English terminology used by their co-workers in case the words came up again in the future. These responses corresponded to Birr's (2010) results.

Two interesting points to consider for the contradiction with Birr's (2010) results are content and setting. The source material viewed by the Gallaudet professors was stock footage that did not involve campus topics, nor was it technical or emotional. Furthermore, Gallaudet University is not generally the norm for a workplace environment given its signing environment and high deaf population.

### **Preference for Contact Sign**

The following are interpretations of the responses from the participants. For participants who preferred the contact sign excerpt over the ASL excerpt, the contact sign provided more details, was closer to the source material, and exposed the participants to the vernacular that hearing people use (such as "folks" versus "people"). Several participants noted that although they preferred contact sign, they recognized it was more work for them since they had to re-interpret the meanings of the sign. Almost all who preferred the contact sign excerpt said it was specifically for understanding technical terminology. The addition of English word mouth movements allowed the participants to better identify and understand specific terminology, especially when a sign was used that had different meanings.

In contrast, during the contact sign excerpt, Abby "was working to understand" what she saw. "Word-for-word is harder for me translate," Abby stated, and "The word-for-word signing, I have to work to process the information, which is why I prefer ASL." Equally, with the transliteration excerpt, Barb had "to work harder to decipher what it means." She commented that she "often leave[s] with more questions because there is no overall big picture" when transliteration is used.

Gina characterized the contact sign as "too much SEE." She continued, "I didn't understand some parts, some of the message." Dave, however, preferred the transliteration

because “with speakers like that, top officials, it’s nice to know the words they chose to inspire us. Sometimes that gets lost translating into ASL. The word-for-word showed the metaphors, and idioms.” Fran reiterated Dave’s comment: “I learned about more with the second video (ASL) but at the same time it’s a little hard[er] work on my part.”

These comments confirmed what Kelly (2001), Siple (1997), Malcolm (1992), and Winston (1996) found in their studies on what Deaf people want in a transliteration. Caution is still warranted for those who prefer contact sign since there is no one definition of what it looks like (Kelly 2001; Malcolm, 2005; Siple, 1997; Winston, 1989).

### **Preference for ASL**

Abby preferred the ASL excerpt, saying it was “because it’s easy to understand. I’m a very visual person.” Barb also preferred the ASL, explaining, “I understood clearly the presenter’s message. It was in-depth, good concepts, and it was clear and smooth. I understood the bigger picture of the process.” Gina favored the ASL saying, “For general settings, I prefer ASL because I’m used to my first language of ASL. Unless it’s about a class or specific meeting where I need to know specifics, then chang[ing] to English is fine.”

Dave recognized that “for this interpretation, [the interpreter] already did the work for me which is also nice.” He also recognized that “there’s no one right way to do it. You have to find the balance.” Gina recognized the second approach used “more ASL signs, smoother, bigger picture. The first video, I could see the bigger picture; it was very orderly (linear). That doesn’t work for me.” She expounded on her preferences, saying that ASL was “smoother, [with] more storytelling quality.” Emma found herself being “drawn in” by the ASL, which gave her “a better picture of the overall message of the presenter.” Emma emphasized that she loves ASL

especially for casual conversations with coworkers, but for work-related topics, contact sign is what works for her.

### **No Preference/Preferred Elements of Both**

When Cole viewed the second excerpt, he stated, “The videos are similar, the second one [contact sign] was a little different.” When asked to compare the two excerpts, Cole stated, “I can understand [both]. I prefer ASL but there was a slight difference between the two videos, maybe one was PSE. It doesn’t matter. I understand both and both were fine.”

According to Stauffer & Viera (2000), there isn’t one standard of transliteration, which may account for Cole’s perspective. The contact sign in this study specifically used ASL signs as opposed to contrived systems (e.g., MCE, SEE, etc.). An interesting note was that when asked what was effective about the first video, Cole identified the four concepts General Mattis had presented. However, when asked what was effective about the second video, he added three more concepts in addition to reiterating the four concepts of the first video. This may be a result of the excerpts containing the same information.

Juan was able to recognize things in one excerpt but not in the other, and vice versa for other information. He said he understood some things “in this video [ASL] and not in the first video [contact sign], and there were some things I understood in the first video [contact sign] and not in this video [ASL].” He assessed that he preferred “a balance between the first video, extreme English, and the second video, extreme ASL. I’m in-between. If it’s in between, perfect.” However, at the end of the session, he realized that both excerpts contained the same information. He pondered what effect the order of the excerpts had on his response: “The first video I didn’t know, but the second video was the same, so I knew what to expect. I’m curious if

I saw the second video first, with no knowledge, what would happen?” This reinforced the concept of anchoring and vividness as a potential bias (Heuer, 1999).

### **Comprehension**

All the participants expressed understanding of both excerpts and stated that the interpreter’s product was clear. However, some participants offered feedback about the interpreter’s fingerspelling, mentioning that they felt it was too fast or that they were unable to understand the fingerspelling. Since the contact sign version included English mouth movements with ASL signs, some participants deduced specific words by lipreading the interpreter even though they missed the fingerspelled word. Two participants critiqued the interpreter’s sign choice for the English word “intimidation,” [FEAR] but otherwise, all complimented the interpreter’s production skills in both ASL and contact sign. Three participants — Barb, Cole, and Juan — did not identify which interpretation they preferred. Rather, they simply responded about the need for an interpreter during those settings.

Based on the demographic information collected, the participants ranged in their categories as ASL-dominant bilinguals, balanced-bilinguals, English-dominant bilinguals, and English monolinguals (Kannapell, 1982). The data showed that three had a strong preference for one approach over the another regardless of the setting; of these three, one preferred ASL and two preferred contact sign. Five of the remaining participants expressed that the context of the setting influenced their language preference. It is notable that three out of these five participants stated they had Deaf family members. Three identified English as their primary language while two identified ASL as their primary language.

All participants recognized there were language differences between the two excerpts. Although Juan and Cole did not prefer one to the other, their recognition of a difference between

the two was in stark contrast. Juan stated that he needed something in between the ASL and the English-influenced versions, while Cole said they were basically the same, with one being slightly more English. All 11 participants recognized the ASL excerpt and referred to it as “the ASL version.” However, the participants chose a variety of labels for identifying the contact sign excerpt. This lack of recognition supports the research that there is no one standard for English-influenced signs (Kelly, 2001; Malcolm, 2005; Siple, 1997; Winston, 1989). The participants referred to the contact sign video as “PSE (Pidgin Signed English),” “English sign,” or “ASL with [English] mouth movements.” None of the participants employed the label “contact sign” to identify the product.

### **Details of the message**

Juan commented that the contact sign excerpt “was more work but had more detail” while the ASL excerpt “was less work. I prefer in between.” Juan said he “likes details, likes more information.” Dave observed that the ASL excerpt “was good for the big picture but didn’t give exact examples of points,” and he did not prefer the ASL version “because too many concepts were lost, metaphors, and inspirational quotes and didn’t have the same level of impact.” He elaborated on his preference for the transliteration:

“. . .because it did a better job of matching the transcript. . . I like to know verbatim what they are saying but at the same time, that means more work for me because I have to figure out what that metaphor means.”

However, Emma preferred the contact sign “a lot better” because she “paid attention to the details.” She added that the video “exposed [her] to that vocabulary.” Emma pointed out the “struggle that both interpreters and Deaf people experience” with interpreters deciding when to share expressions that are not commonly used by Deaf people, “even if the Deaf people don’t

know it but the interpreter knows what it means.” While Emma expressed that she cherished ASL, she stated she “understands better with signs plus mouth movements.” At the end of the allotted time, she emphasized that she “loves ASL” but “for work related” she preferred the contact signs. Fran is “understanding ASL more and more over time” but stated she understood the contact sign better. Fran echoed Emma’s comment that contact sign is her preference for work-related topics, since it provided more details. Comparing the two approaches, Fran remarked “the contact sign was effective because it was clear. It was good for concepts. I understood more feeling.”

### **Interpretation Pace**

Many participants commented that the interpreter’s pace was much faster during the contact sign excerpt than during the ASL excerpt. It was unclear if the pace was faster due to trying to keep up with speaker or because processing was done at the lexical phrase (Kelly, 2001; Malcolm, 1992). Only one participant commented that the pace of the interpreter’s fingerspelling was hard to catch during the ASL excerpt.

Abby commented that in the contact sign version, “The signs were too fast and made it harder for me to keep up. The signing was good, and I could understand it, but it was too fast. It was too fast for me to absorb.” Yet Abby said that the ASL excerpt had a pace that “was also different in this [ASL excerpt]. It was nice to have the ASL version.” Dave, Fran, and Hope, each commented that the interpreter’s pace for the contact sign excerpt was fast in order to keep up with the presenter’s speaking pace. Dave said, “The pace of the fingerspelling or some of the signs cut off because the interpreter was trying to keep up with the presenter. Trying to keep up word-for-word is not easy to do.”

Regarding the pace between the two approaches, Dave “felt [the ASL] was not as fast, the pace was more casual.” Fran concurred, saying what “was not effective was the interpreter’s speed, the interpreter’s pace. I understand the interpreter had to keep up with General Mattis’ speech. I noticed I missed some of the fingerspelling.” Hope stated for the contact sign excerpt that “some of the interpreter’s fingerspelling was hard to catch. That’s usually when the interpreter is trying to keep up with the presenter’s pace.”

Dave, along with Abby, noticed the change in pace with the ASL excerpt. “I felt it was not as fast, the pace was more casual. I was able to watch and understand the point so that was effective.” Gina observed that in the ASL excerpt, “the interpreter’s fingerspelling was fast. I prefer the interpreter to fingerspell words slowly the first time and then after that, I’m fine. I get it.”

The pace of the fingerspelling was a challenge for many. Inez succinctly stated “it’s always a challenge to read fingerspelling at full speed. So sometimes it can be hard to pick up what exact words are being said at least at the beginning until the context becomes more clear [sic].” Inez felt “the interpreter was keeping pace with the speaker” for both excerpts.

Emma was the only participant who commented on the pace being fast during the ASL excerpt: “One time the interpreter’s fingerspelling was fast, and I missed that word. It was in the beginning, maybe a name or something but I missed it because it was too fast.”

Hope reiterated Fran and Gina’s comment about the fast pace of the fingerspelling. “Some of the interpreter’s fingerspelling was hard to catch. That’s usually when the interpreter is trying to keep up with the presenter’s pace.”

*Table 9 Video Order and Preferences*

Name	1 <sup>st</sup> video	2 <sup>nd</sup> video	Overall preference
Abby	Contact Sign	ASL	ASL
Barb	ASL	Contact Sign	ASL
Cole	ASL	Contact Sign	Either
Dave	Contact Sign	ASL	Contact Sign
Emma	ASL	Contact Sign	Contact Sign
Fran	ASL	Contact Sign	Contact Sign
Gina	Contact Sign	ASL	ASL
Hope	Contact Sign	ASL	Contact Sign
Inez	Contact Sign	ASL	Contact Sign
Juan	Contact Sign	ASL	Prefer in between
Kobe	ASL	Contact Sign	Contact Sign

To avoid potential bias of either anchoring or vividness (Heuer, 1999), the method of counterbalancing was implemented where six participants viewed the contact sign then ASL excerpts, and the other five participants viewed the ASL then contact sign excerpts. Four out of the 11 participants preferred the first video they saw, and out of these four, three preferred the contact sign excerpt and one preferred the ASL excerpt. Five participants chose the second video they saw, and out of those five, three preferred the contact sign excerpt and two preferred the ASL excerpt. One participant said both excerpts were fine, and another participant specifically stated he preferred something in between the two excerpts (see Table 9).

## **Terms and Definitions of Setting**

*Town hall:* An event in an auditorium. Often it is a monologue, the presenter imparting information. However, there are some town halls where the audience may interact with the presenter.

*Division Meeting:* An event with a high-level authority figure who oversees a large number of employees. Division meetings inform employees of the current status of the division. Similar to a town hall, division meetings can be either a monologue or a dialogue where employees are more engaged to ask questions.

*Staff Meeting/Team Meeting:* A smaller group of individuals to discuss day-to-day operations. An average size for a staff or team is approximately 10 to 15 people. The group tends to work on projects together or for a common goal.

*One-on-One Meeting with Supervisor:* This discussion tends to be about personnel issues regarding employee performance evaluations. One-on-one meetings can be less formal but still have a potential impact on an employee's job.

*One-on-One Meeting with Coworker:* An informal way to discuss work issues, which can happen sitting side by side at an employee's desk or after a staff/team meeting to get clarification. It can also include informal chit-chat that happens in workplace environments (Dickinson, 2010, 2017).

*Orientation:* The training employees receive when they are hired by DoD. Orientation typically lasts a few days. Various representatives from different organizations within the agency come to present to new employees about various offices and the agency structure.

*Classroom Training:* Employees go to a classroom to learn a specific skill from an instructor instead of going to their office. Depending on the class, the length of trainings can be

from a few hours to a few weeks. Agency employees are expected to apply what they learn in class to their job.

*Informal Training:* Training that is not done in a classroom. This is also known as on-the-job training (OTJ). Typically, with OTJ, the employee sits side by side with another employee either watching/learning the work being performed or by asking questions. This type of learning may or may not require the employee to spend time out of the office.

*Other:* A miscellaneous category given to participants to comment about any other type of setting at work that was not specifically mentioned above.

Some participants selected “It depends” when asked about which language they preferred in the specific settings. A common reason for this response was the context of the setting, which influenced the respondent’s language preference. If a key person was attending or if technical terminology was discussed, those who selected “it depends” typically preferred contact sign. If the context was more casual in nature, then the participants preferred ASL, as shown in Table 10.

Table 10 Language Preference by Setting

	Town Hall	Division Meeting	Staff/team Meeting	One-on-One Supervisor	One-on-One coworker	Orientation to the Agency	Training Classroom	Training - informal	Other
Abby	ASL	ASL	ASL	ASL	ASL	ASL	ASL	ASL	ASL
Barb									
Cole									
Dave	Depends	Contact Sign	Contact Sign	Depends	Depends	Contact Sign	Depends	Depends	Depends
Emma	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Depends	Depends
Fran	Depends	Contact Sign	Contact Sign	Depends	Contact Sign	No Preference	Depends	Depends	ASL
Gina	ASL	ASL	Depends	Depends	ASL	Depends	Depends	ASL	ASL
Hope	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign
Inez	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign	Contact Sign
Juan									
Kobe	Contact Sign	Depends	Depends	ASL	ASL	Contact Sign	Depends	ASL	

### **Participant Responses for Specific Settings**

The following responses reinforced Siple's (1997) point that consumers may want transliteration for specific situations and interpretation for others. Most responses emphasized that the status of the setting influenced their language preferences, which confirm Moody's (2011) assertion that consumers' expectations vary based on the situation. For instance, division meetings and agency orientations were the two settings that had the strongest defined preferences, while classroom trainings had the most "it depends" responses; trainings and one-on-one meetings with supervisors tied for second most "it depends" responses.

**Town halls.** Participants stated that speakers and topics determined their language preferences. Dave said, "It really depends on the speaker; if [it's] an important person, I will want more English, because of specific concepts." Fran said her language preference for town halls were "50/50. Sometimes I prefer [ASL] — for example human resources stuff, unless I want more specific terminology then I prefer [contact sign]."

**Division meetings.** Five participants preferred contact sign for division meetings, while two preferred ASL. Kobe reported that his language preference depended on the content provided during the division meeting. Emma "wanted to know the standard terminology used" while Inez stated, "It is extremely important for me in a division meeting to know the [speaker's] tone and nuances."

**Staff/Team meetings.** Gina notably said, "In order for me to understand the same terminology or words the hearing people are using, then I need the English. Maybe ASL doesn't have an equivalent of the word. If a word comes up later, I may be seeing it for the first time because the interpreter used ASL and signed the meaning and not the word." Meanwhile, Kobe

reported his language preferences as being either ASL or contact sign for staff/team meetings, but if there were specific words, he wanted to know them.

**One-on-one meetings with supervisors.** Gina was comfortable with either language, depending on the situation: “If I want to talk about the presenter. . . then ASL is fine.” Dave echoed Gina’s characterization for this setting, saying, “Signing word-for-word means less misunderstanding with my work since it requires specific terminology. If the topic was more general, then more ASL.” Fran wasn’t sure which she preferred since she “has not had many one-on-one meetings yet.”

**One-on-one meetings with coworkers.** Dave commented that for this setting, “It really depends on the nature of the conversation. If it’s more about work-related, I prefer PSE/English, word-for-word because of the technical terminology. If the conversation is more casual, like ‘What are you doing? Did you have a good time last weekend?’, more of life things and less specifics, less serious topics that won’t affect my work, then it can be more ASL.”

**Orientation.** Gina preferred both for orientation-type meetings. “Personally, I want to understand as much as possible in ASL, but terminology may come up and I don’t see it because of ASL and the word comes up later. If it’s the first time the word comes up, maybe use English and then after that use ASL.”

**Training (classroom).** Dave commented that “for technical topics, English/PSE or word-for-word” works best: “Concepts can’t be accurately conveyed in ASL or they can be very challenging.” For Fran, the decision “comes down to which class. For example, an English as a second language class, [contact sign]. I need to know the exact English words and in the proper order. For a leadership class or professional development class, I can go more [ASL] because it’s

more general information.” Kobe stated that the topic of the class would influence his language preferences.

**Training (informal).** Dave stated that in informal training settings, the communication could be in ASL “but if [there are] technical or specific terms then [I] prefer more English/PSE.” Emma stated she could “be flexible between the two, but still prefers [contact sign] because you never know. The informal training may involve terminology or systems.” Fran echoed Emma’s comments, saying, “depending on the context. If it’s technical, I prefer [contact sign] or a mix of both. Most of the time, I sign in PSE style.”

**Other.** Fran added that for social settings, she would choose “definitely more toward [ASL].” These comments reinforced Malcolm’s (2005) statement that Deaf people may prefer ASL for a social setting but English-based signing for more technical settings.

### **Preferences Regardless of Setting**

Some participants had definite preferences regardless of the setting. Abby preferred ASL, citing that it “felt natural. I can converse, joke around, have serious discussions about politics or anything.” Abby went on to explain that she “grew up using PSE at a residential school. I didn’t understand the language in the classroom where teachers used Sim-Com. However, in the dorms with other deaf people, we used ASL.” She added,

“English interpreting is definitely not me. It’s not for me. The pace is too fast. I can grab some concepts but then I miss the information in between that could be important. Maybe the concept I picked up isn’t important. That’s part of the problem with the pace. I definitely do not prefer word-for-word interpreting.”

Meanwhile, Hope and Inez preferred contact sign regardless of the setting, while Emma preferred contact sign for the majority of the workplace settings. Hope did not specify why she

preferred which she referred to as PSE, for all the settings, but did say, “I want to decide what’s important and what’s not. I want to know what General Mattis said, not what the interpreter thinks he meant, if that makes sense.”

For participants who preferred ASL to contact sign, some reasons given were similar to Birr’s (2010) research: the ASL was smooth, provided a better understanding of the main concepts, was better in relaying the storytelling aspect of the presentation, and the interpretation pace was more relaxed for them. This may be due to the fact that interpretation tends to happen at the phrasal and sentential level (Kelly, 2001; Malcolm, 1992).

### **Limitations of the Study**

An unexpected challenge with the methodology was that half of the participants did not understand the first question asked after the first video, presented in contact sign: “What was effective about the interpretation?” Once the second excerpt played and the same question was asked, participants understood the question. This indicated that the question was asked from an interpreter’s lens and not a consumer’s lens. To mitigate this challenge for future research, the questions should be more explicit in asking what about the style of interpretation the participant found effective or ineffective for understanding the message.

Another limitation was that this study used a recording that showed only the interpreter providing the ASL interpretation and the English-influenced signs of a pre-recorded live event. The participants saw only the interpreter on screen and did not see General Mattis alongside the interpreter, which is the norm. Having the source material (the presenter) on screen at the same time as the interpreter possibly could alter the results. However, several participants mentioned that they felt the interpreter matched the presenter’s tone. Since the interpretations were pre-recorded, the interpreter did not have access to the participants’ back-channeling to provide

necessary adjustments. A live interpretation would likely eliminate some of these limitations, but would also create other limitations, such as how to standardize a live-event.

Working within the DoD system required substantial coordination from various offices for approvals, such as the selection of the source material, the recording of participants inside a secure facility, and data removal on an approved medium to transport outside of the facility. The impact of conducting research in a secured facility should not be underestimated, and the following activities consumed more time than expected:

- 1) Coordination among various offices for approvals for the implementation of the research.
- 2) Finding source materials that could be shared outside of a classified facility.
- 3) Receiving approval to remove recorded material from the secure facility and to return it once analysis was completed.
- 4) Review of written material to be shared in a public forum.

These considerations associated with the handling of research data bring up more questions: Does information held at a classified level (confidential, secret, or top secret) change Deaf employees' language preferences? If so, how does one research that in spite of the sensitivity of the information?

More detailed information from a demographic survey could prove to be beneficial. Asking about the age of language acquisition of sign language could help determine if this influenced preference. Asking about the employee's work role could be helpful as well, to help determine if a person's work role affects language preferences. Also, does the line of work affect language preference? For example, would an engineer prefer one type of interpreting compared to a computer programmer or an analyst? Do technical versus non-technical work roles affect

language preferences? Watson (2016) also recommended that research focus on Deaf employees in various managerial positions. Adding this type of information to the demographic survey would likely enhance data results. Finding more information about the employee's educational experience should be considered as well.

Lastly, diversity is always an important aspect to research. Although all 11 participants in this study identified their gender, not all identified their race. It is difficult to get an accurate count to determine inclusiveness, since the information requires self-identification.

### **Conclusion**

Much attention is paid to various settings when discussing interpreters. However, research in the workplace for Deaf employees, which is arguably the next logical step after the educational setting, is just beginning. Deaf children spend an extensive amount of time in the educational system. They become deaf adults who in turn spend a considerable amount of time in the workplace. The professional workplace has become a new area of study for signed language interpreting research, especially with the seminal work of Dickinson (2010, 2017), Hauser et al. (2008), and Watson (2016), focusing on Deaf professionals and interpreters in the workplace. Taking Birr's (2010) research on language preferences among Deaf professors at Gallaudet University, this study went a step further by examining at a specific setting, the federal government, to gather data on the language preferences among Deaf DoD employees. While Birr's (2010) results showed that Deaf professors at Gallaudet preferred ASL over contact sign, this study found the opposite, that Deaf DoD employees preferred contact sign over ASL in the workplace.

The research focused on a group of Deaf DoD employees in the Baltimore-Washington metropolitan area. The research collected exploratory data to discover patterns and/or themes of language preferences in the workplace. Data collected from the demographic survey provided a quantitative analysis, while data from the participants' answers to signed questions provided qualitative data. Each participant, scheduled up to 60 minutes, viewed an interpretation in ASL and a transliteration in contact sign of the same material to compare and contrast the two styles (Appendix D). The participant then read a rolling verbatim transcript on screen followed by questions comparing the two styles (Appendix E). Finally, the participant answered questions regarding eight settings in the workplace and their language preference for each setting. To

counterbalance anchoring or vividness biases (Heuer, 1999), half the participants viewed the ASL video first and the others viewed the contact sign video first.

This adapted study based on Birr's (2010) research took into careful consideration the source material of the Secretary of Defense General James Mattis speaking to the workforce. This selection was a direct result based on Birr's (2010) comment that the source material in her study was stock footage, which did not directly relate to her study participants' line of work. Also included in this research, based on Birr's (2010) recommendations, were questions on the demographic survey inquiring how often the participants worked with sign language interpreters.

Kannapell's (1982) six communication styles play an essential role for interpreters when providing services to Deaf people. Understanding a Deaf person's communication style type can help dictate the interpreting style provided, especially with the diversity of language in the Deaf community. This study had results that indicated that the participants were balanced bilinguals.

Common themes for preferring ASL were to get a bigger picture or understanding of the presented concepts, the pace was smoother, and less work on the Deaf person's part in translating or understanding the presenter's concepts and emotions. At the same time, some participants commented that the interpretation did not convey specifics or terminology that they felt were important. The participants who preferred ASL stated that the visual representation of the message was clearer than that of the contact sign version; the contact sign version was more linear due to its English word order.

Common themes for preferring contact sign were that it offered more details and specific wording from the source language, the pace of the interpreter tended to be faster especially with the fingerspelling of words, and the participants taking on more work in deciphering what certain idioms and words meant. Those who preferred contact sign stated that the mouthing of English

words was a key benefit for them in case they missed a sign or fingerspelled word. Some participants stated they preferred word-for-word interpretation.

### **Diversity of Language Preferences for Effective Communication**

As indicated in the literature review section, the diversity in Deaf employees' language is based on language used by the participant's family, sign language acquisition, and language used in the educational setting. Understanding the influences on diversity of language use within the Deaf community is an important factor for sign language interpreters to consider. The recognition that the participants' language preferences ranged from ASL to an English-influenced signing system is essential in that it can influence which processing level interpreters should use to convey the message.

### **Impact of Study Results**

Results from the study emphasize the need for interpreters to be aware of Deaf people's language and communication preferences in various workplace settings. The participants who preferred contact sign in specific situations reinforced Stauffer & Viera's (2000) observation that "transliterators must recognize, respect, and be responsive to the wide range of preferences regarding transliteration services among consumers requesting such services" (p. 75). The data collected can facilitate change in how government interpreters prepare for an assignment. The addition of a "language or communication preference" field on the interpreter request form would be a positive step based on this research. Deaf employees would then be able to choose their language preferences based on the setting or event they attend, further enhancing the appropriate resources being assigned to each assignment.

**Recommendations for Future Research**

This experiment occurred in the Baltimore-Washington, D.C. metropolitan area, although the DoD has locations across the country and worldwide. Additional research should be conducted to see if geography impacts language preference in the workplace, and if it does, in what ways.

This research focused on language preference of Deaf employees in a specific agency in the federal government. As mentioned, there are many variations of the target source for transliteration. In this study, the contact sign transliteration followed Winston's (1996) recommendation for the target source. One participant mentioned that in this study, the two choices were at the far ends of the sign language spectrum. Future research could include a third option or focus on the various target sources for transliteration (such as using MCE or CASE).

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## **Appendix A**

### **Email Solicitation**

Dear DHH employee,

I am working on my Masters Thesis. As part of that work, I am conducting a research study on Deaf Department of Defense (DoD) employees' language preference in the workplace. I would like to invite you to participate in this study. If you agree, we will set up a date and time, approximately one hour, for you to watch videos and give feedback on the interpretation. Participation is completely voluntary and will not affect your ability to request and receive interpreting services at work.

If you are interested in participating, please respond to this e-mail and I will send you the informed consent form as well as a short background survey for you to fill out and return.

This study has been approved by St. Catherine University Institutional Review Board (#967). You may contact the IRB office with any questions ([irb@stkate.edu](mailto:irb@stkate.edu) or 651-690-6204) or my advisor, Dr. Erica Alley ([elalley@stkate.edu](mailto:elalley@stkate.edu) or Direct VP: [612-255-3386](tel:612-255-3386)).

Thank you for your consideration and your assistance.

Trisha Montgomery

## **Appendix B**

### **Informed Consent**

#### **ST. CATHERINE UNIVERSITY Informed Consent for a Research Study**

**Study Title:** Language Preference of Deaf Employees in the Department of Defense setting  
**Researcher:** Trisha H. Montgomery, NAD IV, CT and CI

You are invited to participate in a research study. This study is called Language Preference of Deaf Employees in the Department of Defense. The study is being done by Trisha H. Montgomery, a Masters' candidate student at St. Catherine University in St. Paul, MN. The faculty advisor for this study is Dr. Erica Alley, Program Director for the Master of Arts in Interpreting Studies & Communication Equity (MAISCE) at St. Catherine University. The purpose of this study is to collect data on the language preference of Deaf employees in the Department of Defense. The goal of this study is to apply data collected to provide the interpreting team more information about the preferences of Deaf employees in the workplace. Approximately 5 to 20 people are expected to participate in this research. Below, you will find answers to the most commonly asked questions about participating in a research study. Please read this entire document and ask questions you have before you agree to be in the study.

#### **Why have I been asked to be in this study?**

You have been asked to be in this study because you are a current Deaf employee of the Department of Defense in the Baltimore-Washington, D.C. metro area who is over 18 years of age and uses sign language interpreting services in the workplace setting.

#### **If I decide to participate, what will I be asked to do?**

If you meet the criteria and agree to be in this study, you will be asked to do these things:

- Complete a demographic questionnaire via e-mail
- You will be video recorded during the study
- You will be the only person in the room during the study
- Watch (2) five-minute video clips of Secretary of Defense, General James Mattis giving a talk to the workforce (10 minutes)
- After each video, answer the questions regarding the video (10 – 15 minutes)
- Read a transcript of the source text (10 minutes)
- Answer questions about which video you preferred (10 minutes)

In total, this study will take no more than one hour over 1 session.

#### **What if I decide I don't want to be in this study?**

Participation in this study is completely voluntary. If you decide you do not want to participate in this study, please feel free to say so, and do not sign this form. If you decide to participate in this study, but later change your mind and want to withdraw prior to the start of the study simply notify me and you will be removed immediately. Your decision of whether to participate will

have no impact (negative or positive) on your ability to receive interpreting services or workplace performance evaluations.

**What are the risks (dangers or harms) to me if I am in this study?**

There is no more than minimal risk if you participant in this research study. You will be videotaped watching and answering questions about the two interpreted video clips. You will be the only person in the room during the study. Your name will not be used in identifying your responses on videos or transcripts that are created from the video.

**What are the benefits (good things) that may happen if I am in this study?**

There are no direct benefits to you from this study. However, you will be contributing to the interpreting team's knowledge of the language preference DoD employees want in the workplace. This knowledge will assist in providing the correct interpreting services for DoD Deaf employees at work.

**Will I receive any compensation for participating in this study?**

You will not be compensated for participating in this study.

**What will you do with the information you get from me and how will you protect my privacy?**

The information that you provide in this study will be collected and transcribed. Your name will not be used at any time. All documents will be kept in a locked cabinet at my desk and any video/electronic media will be kept on a secure Department of Defense (DoD) network using my PKI to access the data. Only I will have access to the records while I work on this project, however DoD representatives are authorized to review research records. I will finish analyzing the data by May 2018. Due to DoD regulations, the data must be kept for three years and then will be destroyed.

Any information that you provide will be kept confidential, which means that you will not be identified or identifiable in the any written reports or publications.

**Who is the sponsor for this research?**

This research is being sponsored by the U.S. Department of Defense. DoD representatives are authorized to review research records.

**How can I get more information?**

If you have any questions, you can ask them before you sign this form. You can also contact me at (240) 459-3330 (Videophone) or [thmontg@radium.ncsc.mil](mailto:thmontg@radium.ncsc.mil). If you have any additional questions later and would like to talk to the faculty advisor, please contact Dr. Erica Alley at (612) 255-3386 (Videophone) or [elalley@stkate.edu](mailto:elalley@stkate.edu). If you have other questions or concerns regarding the study and would like to talk to someone other than the researcher(s), you may also contact Dr. John Schmitt, Chair of the St. Catherine University Institutional Review Board, at (651) 690-7739 or [jsschmitt@stkate.edu](mailto:jsschmitt@stkate.edu).

You may keep a copy of this form for your records

**Statement of Consent:**

I consent to participate in the study and agree to be videotaped.

My signature indicates that I have read this information and my questions have been answered. I also know that even after signing this form, I may withdraw from the study by informing the researcher.

---

Signature of Participant

Date

---

Signature of Researcher

Date

**Appendix C**

**Participant Background Information Form**

Name: \_\_\_\_\_

Age: \_\_\_\_\_ Sex: M \_\_\_\_\_ F \_\_\_\_\_ Race: \_\_\_\_\_

What is the highest level of education you have completed?

\_\_\_\_\_ High School degree

\_\_\_\_\_ Some college (no degree)

\_\_\_\_\_ 2-year college degree

\_\_\_\_\_ 4-year college degree

\_\_\_\_\_ Some Graduate (no degree)

\_\_\_\_\_ Graduate degree

\_\_\_\_\_ Post-Graduate degree

Other? \_\_\_\_\_

Do you have any Deaf relatives? \_\_\_\_\_

What do you consider your dominant language? \_\_\_\_\_

What other languages are you fluent in? \_\_\_\_\_

How often do you use an interpreter? \_\_\_\_\_

List the days of the week you are most commonly available to meet for at least 1 hour.

List the time of day you are most commonly available to meet for at least 1 hour.

**Appendix D**

**Individual Vignette Questions**

What did you consider to be effective in this interpretation?

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What did you consider to be ineffective during this interpretation?

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Is there anything else about the interpretation you want to comment about?

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**Appendix E**

**Comparison Vignette Questions**

Which video did you prefer, Video A or Video B?

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For the one you prefer, what about it made it your first choice?

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For the one you did not prefer, what about it made it not your first preference?

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For the following settings, which type of interpretation works best for you?

- Townhall (Auditorium event)
- Division Meeting
- Staff/Team Meeting
- One-on-one with Supervisor
- One-on-one with coworker
- Your INDOC/EOD (Indoctrination/Enter On Duty) to the Agency
- Training (Classroom)
- Training (Informal)
- Other (Explain)

Please explain your answer to the previous question.

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Any additional comments about the videos you saw that wasn't asked?

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## **Appendix F**

### **Script of Instructions for Research**

You will watch two videos (A and B) and respond to questions about what you saw. After each video, the interpreter on screen will appear again and ask questions about the video. After each question, press pause and respond to the question. Then press play to see the next question. After the questions are done the next interpretation will begin. At the end, the interpreter on screen will appear again like before. Once the questions are done, a transcript of the presentation will appear for you to read. At the end of the transcript, the interpreter on screen will appear for the last set of questions. After each question, press pause and respond to the question. Then press play to see the next question. This is the end of the participation. Press stop and exit the room.