Features of Voice-to-Sign Transliteration by Educational Interpreters[1]

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Abstract

The number of educational interpreters in the United States is growing at a fast rate. Anecdotal information suggests that transliteration, as opposed to interpretation, is the primary process used to facilitate communication via sign language in the K-12 educational setting.

The investigators of this study descriptively analyzed the sign language transliteration products of 15 full-time K-12 educational interpreters in the Commonwealth of Virginia for selected features of English and ASL. The findings of this study are divided into two parts: 1) nine common features of these transliterated products, including shadow and selective initialization, are noted and detailed; and 2) two forms of sign language transliteration, speech-driven and sign-driven, are identified and described.

This article is written specifically for working interpreters, particularly those in the K-12 educational setting, in the hope of fostering the continued exploration and identification of the core features and determining the overall effectiveness of sign language transliteration.

Introduction

Transliteration, according to anecdotal information collected from working educational interpreters, interpreter trainers, teachers for the hearing impaired, and consumers of K-12 educational interpreting, is the primary process used to facilitate communication in the educational setting. Virginia Quality Assurance Screening (VQAS) statistics, compiled by the Virginia Department for the Deaf and Hard of Hearing, show far more individuals with higher transliteration levels than interpretation levels, supports this notion.

Kannapell (1982), when categorizing deaf and hard of hearing individuals according to their communication preferences, notes that individuals who prefer English would prefer information being transliterated rather than interpreted. Kannapell later describes simultaneous communication (SimCom) as "mouthing or voicing English words while signing in English order (p. 194)." Is transliterating therefore similar to SimCom?

The investigators of this study describe the attributes of transliterated products of 15 educational interpreters. For that we borrow the concept of two different types of SimCom presented by Stewart, Akamatsu, and Bonkowski (1988): speech-driven, where primary emphasis is given to the spoken English portion of the SimCom product, and sign-driven, where primary emphasis is given to the meaning, or semantic base, of the signed portion of the SimCom product. This notion of emphasis is then applied to the concept of transliteration where Kannapell's definition of SimCom regarding "mouthing or voicing English words" is adopted.

In this way, English-influenced features of the transliteration work of the participants were selected to identify speech-driven products, and ASL-influenced features were selected to identify sign-driven products. The results of the study are divided into two parts: first, the

attributes found consistently throughout most of the participants' products are identified; and second, the investigators delineate between the resulting two types of transliteration.

Literature Review

Research on ASL and Interpretation

A great deal of the research has been conducted during the last several decades that relates to the field of sign language interpreting; however, most of this study has been related to spoken English-to-ASL. This literature has focused on: 1) the structure of ASL (Stokoe, Casterline, & Croneberg, 1965; Supalla & Newport, 1978; Klima & Bellugi, 1979; Liddell, 1980); 2) the interpretation process (Cokely, 1984; Gish, 1987; Colonomos, 1992); and 3) ASL use in the educational setting (Johnson & Erting, 1989; Johnson, Liddell, & Erting, 1989).

Research on Transliteration

Comparatively, little investigation has been conducted regarding transliteration as a specific form of sign language interpretation. Siple (1997) asserts that there is a great need nationally for transliteration because: 1) consumers have identified it as a key competency for sign language interpreters; 2) it meets the preferences of a large number of Deaf community members; and 3) federal legislation has opened up opportunities for deaf people, creating increased demand for transliteration.

Sign language transliteration literature focuses on the following six areas, which are discussed below: 1) the definition of transliteration; 2) the process of transliteration; 3) strategies used by transliterators; 4) effectiveness of transliteration; 5) credentialing and assessment of transliterators; and 6) regulation and numbers of qualified transliterators. However, very little research has focused on transliteration in the K-12 setting; as of this writing, the only large group study regarding the effectiveness of transliteration (Livingston, Abramson & Singer, 1994) and most other research on transliteration has focused on post-secondary educational interpreting environments (Winston, 1989; Siple, 1993; Siple 1995).

Definition of Transliteration

In the area of definitions of transliteration, most attempts have tended to describe a general overview of the process (i.e., matching a sign to every spoken word, or vice versa), rather than to identify any features pertinent to a transliterated product. These attempts are common to textbooks most frequently utilized by interpreter education programs (IEPs), such as "Sign Language Interpreting: A Basic Resource Book" (Solow, 1981), "Interpreting: An Introduction" (Frishberg, 1990), and "So, You Want To Be An Interpreter?" (Humphrey and Alcorn, 1995).

Winston (1989) conducted a one-participant study of transliteration. This pioneering study cites evidence that transliteration is not merely a "simple encoding process," as that "inadequately describes both the form of the message and the production process." Instead, Winston posits that transliteration balances the pragmatic, linguistic, aesthetic-poetic, and ethnographic goals of translation, and states that, "at least some forms of transliteration include not only English-like signing of the source message but also many features of ASL" (p. 163).

Winston's assertion has been incorporated into more recent definitions of transliteration, which state that transliteration is not a simple recoding of information. Stewart, Schein & Cartwright (1998) elaborate that "interpreters rely on their ability to incorporate ASL features in English word order" (p. 139).

Process of Transliteration

A few research studies (Cokely, 1984; Gish, 1987) have focused their efforts on describing in detail the process of interpreting. Cokely (1998) purports that his model applies directly to interpretation rather than transliteration; however, Colonomos (1992) applies directly to transliteration.

Colonomos' three-staged "Pedagogical Model of the Interpreting Process" leads the interpreter from understanding the source (spoken) message through constructing the target (signed) message. Through the stages of concentrating, representing, and planning, the interpreter analyzes the content of the speaker's message and composes an equivalent target message in the visual-gestural medium.

Strategies Used by Transliterators

The few published investigations of transliteration have focused almost exclusively on the post-secondary setting. Winston (1989) conducted the seminal work in this genre. In this study, the product of one transliterator was transcribed and compared with the source text. An analysis of five strategies ensued: sign choice, addition, omission, restructuring, and mouthing. Siple conducted large group studies of transliteration, that focused on the use of pausing (Siple 1993) and the use of addition (Siple 1995).

Effectiveness of Interpretation and Transliteration

The effectiveness of interpretation and transliteration in the post-secondary setting was evaluated in an important study conducted by Livingston, Singer, and Abramson in 1994. "The results showed that participants achieved significantly higher scores when the material was interpreted into ASL than when it was transliterated (i.e., kept in English order by using manual signs for individual words and concepts). This was true even of those students who expressed preference for the latter kind of signing but received the material in ASL interpretation" (p.1).

Livingston et al. identified recurring "strategies evident in successful interpretation" (p. 20), including use of rhetorical questions, creating contrast with negation, and explanation before label. While the analysis of the data by Livingston et al. resulted in the identification of these "strategies" for the most successful interpreting products, a comparable analysis of the transliterating was much less revealing; similar strategies for transliteration were not identified because the transliteration products "revealed little if any difference between them" (p. 31).

Credentialing and Assessment of Transliteration Products

Detailed definitions of the components of a transliterated product have been offered by several evaluation and assessment entities. Registry of Interpreters for the Deaf (RID), which began a certification process in 1972, is the only national organization of interpreters in the United States. In its criteria (RID, 1996), the three broad categories which raters evaluate (Grammar and Vocabulary, Processing, and Mouth Movement Patterns) are described.

The Virginia Department for the Deaf and Hard of Hearing (VDDHH) has operated the Virginia Quality Assurance Screening since 1989. According to the VQAS Dictionary of Terms (VDDHH, 1995), expressive (voice-to-sign) transliteration includes the following important features: 1) English grammatical structure; 2) shadowing, which is defined as "the identifiable English representation of the speaker's words on the lips of the candidate"; 3) conceptual accuracy (of lexical items); and 4) use of well-known, commonly used "initialized signs."

There are many other interpreter credentialing systems currently active in the United States. The Florida Registry of Interpreters for the Deaf (FRID) operates the oldest creden-

tialing system specifically designed for educational interpreters (Schaefermeyer, 1997). The Educational Interpreter Evaluation (EIE) was first proctored in 1988 at the University of South Florida in Tampa.

Educational Interpreter Regulations in Virginia

In 1989 and 1994, the Virginia Department of Education (VDOE) promulgated regulations establishing a minimum requirement for all personnel employed by local education agencies (LEAs) who perform the duty of interpreting at any time during the school year. This minimum requirement was established as a VQAS Level III or higher.

In May 1997, VDOE surveyed all local education agencies in the Commonwealth of Virginia and found that, of the 249 working educational interpreters in Virginia, only one in five (or 19%) satisfied the minimum requirement established some three years prior (Power-deFur, 1997). This is true despite the fact that a vast majority of working educational interpreters had attempted either the RID evaluation or VQAS assessment within the preceding 18 months of the study.

Number of Qualified Transliterators in Virginia

Historically, VDDHH staff estimates that 70% of all VQAS candidates are currently employed as educational interpreters. As of March 1, 1996, 354 individuals possessed at least one valid VQAS level. Of these, only 12 (or 3.4%) had obtained a higher level for interpretation than for transliteration. By contrast, more than half (or 196 individuals) possessed a higher level in transliteration than in interpretation. This number includes 104 individuals who only possessed a valid level in transliteration (Sofinski, 1995).

The Need for More Investigation

According to Winston (1989), "Areas of research suggested by this study include ... a description of different varieties of transliteration, including the varieties requested by bilingual ASL and English users as well as the varieties primarily understood by English signers" (Winston, 1989, 164).

These data demonstrate the need for more investigation in the area of transliteration in the K-12 setting. In particular, the answer to this question is needed: "What are the core features of transliteration in the K-12 setting?"

Methodology

Participants

Fifteen full-time educational interpreters working within four Virginia local education agencies submitted an acceptable sample of voice-to-sign transliterating based on four criteria (see Procedures below). Each of the participants had attempted the VQAS Performance Assessment for transliterating within the previous 18 months leading up to the study. Thirteen of the participants were female; two were male.

At the time of the study, six participants possessed a valid VQAS Level III in transliteration; nine possessed a valid VQAS Level II in transliteration. All possessed a valid VQAS level in interpretation. Ten participants had higher levels in transliteration than interpretation; five had equal levels in both disciplines. The average VQAS voice-to-sign transliteration score for the 15 participants was 79.55; the average VQAS voice-to-sign interpretation score was 71.30.

Apparatus

Using a camcorder, tripod, TV/VCR, and a suitable room, each participant was asked to provide a voice-to-sign transliteration product. These products were based on a 6 1/2 minute spoken English source, which satisfies the minimum criteria for use as a source for the voice-to-sign transliterating segment of VQAS. (For a script of the source, see Appendix A.) In addition to meeting the VQAS criteria, this source was selected as it contained both a presenter and a topic that educational interpreters may encounter during their regular K-12 job duties.

The VQAS is "a diagnostic and proficiency screening instrument designed to assess the knowledge, skills and abilities of interpreters and transliterators who use sign language or Cued Speech" (VDDHH, 1998: 1). "The VQAS Performance Assessment proficiency score is based upon the information actually conveyed during the interpreting and transliterating performances. Each rater identifies key components of the message that are accurately conveyed. They also note information deleted from the message, inappropriately added to the message, or inaccurately conveyed. Each rater assigns a percentage score" (VDDHH, 1998: 6).

Procedure

Collection of Data

Each sample was collected by adhering to a set of videotaping procedures. (Note: This process was reviewed by the Gallaudet University Internal Review Board and approved by VDDHH.) These procedures assure that each participant was allowed a warm-up period and environment, and a performance period and environment similar to those afforded VQAS candidates. Each candidate was asked to supply a transliterated product which would be similar to one used in satisfying everyday K-12 educational interpreting duties. While being videotaped, the transliterator was asked to visualize a consumer who typically requested and understood transliteration. Each sample was assigned a unique identification number.

Assessment of product samples

Once samples were collected, two trained VQAS raters applied psychometrically approved rating procedures, resulting in a composite score for voice-to-sign transliterating. Composite scores are percentages based on 18 key components, which are weighted. (Note: Due to proprietary and confidentiality concerns of the VQAS process, the investigators are unable to provide a more detailed description of this assessment.)

The Virginia Department of Education has established a minimum requirement for educational interpreters as a VQAS Level III. In order to be eligible for a VQAS Level III, the lowest segment score, including voice-to-sign transliterating, must be at or above 75%. As a result, two of the 17 products with a composite score of less than 75% were excluded from the study.

Screening for Transliteration Product

In order to be included in the study, each product was screened according to VQAS measures to ensure that the component averages for Language Mode (English) and Mouth Movements/shadow each averaged at least 5.0 on a scale of 1-10. This was done to ensure that all 17 products were predominantly English-based, or transliterating, as opposed to ASL-based, or interpreting. These two areas were commonalties of transliteration found in Winston (1989), Livingston et al. (1994), and Siple (1997).

Participant Post-Survey

Upon completion of the Performance Assessment, participants were asked to complete a

four-page survey. This survey collected information on the participants: background; educational/work setting; previous experience with the source tape; warm-up/pre-conferencing information; and performance. In particular, the survey was designed to determine if the participant believed that the sample was a transliteration product. (See complete participant post-survey in Appendix B.)

Descriptive Analysis of Product Samples

The investigators of this study hypothesized that previous attempts to analyze transliterating products, including Livingston et al., suffered from a lack of "observational adequacy" (Chomsky, 1965), which occurs when the procedure used to record data lacks adequate detail. Based on their collective experience observing numerous educational interpreters working in the classroom, the investigators perceived many differences in the various transliteration products. For the purposes of this study, then, the identification of core features of transliterating through a more detailed and targeted observation appeared to be the next logical step in being able to further assess the variation in products of transliteration.

Lucas & Valli (1992) identified various ASL features (e.g., non-manual negation, topicalization, locative verbs, etc.) and English features (e.g., conjunctions, prepositions, invented morphemes, etc.) of contact signing. In a similar way, the core features of interpreting and transliterating products contain variations from the target languages of each, ASL and English, respectively. It is for this reason the investigators utilized the format established in Lucas and Valli to analyze the existence of particular ASL and English features recurring in transliterated products as they do in varieties of contact signing.

The following areas and related features were selected by the investigators based on their hypothesis that transliterating is similar to SimCom, as defined by Kannapell. Analysis centered on searching for established patterns of the following feature groups within each transliterator's product. While Winston and Livingston et al. address strategies that transliterators use, these investigators identified language features. (See Results for specific examples used by transliterators.)

1) Shadow - a mouthing of pronounced English, which may either "mirror" the precise words of the source or more closely follow the glosses of the signed lexical items;
2) Lexical form - a pattern of whether the vocabulary is primarily composed of base/root signs or contains numerous initialized handshapes;
3) Syntax - a pattern regarding the tendency of the product to follow the syntactic form of the source or if the transliterator incorporated phrasal restructuring;
4) Lexical meaning base - a pattern regarding the choice of lexical item used in the product and if it was more closely representative of the ASL-semantic meaning of the sign or any meaning related to the phonetic English source signal (i.e., a gloss-for-sign type of processing);
5) Space - particularly identifying uses of listing (fingertip loci referents), tokens/surrogates, and directional verbs; and
6) Non-manual signals (NMS) - those requisite for topicalization, rhetorical questions, and adverbial usage.

Once charted, the results were analyzed across all 15 samples to determine commonalties. See Appendix C for ASL and English features for which the products were analyzed. The resulting data was then analyzed to determine commonalties among all voice-to-sign transliterating product samples, and then to determine if any of the samples could be grouped together into different types of transliteration.

Results

Consistency in Features of Voice-to-Sign Transliterating Products

The investigators posit the nine commonalties described below as a demonstrative representation of core, salient features of voice-to-sign transliterating, particularly transliterating used by educational interpreters. It is not the investigators' claim that this list is exhaustive.

Table 1 (Figure A)
Nine Common Features of Voice-to-sign Transliterating Used by K-12 Interpreters

Percentage of Samples	Feature Number	Feature
100%	1	Shadow pattern primarily textual or sentential
100%	2	Shadow accompanies fingerspelling
100%	3	Syntax of frozen text follows form of source
93%	4	NMS include instances of topicalization
86%	5	Lexical form includes selective initialization (when base/root sign is unclear or does not exist)
86%	6	Lexical meaning base includes instances of prepositions
80%	7	Space includes instances of listing
73%	8	Lexical meaning base is ASL-semantic
73%	9	Syntax follows form of source (with possible deletions)

Features Related to Shadow and Syntax

Two of the features that were incorporated into the products of all 15 participants were related to the shadow. The shadow of a product was analyzed on a four-tier scale, ranging from primarily lexical (attached to single words/expressions) to primarily textual (simultaneously occurring with a majority of source). Neither the use of a primarily sentential-textual shadow throughout the products, nor the finding that shadow accompanied fingerspelling, was surprising to the investigators. However, the unanimous use of these features was not anticipated.

Similarly, 100% of the participants incorporated the English syntax of the frozen text that occurred in the source language into the transliterated product, as follows:

Mouth:	I promise to volunteer and work hard to involve
Manual:	PRO-1 PLEDGE (to) VOLUNTEER (and) WORK-HARD TO INCLUDE
Mouth:	my friends in community service
Manual:	POSS-1 FRIEND IN CITY/TOWN SERVICE

This was an increase from 73% of the overall products following the English syntax of the source. However, while the shadow adhered to the spoken English source, there were generally deletions within the non-shadow portion of the product (e.g., manually produced portions of the signal).

Non-Manual Features

Fourteen of the 15 participants incorporated topicalization into the transliterated product. This distinct grammatical feature of ASL, which incorporates the use of non-manual signals, or NMS (Cokely & Baker, 1980), was also a recurring strategy identified in the products of the

most effective "interpretations" (Livingston et al., 1994). An example:

    Mouth: The Pledge of Service ...
    NMS (eyebrows):
    Manual: PROMISE (of) SERVICE

Selective Initialization

Thirteen of the participants (or 86%) utilized a strategy the investigators label as selective initialization (SI). Initialization, in general, refers to the process of replacing the handshape found in the citation form of the base/root sign with the handshape found in the sign that corresponds with the first letter of the particular English word in the source. SI varied by signer and occurred only during portions of the source where the gloss of the ASL lexical item did not meet the perceived needs of the source, as analyzed by the interpreter. An example in this text is the term "ambassador," where many transliterators chose to "initialize" the sign representing the sash used by royalty or for beauty contest competitors with an "A." This sign was further personified by the addition of the suffix AGENT resulting in the meaning "ambassador."

Lexical Meaning Base – ASL-Semantic Signs and English Preposition Use

Lexical meaning base, as opposed to lexical form, refers to the pattern of meaning of signs selected by the transliterator. For example, with the utterance "students came from across Virginia," did the meaning of the lexical items produced for the phrase "from across Virginia" match the perceived intent of the speaker? An example ASL-semantic rendering could be:

    NMS/Mouth: from   mm Virginia
    Manual: FROM ALL-OVER #VA

An ASL-semantic lexical meaning base was utilized by 73% of the participants. In contrast, some participants followed the form of the source (i.e., the gloss for the words spoken):

    Mouth: from   across   Virginia
    Manual: FROM ACROSS #VA

The occurrence of lexical items representing prepositions in the source (e.g., the existence of "from" in the example above) was conveyed by a separate lexical item in 86% of the product samples. Other examples include #OF and RELATED-TO for the English preposition "of."

Use of Listing

Finally, the transliterators' use of space was analyzed. The only common feature across the 15 participants was use of "listing," which was used by 12 out of 15, or 80%, of the participants. An example would be listing the Virginia colleges, cities, and towns, which the high school and college students represented.

In summary, within the six feature groups (shadow, lexical form, syntax, lexical meaning base, space, and non-manual signals), the investigators' analysis identified nine features which were commonly used by a majority of participants in our study. These include six English features (shadow pattern primarily textual or sentential; shadow accompanies fingerspelling; syntax of frozen text follows form of source; lexical form includes selective initialization [when base/root sign is unclear or does not exist]; lexical meaning base includes instances of prepositions; and syntax follows form of source [with possible deletions]) and

three ASL features (NMS includes instances of topicalization; space includes instances of listing; and lexical meaning base is ASL-semantic). The investigators posit these nine features as being among the core features of prototypical voice-to-sign (expressive) transliteration by educational interpreters in the K-12 setting.

Split Within Study: Sign-Driven and Speech-Driven Groups

The previous section discussed salient features that seem to appear in most transliterated products. However, not all transliterated products look the same. More times than not, a transliterator will modify his/her approach to transliterating according to the needs of the consumer(s) receiving the product. Kannapell (1982) notes there are different linguistic needs depending on how individuals view their identity. If individuals see themselves as English-dominant bilinguals or as English monolinguals, then a more English-like signing would be required.

The investigators for this project wanted to deduce whether there were two or more varieties of transliteration, as there are with SimCom (Stewart et al., 1988). If so, what made these varieties distinct?

Features of Sign-Driven Transliteration

Ten common features were seen in the data regarding sign-driven products. The features in question are sentential rather than textual shadowing; the use of non-manual signals in lieu of consistent English mouthing (i.e., adverbials); listing techniques; use of token and surrogates; classifier predicates; inflected verbs; ASL semantic-based signs; base/root lexical form; rhetorical questions; and phrasal restructuring (Winston, 1989).

The Mouth Channel – Presence and Absence of Sentential Shadow and Adverbial Use

As noted in the previous section, an obvious feature of transliteration is the English shadowing on the mouth. This also concurs with Winston's (1989) research. In her discussion, she notes the mouthing at times becomes interrupted by certain linguistic challenges (Winston, 1989).

In the data collected, individuals who used adverbials, classifier predicates, and some inflected verbs in their product showed an absence of shadowing during these occasions. Often this absence was superseded by specific non-manual signals. These non-manual signals are necessary to provide the appropriate meaning to the signed concept (Cokely & Baker, 1980, p. 12-18). Therefore, the participants' shadowing took on a primarily sentential style of mouthing, making it appear that the language and its message were foremost on their mind and not the mouthing of the English source.

Ten of the 15 participants (66%) used adverbials in their product; 90% of those same individuals used classifier predicates; and 70% of the same people used some inflected verbs. Employing these ASL features makes it difficult to continue shadowing on a primarily textual basis—only 30% were able to do so.

Base/Root Lexical Form and ASL-Semantic Base for Sign Choice

The ASL base/root of a concept was used by 73% of the participants, while 27% used overall initialization. An example would be the use of a "1" handshape in the sign glossed as PAY-TO. Similarly, instead of allowing the spoken word, or word/gloss-for-sign process, to drive the selection of a sign, the meaning of the sign was taken into consideration as a sign was selected. (See example of "from across Virginia" in previous section.)

Use of Space—Listing and Tokens/Surrogates

Two more features of ASL seen in the data were the use of listing and tokens/surrogates; 80% of the participants used some type of listing technique throughout their product. (See previous example of the listing of geographical areas represented and the colleges represented.)

Tokens and surrogates (Liddell, 1995) also were established and employed by 66% of the participants. Tokens refer to "the area of space associated with some entity. That area of space typically (but not always) rests on the horizontal plane. However, signs are directed toward the area of space, not the point it rests upon." Surrogates represent "imaginary characters."

In this work, while describing the design of the Pledge of Service used as a backdrop, many of the sign-driven products incorporated eye gaze, head, and torso directed to a token (area of space) where the imaginary sign was located. As this was done, the layout of the sign was described.

Syntactic Restructuring—Use of Rhetorical Questions and Movement of Phrases

In this study, 20% of the transliterators found it necessary to restructure certain phrases that do not lend themselves to linguistic comparison. Winston (1989) found the same to be true in her study. An example is found in the section that reads, "the Council members then took the big sign and put it underneath the Eiffel Tower that's in the center of Kings Dominion." In the sign-driven products, the transliterators placed the tower in the center of Kings Dominion first, and then placed the pledge/sign "under the tower."

Another syntactic feature seen in some of the segments was the incorporation of ASL's use of rhetorical questions. Forty percent of the participants' products contained rhetorical questions not elicited from the source message—a clear breakaway from English source form. There were several examples of this found in many of the samples collected. One common instance was during the source, "I work with the Virginia Office of Volunteerism." This was restructured to:

            Mouth: I   work (pursed lips)
            Manual: PRO-1 WORK WHERE

Features of Speech-Driven Transliterating

When interpreters are asked what transliterating "is," the answers tend to be more focused on English features. These features include constant English mouthing or textual shadowing; English-influenced word/gloss-for-sign substitutions; English-bound morphemes as well as "invented morphemes" (Lucas & Valli, 1992, 101); predominant use of initialized signs; and source form or English word order.

The Mouth Channel—Textual Shadow

The individuals who chose to mouth more on a primarily textual basis (discourse larger than a sentence) used fewer ASL features; 53% of the participants (8 out of 15) used a primarily textual-based shadowing. Half of these individuals used adverbials in their products. Only one chose to incorporate inflected verbs, and only three employed classifier predicates. (Note: The effectiveness of their mouthing during the use of these features was not analyzed.)

Initialization and Invented and English Morphemes

Initialization refers to the process of replacing the handshape found in the citation form of the base/root sign with the handshape found in the sign that corresponds with the first ortho-

graphic letter of the English word. An example of this from the source material is substituting the "1" handshape found in the base/root sign TO-PAY with a "P" handshape. In all, 27% of the participants used overall initialization, as opposed to selective initialization, and several of these same individuals also utilized invented morphemes in their product. Some examples of invented morphemes are #LY for "specially,"and READ+ING for "reading." For the word "reading," it is interesting that these individuals also used the sign glossed as READ, as in "read a book," as opposed to PRESENT or SPEAK, which would more appropriately match the meaning of the word "reading" used in the text (see Appendix A) as follows, "And that was highlighted by reading a Pledge of Service, which was led by Ms. Susan Allen ...."

Syntactic and Lexical Source Form Features

One of the main differences between ASL and any manual code of English is the syntax or word order. It has been mentioned on several occasions that a transliterated product typically follows the syntactic order of English. For the most part, this study supports that claim; 80% of the participants tended to pattern their product from the source's word order. However, speech-driven products included a gloss-for-word processing, as follows:

Source:	Our ZIP is 23219
Mouth:	Our zip is 23219
Manual:	OUR Z-I-P IS 2-3-2-1-9

This contrasted with many of the sign-driven products that conveyed the meaning without as much attention to the specific English words spoken, as in:

Source:	Our ZIP is 23219
Mouth:	23219
Manual:	2-3-2-1-9

Sign-Driven vs. Speech-Driven Products

Of the ten sign-driven features mentioned above, the data showed that eight participants incorporated at least seven into their product. Conversely, there were four participants who each incorporated only one of the features deemed sign-driven.

Of the six speech-driven features, these four participants met the above criteria by at least 83%. One participant satisfied all six of the speech-driven features. In contrast, none of the eight sign-driven products contained more than one of these speech-driven features.

Hybrid Products

The remaining three participants demonstrated 50% of the sign-driven features and less than 33% of the speech-driven features (see Appendix D). (Note: The investigators felt uncomfortable categorizing them into either group.)

Discussion

Factors Affecting Investigation

Environment

While every attempt was made to make the environment as similar as possible to one in a VQAS performance assessment, it is important to point out those factors that could affect the

results of this study. The interpreters involved in this study were not videotaped in an educational environment. While several of the interpreters were videotaped in a classroom, it was not necessarily the classroom in which they work on a daily basis. The interpreters were also not working with an audience, except for the video camera, which can affect people differently. Also, the participants in this study are not representative of the pool of working interpreters at-large, as not one of the participants is a child of a deaf adult (CODA).

Of the 15 interpreters, 8 were working at the high school level, 1 in a pre-school class, 4 at the elementary level, and 2 in both elementary and high school. There were no interpreters from a middle school setting.

Also, the interpreters knew that it was not a real testing situation. For many interpreters, this was a more relaxed environment because their job was not threatened. This, too, can account for some of the differences in scores between project results and actual VQAS scores.

Relationship Between Investigators and Participants

Another factor for this study is the relationship the participants had with the investigators. Some of the interpreters had worked with two of the investigators in a training capacity. Those that had viewed the source tape before had done so for a class in which the focus was on interpreting and not transliterating, or for a training workshop in which one of the investigators was providing diagnostic feedback to the interpreter. Weaknesses identified during those diagnostic feedback sessions could have been at the forefront of the participants' minds, causing the interpreters to work harder at attempting to remember mistakes from the first time he/she had interpreted the source.

Another factor was that one of the investigators was the supervisor for some of the interpreters. This could have affected not only their transliterated product, but also their response to the survey questions. While it was made clear that their participation in the research project would in no way affect their job positions, there was still that underlying possibility of retribution.

ASL Fluency

While all of the participants possessed a valid level in interpretation, the ability of some of these individuals to incorporate ASL features into any product is still questionable. None of the participants possessed a higher level in interpreting than in transliterating.

Comments on Results/Table of Nine Common Features

When identifying a pattern (shadow pattern primarily textual or sentential; shadow accompanies fingerspelling; syntax of frozen text follows form of source; lexical form includes selective initialization [when base/root sign is unclear or does not exist], lexical meaning base is ASL-semantic; and syntax follows form of source [with possible deletions], both of the assessors independently reached the same decision that one feature (i.e., sentential as opposed to phrasal Shadow) was predominant. The remaining features [e.g., NMS include instances of topicalization; Lexical meaning base includes instances of prepositions; and space includes instances of listing) were determined by identifying at least one occurrence in the product. The percentage of samples was determined by dividing the number of products containing the feature with the total number of products in the study (i.e., 12 divided by 15 equals 80%). (Note: The investigators did not use a statistical program in determining if a product demonstrated a particular feature.)

For Further Discussion

Investigation on transliterating has been very limited. Throughout the course of this investigation there were several areas and topics that were suggested for future investigation. One of those areas involves detailed investigation to find a more comprehensive listing of the core features of transliterating. Another is to look at the effectiveness of pre-conferencing, the influence of the warm-up period during an assessment, and the effect of high extra linguistic knowledge (ELK) or background information on the product of interpreters and transliterators.

Questions that came up during this investigation include: How do interpreters become more sign-driven or speech-driven? What type of product is most effective for the Deaf consumer? Are there situations where transliterating is consistently more appropriate than interpreting? Would categorizing the types of transliteration assist in serving the myriad of contact language users? Do only language features affect the categories of speech-driven and sign-driven?

Other areas in need of study are the preferences and viewpoints of consumers of transliteration who are deaf or hard-of-hearing, as well as more investigation regarding English proficiency (i.e., reading and writing English) as a predictor of transliteration being a benefit to the consumer. All of the above topics were not explored in detail during this investigation, but deserve more consideration, especially if the quality of educational interpreting is to improve to better serve deaf/hard of hearing students placed in mainstream settings.

Conclusion

In conclusion, one can see that interpreters rendering a transliterated product can be divided into at least two groups, sign-driven and speech-driven; a possible third group, or hybrid (a mixture of both), also emerged. Based on the work of Kannapell (1982) and Stewart et al. (1988), the investigators can safely say that this type of transliteration parallels what is seen in SimCom; sign-driven transliterators incorporate more ASL features in their products while speech-driven transliterators use more English features. ■

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End Note

Appendix A

Virginia Youth Service Council Script
By Kent Harrison

Hi. My name is Kent Harrison. I work with the Virginia Office of Volunteerism. And, today, I would like to talk about one of the projects of the Virginia Youth Service Council.

And, the Youth Service Council is a group of 25, special young Virginians who are volunteers in their community, and I serve as staff for the Youth Service Council.

The Project I'd like to talk about was held on April 19th, 1997, and it was called, "Paramount's Kings Dominion's Salute to Young, to Virginia's Young Volunteers."

What this event was is that, in a nutshell, Paramount's Kings Dominion helped to honor 125, uh, young volunteers from across Virginia who were called, who they were specially named Virginia's Youth Ambassadors for Volunteerism. And they, these volunteers and their friends, got to spend the day at the Park, either on free or half-price admissions, and they also participated in a special ceremony that was held in the Kidzville Auditorium.

And that was highlighted by reading a Pledge of Service, which was led by Ms. Susan Allen, who was First Lady of Virginia, at that time, her daughter, Tyler, and her son, Forrest. I believe Tyler was in 2nd grade at the time and, maybe, Forrest is in 1st. And also about 20 members of the Virginia Youth Service Council.

After the youth and vol(unteers) ... Ambassadors got registered and went into the Park on this early Saturday morning, we had the 125 Youth Ambassadors were inside an outdoor auditorium and there was a stage in ... in the front of it and on that stage was where Mrs. Allen and Youth Service Council Members were. Mrs. Allen read some special remarks about young volunteers. And, then, she and the Council members led all of the Youth Ambassadors for Volunteerism in reciting a Pledge of Service.

The Pledge of Service was actually ... served as a backdrop to Mrs. Allen and the Youth Service Council members. It was at the back of the stage. The sign shop at Kings Dominion had reproduced the Pledge on a sign that was about 8 feet tall by 14 feet wide. It had the Pledge in big, bold letters on the front.

In the left-hand ... top, left-hand corner of the Pledge was a reproduction of the Youth Service Council logo. In the right-hand section ... upper, right-hand section was the Virginia State Seal. Then,

No, the, sorry, the State Seal was on the upper, left-hand ... the Youth Service Council logo was the right-hand ... side.

Across the bottom we had giant signatures of Governor George Allen, in the middle, and the two Co-Chairs of the Youth Service Council: Baxter Vendrick and, also, Ronna Compton.

These Youth Amb ... Ambassadors led the service ... the Pledge of Service which reads:

"I am an important part of my community and I have the ability to help others. I promise to volunteer and work hard to involve my friends in community service. I will use my creativity to find new ways to solve problems in my community. I believe that volunteerism is the key to building a better world."

We, some of our Ambassadors represented ... they came from Charlottesville, from Norfolk. These were mostly high school students. Also, from Fredericksburg and, of course, Richmond.

And we had college students that represented: the University of Rich ... University of Richmond, University of Virginia, Virginia Commonwealth University, and Hampton College, or is it Hampton University.

After the Pledge of Service was read, the Council members then took the big sign to put it underneath the Eiffel Tower, that's in the center of Kings Dominion. And for the next 3 hours, they handed out small, laminated versions of the Pledge of Service. And we got nearly 400 visitors, who were all youth who just happened to be at the Park, to sign this big Pledge of Service. Which, and we gave out those little cards and all of ... now that Pledge is located in our Office.

If you would like to learn more about the Virginia Youth Service Council, please contact Jay Carr at: the Virginia Office of Volunteerism, 730 East Broad Street, in Richmond. Our ZIP is 23219. Or, you can call him at area code 804-692-1956. Thank you.

Appendix B

Participant Post-Survey

This survey will provide pertinent information to assist the researchers in qualifying the definition and effectiveness of Transliteration. Once again, your identity WILL NOT be incorporated into any reports or abstracts resulting from this study. The researchers involved in this project APPRECIATE YOUR WILLINGNESS AND EAGERNESS to continue to improve the interpreting field.

SUBJECT SAMPLE NUMBER:
(To be completed by researchers.)

BACKGROUND

Gender (please circle):   female   male

2.   Current Age: _____

3.   Age started learning sign language: _____. (Note: If at least one parent is a deaf, sign language users, AND signed to you from birth, please use "Age 0".)

4.   If age started learning sign language is over 21, please skip to question #9. If yes, please continue.

5.   When learning sign language, did you have direct, on-going regular (at least weekly or continuous periods of at least two weeks per year) contact with a deaf person who used sign language as their primary means of communication AND who signed WITH YOU?

        YES   or   NO

6.   If no, please skip to question #9. If yes, please continue.

7.   Please list your relationship with each person (i.e mother, grandfather, neighbor, fellow student) AND the percentage of time you conversed with this person using sign language (the remaining percentage being spoken communication).

        Please list up to the three most influential relationships:
        For example, mother = 50% (of our conversations were using sign language).

        A. _____ = ___ % (of our conversations were using sign language).

        B. _____ = ___ % (of our conversations were using sign language).

        C. _____ = ___ % (of our conversations were using sign language).

8.   For the individual who had the most influence on you, please identify on a scale of 1 -10 (1 being more ASL-like and 10 being more English-like), what number would best indicate the mode of signing that person USED WITH YOU.

        [ASL-LIKE]   1   2   3   4   5   6   7   8   9   10   [ENGLISH-LIKE]

9.   Years of signing experience to date FOR YOU (e.g. at least 10 hours per week): _____

10.   Years of full-time interpreting experience (e.g. at least 20 hours per week, paid or unpaid): _____

11.   What is the highest level of education you have completed? Please circle:
        High School   College   Grad School Post-Grad   Other
          9   10   11   12   1   2   3   4   5   6   7

EDUCATIONAL SETTING

12.   In what educational setting do you typically interpret (i.e. elem., middle, etc.): _____

13.   On a scale of 1 -10 (1 being more ASL-like and 10 being more English-like), what number
        would best indicate the mode of interpreting you provide in the setting you typically inter-
        pret in?:

        [ASL-LIKE]   **1   2   3   4   5   6   7   8   9   10**   [ENGLISH-LIKE]

14.   How many consumers (students) are in your typical setting?:

15.   For the student you interpret/ transliterate the most for, please identify on a scale of 1 -10 (1
        being more ASL-like and 10 being more English-like), what number would best indicate the
        mode of signing that person uses in the classroom.

        [ASL-LIKE]   **1   2   3   4   5   6   7   8   9   10**   [ENGLISH-LIKE]

SOURCE

16.   Did you have ANY background knowledge of the topic addressed in today's source material
        prior to the warm-up period?   YES   or   NO.

17.   If no, skip to question #24. If yes, please continue.

18.   Was that background knowledge beneficial in your processing the information?
                YES   or   NO.

19.   Have you seen this EXACT source material before today? YES   or   NO.

20.   If no, skip to question #24. If yes, please continue.

21A.   When was the last time (month & date) you heard or saw this source? _____/____

21B.   How many times have you seen this source?   _____

22.   On a scale of 1-10 (1 being of particular hindrance, 5 being of no particular consequence, and
        10 being of particular benefit), how has the experience of seeing the EXACT source material
        effected your performance?

        1   2   3   4   5   6   7   8   9   10

23.   Please explain WHY you selected this number, including THE MOST RELEVANT REASON.

        _____
        _____
        _____

WARM-UP (Pre-Conferencing)

24.   On a scale of 1-10 (1 being of no assistance, and 10 being particularly beneficial), how did the warm-up (pre-conferencing) time assist you in preparing for the performance?

      1   2   3   4   5   6   7   8   9   10

25.   Please explain WHY you selected this number, including THE MOST RELEVANT REASON.

      _____
      _____
      _____

26.   Did you employ any particular approach during this warm-up time? YES   or   NO.

27.   If no, please skip to #29.

28.   Please explain how you used this warm-up (pre-conferencing) time.

      _____
      _____
      _____

PERFORMANCE (The one you JUST completed)

29.   What was foremost on your mind during your performance: the message's concept (or meaning) or making sure it was in English word order (the "important" words were being conveyed in sign)?   _____

30.   On a scale of 1-10 (1 being completely unsuccessful, and 10 being totally successful), where does the product produced TODAY fit?

      1   2   3   4   5   6   7   8   9   10

31.   Is the product you provided today (Transliterating) indicative of the mode of interpreting you typically provide (as referenced in question #12)? YES   or   NO.
      Please explain WHY or WHY NOT?

      _____
      _____

32.   During your performance TODAY, did you visualize or "think about" a particular consumer receiving your product? YES   or   NO.

33.   If no, please skip to question #38. If yes, please continue.

34.   Was that consumer the same one in question #15? YES   or   NO.

35.   If yes, please skip to question #38. If no, please continue.

36.   Please describe the relationship you have with the consumer or individual you "visualized" during your performance. What is your relationship with this individual? _____

37.   On a scale from 1-10, (1 being more ASL-like and 10 being more English-like), what number would best indicate the mode of signing that this person uses WITH YOU.

      [ASL-LIKE]   **1   2   3   4   5   6   7   8   9   10**   [ENGLISH-LIKE]

LANGUAGE POLICY (for your LEA, school system, school, or classroom)

38. Is there a language policy which directly relates to services provided to the individual refer-enced in # 15? YES   or   NO.

39. If no, please skip to #42. If yes, please continue.

40. Briefly describe the language policy which directly relates to services provided to the indi-vidual referenced in #15.

     _____
     _____
     _____
     _____
     _____

41. In your opinion, is the product produced during the performance today "in line" with that language policy?   YES   or   NO.

42. Your participation in this study is crucial to its success. **THANK YOU** for the time you have so unselfishly given!

Appendix C
Feature Checklist

CONSISTENT   **PATTERN(S)**   **Subject Sample Number: SL -   A**
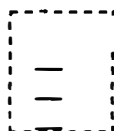
Shadow:
* Textual
* Sentential
* Phrasal
* Lexical
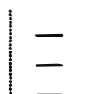
       * Accompanies Fingerspelling
       * Absent on Inflected Verbs
       * Absent on Classifier Predicates

Lexical Form
* Base/ Root Signs
       * Initialization ONLY when base/ root sign unclear
                in context <u>or</u> does not exist
* Initialization
       * Bound Morphemes
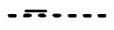
Syntax
* Word-for-word with source (deletions possible)
       * Word-for-word with PLEDGE
* Phrasal restructuring
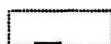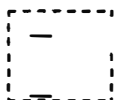
Lexical Meaning Base
* English "Gloss" or Source
       * English prepositions
       * Signs rep. Eng. form morphology ("out"+"side")
* ASL-Semantic
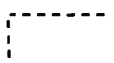
Space
* Referents established and incorporation consistent
* Referents established, but incorporation inconsistent
* Referents not established, but incorporation attempted
* Space Inconsistent, Inappropriate, and/or Unattempted
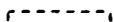
       * Listing
       * Tokens/ Surrogates
       * Directional Verbs

NMS
* Present
* Absent

       * Topicalization
       * RH-question
       * Adverbials

Appendix D
Feature Checklist Results Chart

KEY: C = Consistent Pattern   X = Predominant Pattern noted   0 = No instance noted

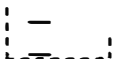| Subject Sample Number	32	5	3	22	2	6	30	31	1	24	29	27	26	23	28
Sufficiency Percentage	88.9	82.4	80.3	87.0	85.5	81.1	88.3	76.6	87.4	83.9	78.0	81.3	80.8	76.5	75.4
Shadow:															
Textual		X					X		C	X		X	C	X	X
Sentential	X	X	C	C	X	C	C								
Phrasal															
Lexical															
Accomp. Fingerspelling	C	C	C	C	C	C	C		C	X	X	C	C	C	C
Absent – Inflected Verbs	X	X	X	C	X	X		X		X	X	X	C	C	X
Absent – CL PREDs	X	C	X	C	X	X	X	X		X	X	C	C	X	X
Lexical Form:															
Base/Root Signs	X	X	X	X	X	X	C	X	X	X	X	X	X	X	X
Init.-root not exist/unclear	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Overall Initialization											X	X	C	X	X
Bound Morphemes													X	X	X
Syntax:															
Follows Src/Form (w/ del)	C	C	C	X	X	X	C	C	C	C	C	C	C	X	C
Follows Src – PLEDGE	C	C	X	C	C	C	C	X	C	C	C	C	C	X	C
Phrasal Restructure	C	C	X	X	X	X	X	X	X	X	X	X	X	X	X
Lexical Meaning Base:															
Follows Source/Form															
English Prepositions		X		X	X	X	X	X	X	X	X	X	C	X	X
Signs rep. Eng. Morph.						X	X	X		X		X	C	X	X
ASL-Semantic	X	X	X	X	X	X	X	X	X	X	X				
Space:															
Ref. Est. and Incorp. Con.	X				X		X								
Ref. Est, Incorp. Incon.		X	X	X		X		X		X	X	X		X	
Ref. Not est, incorp attem													X		X
Incon, inapp., or unattem															
Listing	C	X	0	X	X	X	X	X	X	0	X	X	0	X	X
Tokens/Surrogates	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Directional Verbs	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
NMS: Present	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Absent															X
Topicalization	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RH-question	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Adverbials	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X