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Conference of Interpreter Trainers

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Editorial: Education, educating, educational…

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Welcome to the third volume of the *International Journal of Interpreter Education (IJIE)*. I am delighted to report that due to the increasing number of manuscripts being submitted to the journal for consideration, as of 2012, we will move to two issues per year and will select articles according to themes. This volume focuses on different educational elements of interpreter education and training. When we consider interpreter education, it is important to reflect on the purpose of **education**, generally speaking.

> Education in the largest sense is any act or experience that has a formative effect on the mind, character, or physical ability of an individual. In its technical sense, education is the process by which society deliberately transmits its accumulated knowledge, skills, and values from one generation to another. (Wikipedia, 2011)

As interpreter educators, we transmit our accumulated knowledge, skills and values to the next generation of interpreters working between spoken and signed languages by providing systematic and scaffolded instruction through formal training programs, continuing education (professional development) workshops, and mentoring. The goal of adult and higher education is to produce graduates who are critical thinkers, independent learners, and reflective and ethical citizens who are deeply committed to lifelong learning.

> In formal terms, students enroll in university [and adult education] programmes for in-depth study of a limited number of disciplines and/or to learn how to be proficient in an established profession. The widely accepted view of [adult] education, though, goes beyond acquiring the knowledge base of a discipline or profession. There is generally an expectation that a graduate will have developed as a person and acquired a range of intellectual qualities so as to be capable of performing in an intelligent way outside the confines of what has been taught in formal courses (Kember & Leung, 2005, p. 155).

Interpreter education has the same goals. We need interpreters who are critical thinkers, independent learners, and reflective and ethical practitioners, and interpreter education programs of any form need to incorporate the development of such traits and equip graduates with the skills and capabilities necessary to be lifelong reflective practitioners (Winston, 2005).

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In more recent years, approaches to **educating** in adult and higher education have shifted to become more learner centered, promoting collaborative, cooperative, and constructive learning. Higher education teaching philosophy is now focused more on meeting students' needs in a more general manner, especially those who are professionals undertaking vocational-related courses. A constructivist approach to learning highlights the importance of reference to the student's own experience:

> Constructivism is building on knowledge known by the student. Education is student-centred, students have to construct knowledge themselves. Explanations can use metacognition via metaphor. Semiotics, or meanings of words, are important to keep in mind. Constructivism is a theory, a tool, a lens for examining educational practices (Dougiamas, 1998, p. 4).

A *constructivist perspective* embodies the notion of active learning, wherein the main interest is in the process by which the learner reaches an understanding of the structure of the learning tasks. Wilson (1981) supports considering the nature of the learner's individual experiences and how he or she interprets those experiences in the teaching and learning envrionment. Thus, to constructively encourage students to derive meaning from the learning process, an instructor must establish a good learning atmosphere with varied teaching strategies (Druger, 1996). Effective learning requires the process to be "an ongoing active learning experience" where the students are "intellectually engaged throughout the process, constantly reflecting on and assessing their understanding" (Evensky, 1996, p. 17).

Higher and adult education promote critical thinking and reflective practice, which works most effectively within an active learning framework. In evaluating higher education literature, the following points are crucial to ensuring effective pedagogy: (a) active learning, (b) student-centered learning, (c) experiential learning, and (d) interface between learning and professional skills development (i.e., workplace demands).

All of these points are also crucial in interpreter education. As stated by Sawyer (2003), "[T]he momentum driving interpreter education has gathered force" (p. 2), and curriculum and assessment theory must inform interpreter education. Likewise, research must inform interpreter education—interpreting not just research but, more important, interpreter education research (Pöchhacker, 2010). The aim of this journal is to facilitate the discussion of all elements of interpreter education in whichever form they appear—whether formal or informal, and through case studies, reflections, theoretical discussions, or research. *IJIE* seeks to validate what it means to be a teacher-researcher (Roulston, Legette, & Deloach, 2005) in interpreter education.

Volume 3 of *IJIE* explores **educating** spoken and signed language interpreters in different contexts, taking alternative approaches, and drawing on a variety of frameworks. All of the articles—although discussing educating either spoken or signed language interpreters, specifically in different countries—are more widely applicable and transferable across modalities, languages, and borders.

The featured research articles present the fundamentals of interpreter education that discuss how to draw on linguistics and teach reflective practice among spoken and signed language interpreters. Annette Sachtleben and Heather Denny discuss how to teach pragmatics to spoken language interpreters in New Zealand; Trudy Schafer details a project to develop expertise among American Sign Language (ASL) interpreters; and Maria Moreno and colleagues explore how they provided web-based training for Spanish-speaking, dual-role interpreters in the United States.

The commentary pieces focus on **educational** interpreting and professional development. There are two such articles: One describes projects addressing the performance assessment of educational interpreters in a school in Australia (Karen Bontempo and Bethel Hutchinson), and the other describes the delivery of a professional development program for educational interpreters working in schools throughout the state of Queensland, Australia (Maree Madden). Although the focus of each article is on Australia and educational interpreters, both articles highlight some of the most crucial aspects of interpreter education: standards, assessment, and, particularly, ongoing maintenance and development of professional skills. Thus, these two articles should also be relevant to people who are training, educating, and accrediting/certifying spoken and signed language interpreters in any country. Likewise, Fatima Cornwall's commentary on creating your own materials for use in the classroom is a welcome contribution in which the author shares pedagogical approaches and the ever-challenging aspect of finding appropriate source texts that students can use to practice and develop their interpreting skills.

Editorial

In our student section, we have an excellent contribution from Lisa Godfrey, who identified characteristics of effective interpreting programs in the United States. Although she surveyed ASL interpreter programs, much of the effective characteristics that she identified give educators and administrators food for thought in relation to what makes a good program. I was recently involved in leading a team to review the translation and interpreting curriculum at my institution, and we found many of the same issues that Lisa brings to light.

Finally, the open forum section features another interview with a scholar—this time, with Christopher Stone. Stone has been involved in sign language interpreter education since 1999 and also works closely with many spoken language interpreter colleagues in the United Kingdom. This interview gives us insight into what attracts us to our work as interpreters, interpreter educators, and, particularly, scholars of interpreting or interpreter education.

In keeping with tradition, I'd like to end the editorial with a quote that I feel encapsulates the theme(s) of the editorial and the volume. I recently discovered a great quote via one of my students studying in our Translation & Interpreting Pedagogy program. Although I am familiar with Don Kiraly's work on applying social constructivist approaches to teaching translation, when the student highlighted this quote in one of her online postings, it really resonated with me so I would like to share it with you:

> We become empowered as teachers not by controlling learners, but by emancipating them. When we encourage learners to think for themselves and to depend on each other, on their individual capabilities for independent learning, and on us as guides and assistants to help them learn, we are empowering them to become full-fledged members of the communities in which they live and will work: we are helping them to build character and trustworthiness; we are promoting a culture of expertise and professionalism in our future colleagues and successors. This is empowerment for all of us: teachers, students and administrators alike. (Kiraly, 2000, p. 194).

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The Teaching of Pragmatics as Interpreter Training

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Abstract

Research undertaken in 2010 with an interpreting class at a New Zealand university showed that explicit teaching of pragmatic features of New Zealand English discourse helped develop the students' awareness of the differences between the semantic meaning and the pragmatic purpose of an utterance.

In this research project, the authors intended to test whether explicit classroom instruction of pragmatic features and these features' impact on meaning through the use of recorded discourse samples would be effective, considering that explicit language instruction to language learners has been researched and was found to assist success (Kasper & Roever, 2004). In the classroom, teachers used samples of spontaneous New Zealand English discourse to identify and discuss the use of pragmatic features.

In the project, the researchers also aimed to evaluate the effectiveness of classroom practice in teaching and learning pragmatics. The data for this research came from the interpreting students' reflective blogs, 2 participant surveys, and the researcher–teacher's weekly log.

Keywords: interpreter training; teaching pragmatic awareness; semi-authentic discourse samples

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The Teaching of Pragmatics as Interpreter Training

1. Introduction

For interpreters, the principle of *equivalence of sense* is vital. To follow this principle, the interpreter needs to understand the Speaker or Signer's (S) intention in order to provide an *equivalence of effect* for the Hearer (H) (Pöchhacker, 2004 p. 144). Thus understanding the pragmatic force of an utterance is just as important as understanding the lexical meaning, and interpreters need to develop pragmatic competence as part of their skill set. Crystal (1985) defines pragmatics as "the study of a language from the point of view of users, especially in the choices they make, the constraints they encounter in using language in social interaction and the effects their use of language has on other participants in the act of communication" (p. 240).

As Yates (2007) clarifies, "Because in different languages and cultures, equivalent words may have different impact, there is a danger that we may innocently transfer a construction from our first language into the use of our second although it may not have the same effect" (p. 22). Thomas (1983) puts it more bluntly: "While grammatical error may reveal a speaker to be a less than proficient language user, pragmatic failure reflects badly on him/her as a person" (p. 97). Therefore, it follows that the interpreter—in his or her incorrectly interpreting a message—who is not proficient in passing on the pragmatic message of S may cause H to infer something quite different from that which S intended.

However, the best method of raising pragmatic awareness remains unclear when training interpreters in the classroom. Excellent texts describing pragmatics (Blum-Kulka, House, & Kasper, 1989; Grundy, 2008; Yule, 1996) sometimes are too theoretical for interpreters in training. Student interpreters need practical examples linking theory to the interpreting tasks that await them. Wadensjö (1998), although not using the term *pragmatics*, refers to the contextual effect on meaning while discussing interpreting practice in a way that every interpreting student can understand. Lecercle (1999) writes in great detail using complex examples that, perhaps, are better suited to those practicing interpreters who have an academic education than to novice interpreters.

Pragmatic competence can be divided into two areas: illocutionary competence and sociolinguistic competence. *Illocutionary competence* is the awareness of a variety of language functions and intentional ways of expressing them, such as the choice of softening words such as "just" and "perhaps" in a request. *Sociolinguistic competence* can be further subdivided into sensitivity toward dialectal variety, register and naturalness as well as the ability to understand and use cultural references and figures of speech (Bachman, 1990). *Pragmalinguistics*—that is, the study of the relationship between language items and the purpose and effect they have in a specific context (Leech, 1983) also needs to be part of the interpreting classroom.

Thus, although sociolinguistic competence and pragmalinguistics are of great importance to interpreters, interpreting educators typically find that these areas often are very difficult to teach explicitly when dealing with interpreting students' second (B) language. For the effective teaching of pragmatics, actual authentic discourse samples are needed for classroom analysis in order for interpreters to (a) initially recognize pragmatic effect and (b) identify the actual pragmatic features used (Napier, 2006; Denny, 2008).

2. Methodology, research questions, and data collection

This qualitative teaching-research project uses the *Action Research (AR) paradigm* (Jennings & Graham, 1996; Winter, 1989), which allows for insider perspectives and potentially makes possible the adjustment of aims during the investigation. Thus, the research was co-conducted by Sachtleben as a teacher–practitioner and by Denny as a researcher–practitioner. As Dick (2000) states, "Action research provides enough flexibility to allow fuzzy beginnings while progressing towards appropriate endings". This research study was a pilot for further work on the teaching of pragmatics, and AR allows for the development of a new hypothesis or the retesting of results arrived at in a pilot study. Researchers have successfully used AR for the evaluation of educational programmes (Jennings & Graham, 1996; Winter, 1989). In recommending AR, Dick also claims that the interpretation of data is often richer in instances where there is researcher involvement. He advises that to avoid any perception of conflict of interest, collaborative research is advisable; this allows for moderation of data analysis and critique of research methodology.

In this project, having two people working together enabled the coding of items to be moderated, thus ensuring consistency and accuracy. In AR, the use of multiple sources of evidence ensures its trustworthiness (Dick, 2000). Triangulation was achieved by drawing on data from student blogs, a journal written weekly by the teacher–practitioner, and two participant surveys that were administered at two time points: during Week 8 of the 12-week semester and 6 months after the end of the semester.

In this study, the authors sought to answer the following three research questions:

1. What evidence is there of development in the learners' awareness of the pragmatic norms targeted in instruction?

2. What evidence is there that this awareness extends to cross-cultural awareness of pragmatic differences?

3. What evidence is there that the learners make use of this awareness of the pragmatic features targeted in instruction in their own interactions, both inside and outside the classroom?

Fourteen of the 29 interpreting students at Auckland University of Technology in Auckland, New Zealand, agreed to participate in the research. There were three main sources of the data, one of which was the students' blogs, which were reflective and explorative in nature. These data were collated, coded for any pragmatic features noticed, and matched to the weekly lesson input to note changes and development in the participants' understanding of pragmatic awareness. Additional data came from the two surveys, which explicitly asked the participants for comment on their perceived changes in their understanding of pragmatics in New Zealand English conversation. The final and triangulating data source was the teacher's weekly log, in which she commented on class content and dynamics, individual student comments, technical matters, classroom management, and teaching methodology. The teacher knew the students quite well by the end of the semester and could identify who had been in New Zealand for only a short time and who was in employment where English was spoken. The teacher could then suggest reasons to contextualize and complement the participant data. Dick (2000) confirms that "Differences between data sources, used critically, can then lead the researchers and the participants towards a deeper and more accurate understanding".

The researchers analyzed the four blogs that each learner wrote by coding for evidence of learners' noticing language and paralinguistic features used for pragmatic effect. It is interesting to note that once students became aware of pragmatic features, they were able to notice and include others in their reflections. Although initially, the authors coded only for those pragmatic features that were introduced in the classroom, as more pragmatic features were noted in the blogs, these were added to the coding. For example, classroom-introduced features included hesitators, softeners, exaggeration, and repeated words, whereas additional themes that emerged from the learner's blogs included silence, in-group language, and humour. Example 1 illustrates an example from a blog, with coding noted in parentheses.

Example 1: Example from blog

Lecturer: "Should I tell?"

Student: "Yes, please. It's Friday. And it's already 3 o'clock. So, please…"

I have been in New Zealand for almost 5 years, so I now know why this student mentioned Friday afternoon: Most Kiwis are laid back and start drinking on Friday afternoon. (Analysis of cultural difference). However, if I am new to here, I will not know why he mentioned it, because it does not matter if it is Friday or not in Japan. This student perhaps understood the lecturer's implication and wanted to indicate his understanding by giving a straightforward opinion without silence. (Silence or lack of silence). He might expect the other students would laugh so he could put them in a good mood. In addition, the tone of his voice was cheeky, and it made us laugh too. (Use of humor).

The content of individual blogs differed considerably. Sometimes, the learner showed clearly explicit understanding, whereas at other times, a pragmatic feature was simply noticed. For example, an unexpected reaction to what had been said was reflected on, and a reason was posited. The reflective comments in the blogs very often referred to cross-cultural or cross-language differences. Oftentimes, a parallel situation would be explained in the context of the first-language culture to highlight a difference.

The first reflective blog posted by the students set the baseline for measuring further development of pragmatic and cultural awareness. The baseline consisted of the number of students showing awareness of these features in Blog 1. This number was compared to the number of students who noticed the same features in the second, third, and fourth set of blogs.

Example 2 lists the features used for pragmatic effect, which were identified and coded for, having been noticed and referred to in the interpreting students' reflective blogs.

Example 2: List of features

i. Exaggeration or understatement for effect
ii. Hesitators
iii. Softeners
iv. Repeated words
v. Irony or sarcasm
vi. Reference to the use of intonation or stress
vii. Register between participants/use of in-group terms
viii. Paralinguistic features/nonverbal language
ix. Identification of a speech act
x. Reference to politeness norms
xi. Use of discourse makers
xii. Silence or lack of silence
xiii. Use of humor

The two participant surveys specifically asked about the students' perceptions of their pragmatic understanding. One of these survey questions was explicitly related to interpreter training (see Appendix).

3.   Teaching pragmatics

3.1.   *Resources: Semi-authentic discourse samples*

In this study, the authors trialled the use of a new resource to provide recorded naturalistic discourse samples for classroom analysis so that students could explicitly recognize pragmatic features in context. It was anticipated that a resource such as this, which can provide repeated listening, would be an effective basis for pragmalinguistic study. Authentic language samples can be analyzed and discussed. However, fully authentic samples—which include the many irregularities and imperfections of actual spoken discourse—can be difficult to record. Permission needs to be sought, the appropriate recording equipment needs to be on hand, and there may be interference from background noise, which interferes with recognition of subtle features. Thus, the authors used semi-authentic language samples to meet that need. For semi-authentic recordings, native speakers or expert speakers are told the context of a conversation and are asked to simulate the conversation in a role play. Thus, spontaneously generated language occurs, containing all the nuances of interpersonal discourse, and it can be recorded under studio conditions.

Three semi-authentic recordings of different face-threatening acts (Brown & Levinson, 1987) were made: (a) a complaint about a late report, (b) an offer of help that was misunderstood and then repaired, and (c) criticism in a meeting that required steps for conflict avoidance. University colleagues familiar with the aims of teaching pragmatics as part of language learning were used as actors for the recordings. First, each actor received a description of the part to play a few days before the recording session and was entrusted to deliver it appropriately. No actor saw what part the other interlocutor had to play, nor were there any rehearsals or discussion prior to the recording being made, in order to retain the sense of spontaneous interaction. The final outcome of the actors' interaction was not known in advance but was left to resolve itself. An example of such a role-play description can be seen in Example 3.

Example 3: Example of role-play description

A. Role: Colleague (male). Scenario: Clarification and Repair.

You see [that] your colleague has a problem with her computer, and is getting behind with her work and [seems] rather stressed. You ask, "Shall I ring the IT Helpdesk to see if a techie can come over and sort your computer out?"

A. Role: Colleague (male). Scenario: Clarification and Repair.

You see [that] your colleague has a problem with her computer and is getting behind with her work and [seems] rather stressed. You ask, "Shall I ring the IT Helpdesk to see if a techie can come over and sort your computer out?"

B. Role: Colleague (female). Scenario: Clarification and Repair.

You are a highly experienced and competent computer software designer who knows how to fix computers by yourself. Your computer has crashed twice today, but you need to finish the current job before you can actually take the time to fix it. Your colleague says, "Shall I ring the IT Helpdesk to see if a techie can come over and sort your computer out?" You feel really quite insulted that your skills are simply not recognized.

The three recordings that resulted were between 5 and 6.5 minutes in length. Because one actor did not know what another would say, the ensuing dialogues were spontaneous and had the authentic qualities of stopping and restarting as well as using pauses, repeated words, and a number of filler words (e.g., "well"). In addition, because the exchanges were problematic, the actors used the appropriate pragmatic devices naturally to convey the underlying meaning. This was found to be helpful at the initial teaching stage. More subtle nuances of intonation combined with stressed words became clear with repeated listening.

The recordings were in digital format, meaning that they could be loaded onto the online platform used at the university for student self study as well as played in class through the computer and ceiling speakers. This digital format ensured that each student could hear equally well regardless of where he or she was seated. The computer program that was used allowed the teacher total control of stopping, starting, and replaying single phrases. This was especially efficient when particular phrases were being discussed and analyzed by the class.

3.2. The interpreting class: Students, content, and parameters

The class for this research project consisted of 29 students (27 female, two male), of whom only one had been born in New Zealand and had English as her mother tongue. Many of the students had come to New Zealand as children, whereas others had come within recent years. Three students had been in New Zealand for only 3 weeks when the class began. There were 12 mother tongues: Mandarin, Cantonese, Korean, Japanese, Hungarian, Russian, Macedonian, French, Urdu, Hindi, Tongan, and English. Three of the students were already working as interpreters, including in the courts. Most of the students had been employed in various jobs, and some continued to work part time while they studied part time. Only the three recent arrivals from Mainland China had never been employed at all. This rich diversity led to productive classroom discussions and deep intercultural awareness.

The course titled "Oral Discourse for Interpreting" was compulsory for first-year students in the Bachelor of Arts (BA) in Interpreting program. The content that was covered included pragmatics, English phonology and pronunciation, and some basic interpreting techniques such as shadowing, as well as idioms and common text types. The course length was 12 instruction weeks, with a 2-hour class each week and a 1-hour computer laboratory practice session. Further practice materials were available online for self study.

3.3. The teaching methodology

The use of the semi-authentic discourse samples was the backbone of the teaching of pragmatics. Because each discourse sample lasted approximately 5 minutes, not one was analyzed in its entirety in a single class. Before playing the recording, the teacher explained the context. Then, she played the sample three times without comment. Specific questions to students about general content elicited details about meaning. At the next stage, more detailed questions about the pragmatic impact were asked. Confident students usually responded first. In addition to the listening and aural analyses of the discourse samples, there followed focused written tasks associated with the text; these tasks required identification of certain features—for example, the pragmatic purpose of repeating a word, or the use of a softener. These written tasks could be done individually, with a peer, or in a small group.

In addition to this work, there was explicit teaching of a range of pragmatic features, which were identified in the listening and analysis class work. Each student was referred to an online glossary of pragmatic terms and features. In the class content, the instructor aimed to introduce the most common pragmatic features first, such as intonation and stress, hesitators, or softeners. Only three pragmatic features were taught per class, although more features were often referred to as they were embedded in the discourse sample. The reason for this was in part because, according to Scarino (2009), pragmatic awareness is a developmental process that needs time. She also referred to the fact that students need to capture their own "participation in communication, understood as the interchange of meaning, and their reflective analysis of what is at play, in particular instances of communication across cultures" (Scarino, 2009, p. 68).

While the metalanguage for class discussion was being learned, easier samples were discussed. When students used their own terminology, this was accepted, and then the typical pragmatic term was introduced and clarified. Sometimes, there was disagreement among the students regarding the pragmatic meaning of an utterance. The disputed phrase would be discussed, thus clarifying the context, exploring the relationship between S and H, and trying some variation in the intonation and prominence or stress. However, the instructor pointed out that sometimes, a speaker may actually demonstrate ambivalence because, as Leech (1997) reminds us, "It is often in the speaker's interest, and in the interests of politeness, to allow the precise force of a speech act to remain unclear" (p. 99).

All of the discourse samples had been listened to and analyzed within 8 weeks. Every 2 weeks, the students wrote a reflective blog—four blogs in all. First, they transcribed a short conversation or part of a conversation in which they had participated or observed. Then, they were asked to analyze it for any pragmatic meaning and pinpoint the various pragmatic features that were present. Next, they were asked to compare the words used with their first-language lexical equivalent, and then with the sense equivalent. Finally, they were asked how the differences would affect interpreting the conversation into their mother tongue. The task guidelines were as follows:

- How was the pragmatic meaning shown? (Sarcasm/ exaggeration/ softeners/ hedging/ understatement/ sentence stress & intonation/ other)

- Would the equivalent words when interpreted into your LOTE carry the same pragmatic meaning? What does this mean to you as an interpreter?

4. Results and discussion

Critical reflection of the results of the teaching activities and cross-referencing of the different data sets lead us to make conclusions about the effectiveness of this teaching approach. Analysis of the data from the reflective blogs showed an increase in the number of students showing awareness of all the pragmatic features. The survey data provided evidence that the learners did make use of their awareness of the pragmatic features targeted in instruction in their own interactions both inside and outside the classroom. Although there may have been an element of "pleasing the teacher" in these survey responses, earlier data from the blogs detailing the development of awareness could not have been contrived because identification of features was not possible without awareness. The blog data are shown in Figure 1, and the development of awareness that was extrapolated from the blog data is detailed in section 4.1.

4.1. Blog Data Analysis

The most noticeable increase in student awareness of pragmatic meaning during the period of instruction was in the area of stress and intonation. This was due to the classroom input, as this area was referred to in the first class and consistently thereafter. It was a new concept for many of the interpreting students who had learned English as a Second Language, and thus, it had added impact. Additionally, in this class, some time was also spent on developing clear and fluent English pronunciation, so stress and intonation carried a double learning load.

Cross-cultural awareness was a matter of high interest to all of the students, and an increase in conscious awareness of cross-cultural differences was the next most notable change in their reflective notes. We also noted a considerable rise in student awareness of pragmatic impact in the area of hesitators. This feature was introduced early in the curriculum and was prominent in the discourse samples being analyzed. Hesitators, although common in English interpersonal communication, are often not "noticed" by interpreters, who may focus on the message rather than on an interruption in the smooth delivery of the message. As it became clear that hesitators also carried sociopragmatic meaning, these interpreters in training were able to adjust to the pragmatic meaning of an utterance.

The pragmatic meaning of softeners and silence (or its lack) in English also featured strongly in students' changing awareness of pragmatic features. Softeners are a noticeable feature of New Zealand (NZ) English interpersonal communication. They are often used in the workplace environment to provide a more egalitarian discourse, as equal status is a cultural ideal if not a reality. Silence, on the other hand, is seen as socially inappropriate in NZ English; thus, it is typically avoided. To ensure that a speaker's turn is not interrupted, hesitators or repeated words are often used (Holmes, 2001).

Awareness of in-group language also had 30% growth. It had limited occurrence in the discourse samples used but occurred often in the language samples chosen by the students for their blog analyses. In-group language is commonly a feature of informal language or of closed groups, both of which are reflected in student conversation. This feature was introduced later in the class curriculum but had high interest for the students.

Politeness strategies of NZ English became easier to recognize when the purpose of softeners and the aim of egalitarianism in workplace requests became familiar. In their later blogs, students recognized and reflected on politeness strategies, particularly in a cross-cultural context, as they came to understand the use of stress to highlight desired lack of imposition or to define a task.
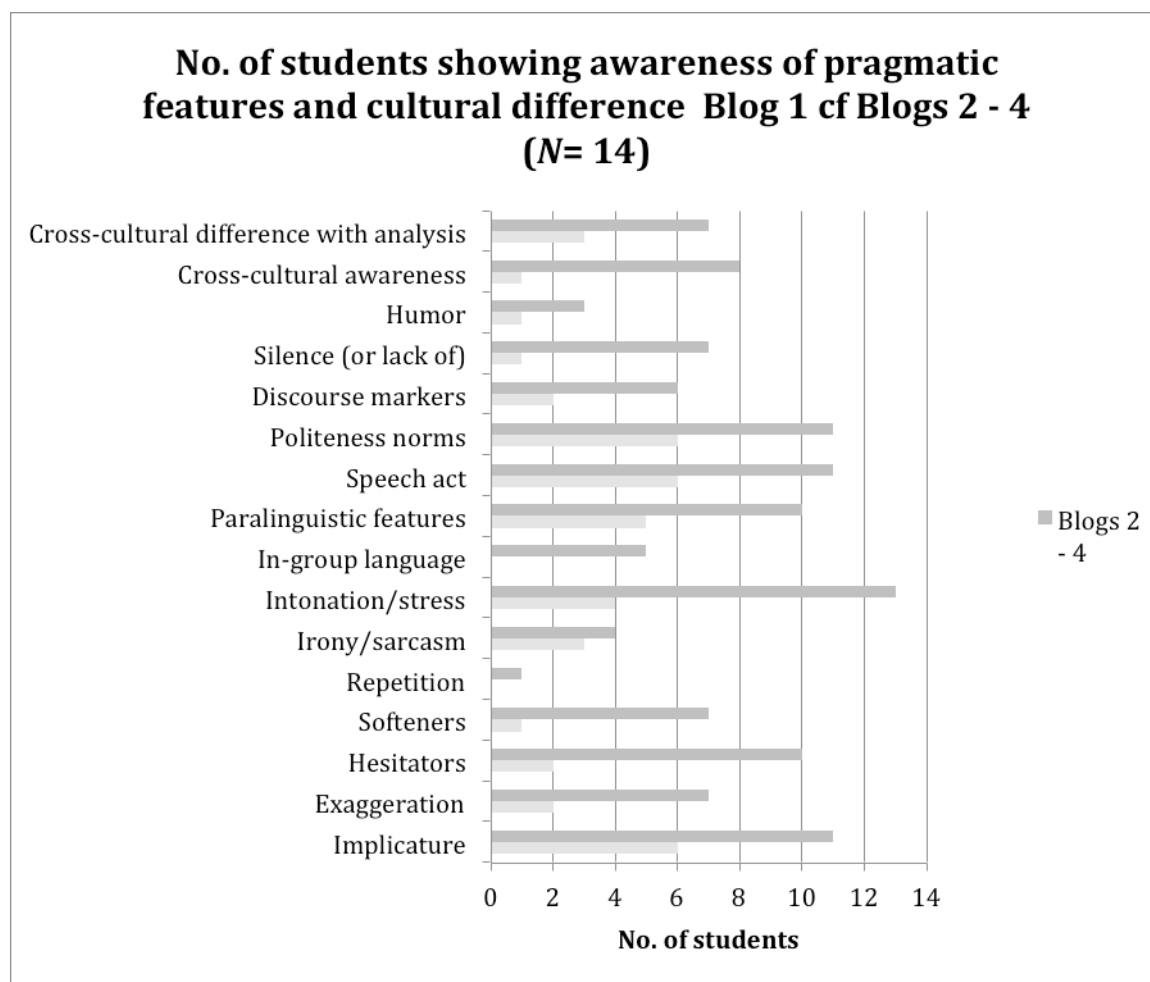

Figure 1: Growth of awareness of pragmatic features and cultural difference, using the first blog as the baseline

Paralinguistic features—for example, a sigh, a short laugh, or an expressive "ahh" were specifically introduced in the classroom after the second blog posting was written. However, this area showed considerable growth, as it proved to be an area of salience in the discourse samples and of high interest to 30 percent of the students. Discourse markers and speech acts that were introduced halfway through the course were not noticed much by students and were, perhaps, too theoretical to engage the students' interest. Occasionally, in the blogs, there were unsolicited comments about the class content that affirmed this approach to teaching pragmatics to interpreters. Two such comments can be seen in Example 4.

Example 4: Examples of students' unsolicited blog comments

This tells me: as an interpreter, when we try to interpret something for people, we not only need to listen carefully what it has been pronounced, but should also be aware of cultural background of the speakers during the conversation. And it is very important for the interpreter to take the context of the conversation into account when we interpret for other people. (Mandarin 2, blog 2)

As an interpreter, especially legal interpreter, it has been very useful to learn about pragmatics because legal interpreter is the voice of the non-English speaker on courts and s/he should render a complete and accurate version of the Source Language message by conserving every single element of information including every pragmatic feature like sarcasm, exaggeration, softeners, hesitation, hedging, sentence stress and intonation. An equivalent message which keeps the same meaning, implied meaning, language level and register is critical to the outcome of the case. Any change from source language to target language can affect the credibility of [the] witness. (Mandarin 11, blog 4)

4.2.   Survey data analysis and student comments

The survey questions (as seen in Appendix) focused on the students' perception of their understanding and increased understanding of pragmatic features. Fourteen of the 29 interpreting students had agreed to participate in the research. All of their responses were positive and affirming. One student responded to the survey question by writing the following observation:

If I do not take this paper [subject], I will not think about the implied meaning or why a joke is funny . . . Now when I talk to someone in English I always think what this person is trying to tell me and what he/she wants from me.

Students gave examples of their interpreting into the target language to show the pragmatic purpose of an utterance since their learning about the impact of pragmatics on meaning. A Cantonese speaker commented that in English, among young teenagers, the phrase "I'll call you later" meant an invitation refusal. Thus, she would interpret it into the equivalent "I'm not coming." Conversely, the phrase "You have a dragon knife in your hand" would be interpreted into English as "How can I refuse your request?" as the source-language statement implied social powerlessness on the speaker's part.

There were many comments from students on how much better the social expectations of New Zealanders were understood and how politeness was often shown using softeners in NZ English.

I believe, learning about pragmatics has been very useful in participating in English conversations, because, as I notice things I understand things better than before. As an interpreter I have also started to analyse whether the pragmatic feature would be used the same way in my LOTE [language other than English] and if not, then what would be the alternative, and the reflective

> journals have helped me develop the habit of noticing the pragmatic features in English as well as my LOTE which is Urdu. Overall, I believe learning about pragmatics is highly useful for interpreters, as it helps you understand things better, as pragmatics provides an in depth explanation of every word we use in our sentences and shows when to say what, why we have said it and how to say it. (Urdu 1, survey 1)

Only one respondent answered that she had not noticed growth in her awareness of pragmatics in NZ English, but she ascribed this to the fact she has lived in New Zealand since she was 4 years old and, thus, had grown up with the cultural understanding of NZ English pragmatic use.

Six months after the semester had ended, 86% of the survey respondents reported that they still consistently noticed the pragmatic content in NZ English conversation; the remaining 14% responded that this happened only when they were interpreting. Eighty-six percent also reported that their awareness of cross-cultural differences had increased as a result of the classroom work and that their cross-cultural awareness was continuing to develop. One respondent wrote "I've also started thinking about what [other] 2nd language English speakers might misconstrue." Generally, there was acceptance that pragmatic features were present in most NZ English conversations that they listened to or participated in. The responses affirmed the usefulness of the class content and the effectiveness of this teaching method for developing pragmatic awareness among interpreters.

4.3. Conclusion

The results illustrate that using the naturalistic semi-authentic discourse samples in the classroom led the students to an explicit awareness of pragmatic features being used in NZ English conversation. Of particular benefit was the classroom analysis which focussed on word stress and intonation. These features were then consciously analyzed by the students in their reflective blogs. The data from the blogs also showed how much the students had learned to listen for and identify implied meaning, politeness strategies, and the purpose of speech acts. Interpreters often disregard hesitators and repeated words because these individuals are listening for the actual message, which they then interpret. Thus, the growth in awareness of the pragmatic purpose of hesitators and repeated words in conversation may lead to a more sensitive message in the target language when these students begin to work as interpreters.

Generally, there was evidence of considerable growth of awareness of cross-cultural differences and their means of expression. Although teaching pragmatics may be difficult, it is of great importance to interpreters. A Mandarin speaker summed it up: "[P]ragmatics to understanding the source language is like water to fish."

As the number of participants in this single class is small, these results cannot be generalized. However, with the wealth of qualitative data, similar results may be obtained in other teaching contexts. In continuing research into teaching the pragmatics of NZ English to learners of English in New Zealand, it is hoped that these results will be confirmed. Other interpreter educators and researchers may consider implementing this approach in teaching interpreters of spoken and signed language about pragmatic features of spoken language. The authors are considering future research with colleagues in the Faculty of Health, into the teaching of awareness of the use of pragmatics in medical discourse between professionals and patients. Another area for future research into the teaching of pragmatics to student interpreters could focus specifically on legal discourse.

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6. Appendix

Oral Discourse for Interpreting: Assessment 1—Reflective Journal

Instructions: During the first 8 weeks of the semester, you will keep a fortnightly journal of your growing awareness and understanding of the pragmatic content of English conversations based on the conversations that we study in class and those that you participate in or listen to. You will also comment on the differences between the pragmatic content of equivalent situations in your Language Other Than English (LOTE). Each entry will be approximately 400 words and will include examples that you have analysed pragmatically.

To assist you with your journal writing for the first three entries, think of a conversation you recently heard or took part in and then try to answer the following questions:

- Who were the participants in the conversation? (friends or strangers or classmates)
- Where was the conversation taking place?
- What did the participants want from each other? (friendship/help/a good time/sympathy/other)
- How was the pragmatic meaning shown? (body language/ sarcasm/ exaggeration/ softeners/ hedging/ understatement/ sentence stress and intonation/ other)
- Would the equivalent words when interpreted into your LOTE carry the same pragmatic meaning? What does this mean to you as an interpreter?

Week 8: Final journal entry survey. Please answer these additional questions:

- Did the pragmatic features we study in class help your understanding of spoken interaction?
- How useful were the classroom examples and learning materials?
- Do you feel you understand more about pragmatics than at the beginning of semester? Please comment.
- Has learning about pragmatics been useful for you as a participant in English conversations, and as an interpreter?

Survey 6 months later—trigger questions:

- Do you still notice the pragmatic content in English conversation . . .

  □ a. All the time?   □ b. Only when interpreting?   □ c. Occasionally?   □ d. Not at all?

- Do you think you can now understand and respond more automatically to pragmatic content when taking part in English conversations? If yes, please give examples.
- Have the features you studied in class been part of the everyday conversations you have heard or participated in during the last 6 months? If yes, please give examples.

Developing Expertise Through a Deliberate Practice Project

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Abstract

Ericsson (2001) defines *expertise* as follows, "Expert performers can reliably reproduce their performance any time when required such as during competition and training" (p. 194). Merely practicing a skill repeatedly will not result in expert performance. However, "deliberate practice" can improve performance. Deliberate practice is defined as "…tasks that are initially outside of their current realm of reliable performance, yet can be mastered within hours of practice by concentrating on critical aspects and by gradually refining performance through repetitions after feedback" (Ericsson 2006, p. 692). Mindset effects deliberate practice. Dweck (2006) describes two types of mindset: fixed and growth. A fixed mindset perceives intelligence and ability as static despite effort. A growth mindset embraces effort as a means to improve ability. Closing the gap between graduation and certification may be facilitated by deliberate practice. This action research project describes the introduction of deliberate practice and mindset in an interpreter education program.

Keywords: expertise; deliberate practice; mindset; action research; graduation–certification gap

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Developing Expertise Through a Deliberate Practice Project

Learning is not attained by chance, it must be sought for with ardor and attended to with diligence.

Abigail Adams

1. Introduction

Students in American Sign Language (ASL)/English Interpreter Education Programs (IEPs) in the United States are faced with the daunting tasks of mastering interpreting theory and skills while often still acquiring ASL as a second language. Interpreter educators are asked to provide a foundation in both interpreting and language skills in a mere 4 years for baccalaureate degrees (and in 2 to 3 years for associate of arts programs). Witter-Merithew and Johnson (2005) explore the length of time required for IEP graduates to gain national certification. They cite the following 2005 statement from the Registry of Interpreters for the Deaf (RID) website confirming that many graduates are still not ready to achieve certification by the time they graduate: "[G]raduates should be able to pass the written portion of the national certification examination, but . . . it typically takes 3–5 years of experience and in-service training, post graduation, to pass the performance portion of the national certification examination" (Witter-Merithew & Johnson, 2005, p. 77).

Candidates who successfully pass the National Interpreter Certification (NIC) administered conjointly by the National Association of the Deaf and RID must demonstrate a minimum level of competence. Although there are now several levels of certification (i.e., certified, advanced, and master), reference here is made to certification generically. As the national standard of professional interpreting, RID certification implies a certain level of expertise. Ericsson and Smith (1991) define expertise as "what distinguishes outstanding individuals in a domain from less outstanding individuals in that domain" (p. 2). Ericsson (2001) goes on to further refine this definition by stating, "Expert performers can reliably reproduce their performance any time when required such as during competition and training" (p. 194).

The development of expertise requires structured time-on-task (Ericsson, 2007a, 2007b). Ericsson argues that merely practicing a skill repeatedly does not result in expert performance; however, deliberate practice can improve performance and eventually lead to expertise. *Deliberate practice* is defined by Ericsson (2007b) as "tasks that are initially outside of their current realm of reliable performance, yet can be mastered within hours of practice by concentrating on critical aspects and by gradually refining performance through repetitions after feedback" (p. 692). Examples of deliberate practice include musicians devoting hours to mastering technical skills or basketball players repeating free throws.

A unique aspect of learning a signed language, generally speaking, is that students are asked to master both the intricacies of language and psychomotor skills. Deliberate practice can help students deepen learning that is taking place in the classroom. In addition to the activities performed when practicing deliberately, another factor can significantly influence a novice's progression to expertise. *Mindset,* which is defined as the perspective with which one approaches new tasks, can support or undermine one's efforts. Dweck (2006) describes two mindsets:

fixed and growth. A *fixed mindset* perceives intelligence and ability as immutable and not subject to change despite effort. A *growth mindset* "is based on the belief that your basic qualities are things [that] you can cultivate through your efforts" (Dweck, 2006, p. 7).

Since developing expertise requires explicit instruction and deliberate practice there are implications for educators. *Action research* is a form of research typically undertaken by educators with the intent of improving teaching. Set in the classroom, action research employs a "systematic, problem-based, data-based and valid approach" to research (Gay & Airasian, 2000). After identifying a problem or topic, the steps in this research methodology include data gathering, decision making, and instructional design to enhance learning.

This article presents the findings of an action research project undertaken at Northeastern University addressing the factors of expert performance, deliberate practice, and mindset through the lens of the Growth-to-Competence (GTC) Log requirement of interpreting skills courses. Although the project was originally conducted with ASL interpreting students, the implications for deliberate practice are relevant to spoken and signed language interpreter educators worldwide.

2. Interpreter education

Witter-Merithew and Johnson (2005) identified four issues that IEP students raise when asked about their pre-service educational experience. These issues include insufficient mastery of ASL, the challenge of simultaneously learning ASL and interpreting, the length of time needed for sufficient professional development in order to pass national certification standards, and the density of the curriculum (i.e., the amount of information incorporated into the program).

The Entry-to-Practice Competencies identified by Witter-Merithew and Johnson (2005) specify 34 attributes and skills that "are intended as a comprehensive statement of essential skills, knowledge, and attributes required for successful practice based on current market and practice trends with attention to indicators for future trends" (p. 71). Although these 34 traits are desirable, it is recognized that recent graduates of interpreter education programs have not mastered them. According to Witter Merithew and Johnson, "[T]he field of interpreter education will have to continue to evolve in order to graduate entry-level practitioners who are certification-ready at the time of, or soon after, program completion" (p. 76).

Contemporary adult learning theory stresses the need to offer authentic learning opportunities that allow students to take control of their own learning. Reigeluth (1999) challenged educators, stating, "To help all learners reach their potential, we need to customize, not standardize, the learning process" (p. 27). IEP curricula are dense. Simultaneously balancing the desire to expose students to all that they need to know and allowing students to integrate this information into their own schema for learning presents all IEPs with a significant challenge.

3. Expertise, deliberate practice, and coaching

Becoming a competent interpreter involves the mastery of not only ASL (i.e., competency in the development of linguistic and psychomotor skills) but also the interpreting process. There are three basic steps in the process of facilitating psychomotor skills: Imparting knowledge content, imparting basic skills, and developing proficiency (i.e., speed, stamina, and accuracy; Romiszowski, 1999). Educator feedback that is provided on psychomotor skills practice should focus on results and on correcting performance. This is a core component of deliberate practice. In addition, students must be encouraged to engage in self-reflection about their skills to develop the necessary metacognitive abilities to monitor their work. Care must be taken, however, that these self-reflections are tempered with the reality of instructor feedback. Kruger and Dunning (1999), in their discussion of self-assessment, illustrate the pitfalls of unskilled practitioners engaging in self-assessment. The authors describe different studies in which such unskilled practitioners lacked the meta-awareness to see their own lack of

proficiency and, as a result, overestimated their abilities. With faculty guidance, students can develop the awareness necessary to accurately critique their own work.

According to Ericsson (2007a), Galton's[2] studies in the 19th century concluded that innate factors had more to do with the attainment of superior performance than did environmental elements or learning. The view that biology—not environment—was deterministic held until the late 20th century, when a burgeoning body of research found that measures of IQ were not predictive of expert performance and that differences between superior performers and ordinary ones "nearly always reflect attributes acquired by the experts during their lengthy training" (Ericsson, 2007a, p. 10). Galton's argument that nature trumps nurture has been challenged through contemporary research in which authors studied expert performance. Colvin (2008) stated, "Some researchers now argue that specifically targeted innate abilities are simply fiction" (p. 6).

There is an extensive body of research available on the development of expertise and expert performance in areas as diverse as music, dance, and athletics (Colvin, 2008; Ericsson, 2001, 2007a, 2007b; Ericsson & Smith, 1991; Ericsson, Charness, Feltovich, & Hoffman 2007; Gladwell, 2008). The techniques used by experts in other fields to achieve superior levels of performance can inform interpreting pedagogy to facilitate the development of expert performance among novice interpreters. This may result in more rapid professional development that may shorten the time between graduation and attainment of professional credentials.

Deliberate practice includes several specific components. Before practice begins, students—with instructor input—set improvement goals for specific performance. Next, the instructor devises training activities to incrementally improve precise aspects of performance. Students engage in practice activities for a specific period of time. Finally, an instructor or coach provides feedback so that the activities can be repeated and improved (Clark, 2008).

For example, Clark (2008) reported on a study conducted by Zimmerman (2006): In this study, the author assessed the improvement of college basketball students' free-throw skills. The study included three steps: (a) goal setting, (b) performance monitoring, and (c) self-reflection (which enabled the participant to make adjustments after missed throws). Participants were divided so that the first group engaged only in goal setting, the second group engaged in both goal setting and performance monitoring, and the third group engaged in all three steps including self reflection. The first group demonstrated performances that were inferior to those of the second and third groups. With basketball free throws, students can self-monitor performance readily, regardless of whether the shot is made. This model may inform approaches in interpreting pedagogy. However, interpreting students may lack the metacognitive skills necessary to ascertain whether an interpretation is successful; hence, instructor feedback is crucial.

Winston (1990) provided an example of using coaching techniques with interpreting students. Although very similar to the process described by Ericsson (2007b) for deliberate practice, in this case, individual goal setting was not undertaken in conjunction with students. Winston identified "accent reduction" as the goal and invited students who were interested in improving their "accents" in ASL to participate in the study. Initially, students filmed themselves signing a 5-minute text. Then, these samples were analyzed for two specific components: sign articulation and overall gestalt.[3] The instructor reviewed the tapes and highlighted areas for improvement in either of the two specific aspects. Then, students were encouraged to practice viewing their own tapes, applying selective watching techniques to identify these errors as well as watching native signers to observe proper execution. In addition, students were encouraged to copy or shadow these features with the intent of incorporating these markers into their own ASL discourse. After additional practice and meetings, the instructor noted improvement in both sign articulation and gestalt production among the participants. The students reported that this structured approach to accent reduction was beneficial.

Through the process of deliberate practice, physiological and cognitive mechanisms are gradually changed, thus allowing for performance improvements. One such mechanism is that of *anticipation*. Experts in several domains (i.e., typing, chess, and tennis) demonstrate an ability to anticipate moves before they occur. Interpreting students can learn to use anticipation in their work as well, even if they may not be able to predict the content of

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[2] Sir Francis Galton (1822–1911) created the field of eugenics. In *Hereditary Genius (1869)*, he argued that attributes such as intelligence were determined strictly by heredity. He advocated selective breeding to enhance these inherent qualities.

[3] Winston (1990) describes *gestalt* as including "eye gaze, use of space, head nodding and phrasing"(p. 6).

interpreting situations. For instance, knowing that inquiry texts have predictable components such as turn taking and adjacency pairs can allow an interpreter to anticipate what may follow an utterance.

Time-on-task when engaging in deliberate practice is also an important consideration. Acute concentration is an essential ingredient of deliberate practice, but there are obvious limitations to the amount of time in which one can practice at peak levels. Ericsson (2007b) reported that experts practice daily for a period of 1 to 5 hours, depending on the domain. Over time, the accumulation of daily practice contributes to the development of expertise. The expectation of hours of daily practice for students and practitioners should be made explicit in interpreter education.

Research has indicated an ideal target exists and must be met in order for time on task to achieve expert performance. For example, a study of expert violinists revealed by the age of 20 years, those destined to be world-class soloists had logged more than 10,000 hours of practice, as compared with 4,000 hours for violinists preparing to be music teachers. Studies of experts in chess and other domains indicate the presence of a "10-year-rule" that is seen as an average period of intense preparation needed to perform at the international level in sports, arts, or the sciences (Ericsson & Smith, 1991; Horn & Masunaga, 2007). This 10-year-rule, or 10,000-hour practice minimum, is also evident in the accomplishments of many world-class performers ranging from Mozart to the Beatles (Gladwell, 2008).

A pedagogical implication from research on expert performance and deliberate practice is that interpreter educators must engage with students in a relationship akin to mentoring or coaching, in which individualized goal setting and feedback become an integral aspect of the learning experience. From this pedagogical implication stems yet another implication: that class time may need to be restructured to enable more individualized face-to-face feedback opportunities, or that time for faculty–student interaction must occur outside the classroom. This expectation may be difficult to implement, given the current staffing patterns in interpreter education programs.

Interpreter education programs often rely heavily on adjunct teaching staff. In the *ASL Interpreter Education Programs Needs Assessment: Final Report,* Cokely and Winston (2008) reported that of the interpreting education program teachers who responded to a national (U.S.) survey, only 38% were full-time staff members. The remaining 62% were adjunct staff. Because part-time staff members earn relatively modest amounts and are not compensated for time outside of instruction, opportunities for one-on-one feedback for students must occur in the classroom. If deliberate practice is incorporated into the pedagogical approach of interpreter education, then a key element will be restructuring faculty resources so that coaching time with students is abundant.

4. Mindset

Mindset can affect expert performance. Dweck (2006) is a recognized leader in the study of mindset within the broader field of educational psychology. Mindset research asks whether people come to believe that the ability to learn is biologically based on factors beyond our control (genetics) or whether learning can ultimately be influenced through instruction and practice. Those who believe that qualities such as intelligence, aptitude, and ability are immutable and bestowed at birth are described as having a "fixed mindset" (Dweck, 2006, p. 6). This view harkens to that of Galton from the 19th century (referenced earlier in this article; see Footnote 2).

A domino effect stems from the belief that intelligence is static. There is a tendency to avoid challenges, to give up easily when faced with obstacles, to see effort as fruitless, to ignore constructive criticism, and to feel threatened by others' success. This *fixed mindset* results in a failure to achieve one's full potential. Studies across domains and ages show that this tendency appears very early in life and persists throughout adulthood. Because the belief is that how one performs is an absolute reflection of who one is, those with fixed mindsets are risk averse.

On the other hand, the *growth mindset* embodies the belief that basic qualities such as intelligence and ability can be developed through effort (Dweck, 2006), which leads to a tendency to embrace challenges, persist despite setbacks, and see effort as a path to mastery. People may still experience failure, but instead of feeling demoralized and worthless, they will seek to learn lessons from the experience and use those lessons to inform future successes.

From the standpoint of learning, a growth mindset is desirable, as it allows for openness to new approaches. Conversely, a fixed mindset can result in resistance to change and experimentation. Dweck insists that people can change their mindsets through education. Often, by learning about fixed and growth mindsets, people who are of a fixed mindset can take steps toward a growth-oriented mindset. Changing one's mindset requires diligent effort to avoid falling into old patterns of thinking that may limit achievement.

5.   Action research context

In order to provide a context for the action research project, an overview of the ASL Program at Northeastern University (NU) is needed. Housed within the College of Social Sciences and Humanities, the ASL program at NU is a 4-year baccalaureate program that offers a major in ASL/English interpreting as well as several dual majors for students who wish to combine knowledge of ASL with training in other disciplines (e.g., psychology, theater, and human services). Commonly referred to as the "day program," this program requires the completion of 129 credit hours and offers courses in ASL, Deaf Culture and History, Linguistics, and Interpreting Skills. In addition to these core requirements, students typically enroll in additional core curriculum courses, thus providing them with an even stronger foundation in the liberal arts.

The interpreting track consists of four skills courses: Interpreting Inquiry Texts, Interpreting Narrative Texts, Interpreting Expository Texts, and Interpreting Persuasive Texts. When NU transitioned from a quarter-based system to a semester-based system in 2001, the ASL program revised the curriculum to better prepare students for workplace demands upon graduation. A study of typical assignments for recent graduates revealed the frequent occurrence of one-on-one interactions that involve dialogue interpreting and that are driven by inquiry interactions (e.g., doctor/patient appointments; Cokely, 2005). Yet nowhere in the existing curriculum were students explicitly taught the nature of inquiry texts or the demands of dialogue interpreting. Therefore, the curriculum revision was based on interaction and text types that students will encounter in the field after graduation.

Students in the day program are typically between the ages of 18 and 21 years. They begin the interpreting track as juniors. Some students transfer in at this time from other interpreter education programs, whereas many others continue into the interpreting track after having begun their college careers at NU. Students in the day program attend school full time. Furthermore, the cohort consisted exclusively of students who were learning ASL as a second language.

In addition to the day program, NU offers an evening program through the College of Professional Studies. The course requirements between the day and evening program are identical. However, classes in the evening meet once a week for a total of 2.5 hours, whereas the day program classes meet twice a week for a total of 6 hours. Also, students in the evening program are on a quarter-based system and thus meet less frequently than the students in the day program, which are on a semester-based calendar. Evening program students typically are of a nontraditional age and work full time. Often, students in the evening program already hold college degrees and are pursuing a certificate in ASL/English interpreting. As with the day program, all students in the evening program who participated in this study are learning ASL as a second language.

5.1. GTC activities and logs

In each of the four interpreting skills courses, students are required to undertake self-directed learning activities, which are GTC requirements that reinforce the working of classroom language instruction and interpreting skills development in both ASL and English. Historically, these activities have been entirely self selected and initiated. Students are provided with written guidance on activities to consider (but none were required) and a GTC log form to track their activities and time on task. Students select those activities that interest them, execute the

activities, and record their work on the log sheet. Examples of English language skills included reading *Time* magazine and doing the *New York Times* crossword puzzle.

The GTC requirement focuses on the following four areas: (a) English Language Development, (b) ASL Development, (c) ASL-to English Interpreting Skills, and (d) English-to-ASL Interpreting Skills. Although the activities might be beneficial for skill growth, no baseline skills were established nor documented, and no objectives or goals were established for measuring growth or success. The log form required only that the students record activities undertaken and time spent. There was no stated expectation of time on task.

Prior to this study, feedback was provided to students via written margin notes on activities that seemed promising. No face-to-face meetings between the instructor and students regarding GTC activities took place. Grading was basically pass/fail and was based on a subjective assessment of the quantity of work undertaken. Assessment was difficult because of the idiosyncratic nature of the work and the subjectivity/variability that is necessarily introduced when asking students to self-determine their individual growth.

In this study, we sought to determine whether aspects of deliberate practice—specifically, guided activities based on performance goals; face-to-face feedback (using a coaching-type model) on a regular basis; engagement in structured self-assessment; and a commitment to a minimum time-on-task expectation—would make the GTC activities more effective learning opportunities for students. Further, we also examined whether there was a relationship between a student's mindset and his or her approach to the GTC activities.

Given the demands expected of students upon completion of their interpreter education programs and entry into the field, GTC activities can be a stepping stone to expertise. Within academic programs, students can augment their classroom learning with self-directed activities that are tailored to their learning goals. Furthermore, learning how to identify these goals, select appropriate activities, receive individualized assessment feedback, and undertake self-assessment are key skills for ongoing professional development.

5.2. Research design

During spring 2008, six students in the day program and three students in the evening program taking the Interpreting Narrative Texts course (second course in the sequence) participated in this research study. Each student completed a "pre-research" questionnaire. I used this instrument to measure satisfaction and experience with the previous course requirement(Interpreting Inquiry Texts) for GTC logs.

In the pre-research questionnaire, I asked students to self-report their perceptions of skills growth in each category. Furthermore, I asked how much time they spent on each area of activity, the extent of faculty involvement surrounding growth-related activities, and a specific set of questions related to mindset.

I then asked students to identify specific goals for each of four skills development areas. The goals were finalized in individualized face-to-face meetings with the course instructor lasting approximately 20 minutes. On the basis of the goals, the instructor and student chose activities to be undertaken. Activities focused on the current skill set of the student and identified incremental steps that could be undertaken for improvement. So that I could measure growth over time, I encouraged students to incorporate measures such as frequent comparisons of their videotaped work or the use of monitor logs to document frequency of errors over time. Also, I asked each student to specify, in advance, an amount of time that would be dedicated daily for these activities.

Students were free to identify activities that they wished to undertake in order to accomplish their personal growth goals; however, the activities had to be approved by the instructor. For example, many students identified improved fingerspelling comprehension as an ASL language development goal. One activity involved practicing receptive fingerspelling via an online site. A record of successful comprehension was maintained. This documentation helped to gauge improvement over time. Once comfort was established with this drill activity, students then reviewed ASL narrative texts that contain embedded fingerspelling to practice comprehension in an actual text. With the premise of incorporating tasks that are just outside the current abilities of students, as described in deliberate practice, growth log activities could then be altered to incorporate ASL narratives, scaffolding the improving skills onto slightly more challenging material.

Once the goals and activities were agreed upon, students worked independently and submitted a formal GTC log along with supporting materials at pre-arranged meetings throughout the term. For the day students, four meetings were held throughout the semester, given the greater frequency of class sessions. For the evening

students, three meetings occurred during the term because the evening program is on a quarter schedule and has fewer sessions.

During these meetings, students would review the work undertaken, highlight specific activities by reviewing videotaped work with the instructor and/or supplying copies of prepared written materials (e.g., paraphrases of English source texts). They would identify activities that were helpful and thus should be continued as well as those that were not helpful and thus should be discontinued. In that event, substitute activities were identified jointly. Students were asked to leave all supplemental materials (e.g., videotaped interpretations) with the instructor for review. This would enable the instructor to provide students with more detailed feedback, thus augmenting the students' self-assessments.

When I conducted the project as an adjunct teaching staff member, meetings with students were planned during class time. This was less of an issue for the day program classes given the luxury of having 6 hours of class time each week as compared with the evening program (2.5 hours per week). The demands of the curriculum do require maximum class time, yet the benefits of implementing deliberate practice may, in the long run, outweigh the temptation to engage in "covering" as much material as possible.

Wiggins and McTighe (2005) described an approach to instructional design that challenges the traditional approach of "coverage." *Coverage* is defined as "an approach in which students march through a textbook, page by page (or teachers through lecture notes) in a valiant attempt to traverse all the factual material within a prescribed time" (Wiggins & McTigue, 2005, p. 16). Using an approach commonly known as *backwards design,* instructors facilitate learning by first establishing desired results, then ascertaining assessment evidence, and only then designing learning activities. This approach calibrates quite well with the principles and approach of deliberate practice.

Customizing learning through backwards design and deliberate practice may be challenging but worthwhile. The current approach of educating interpreting students produces significant numbers of graduates who are unprepared to meet the minimum standards of the field. Facilitating learning may require a reexamination of the structure of class time and reliance on adjunct faculty, who are only available for finite classroom periods.

At the conclusion of the term, all students—day and evening—completed a postresearch survey to measure their experience with this deliberate practice approach to GTC log requirements. The questions ask for a self-assessment of skills improvement. As mentioned earlier, Kruger and Dunning (1999) warned of the misperceptions—particularly, overestimation—of unskilled practitioners engaged in self-assessment without prerequisite metacognitive awareness. Through faculty-led feedback sessions, students were taught to look at specific aspects of their performance that were successful or lacking. If certain aspects were lacking, then improvement in these aspects was highlighted in subsequent GTC activities log submitted at each feedback meeting.

6.   Results

A comparison between the pre- and postsurveys in each cohort follows. A summary of the data reveal that implementing deliberate practice through established self-directed study goals, activities, and coaching resulted in almost universal self-assessed improvement in language and interpreting skills. With deliberate practice, students reported maintaining or increasing time-on-task for GTC log activities. Results on the mindset questions were mixed. The questions explored the perception of interpreting skills being innate (a fixed mindset) or the results of effort and practice (a growth mindset). Students responded favorably to structured meetings with faculty to discuss growth activities. Evening program students indicated full agreement with a growth mindset statement by the conclusion of the study, whereas some day program students continued to demonstrate a mixed view.

6.1. Survey comparison

Students completed a survey inquiring about their growth log experiences preceding the pilot and again at the conclusion of the pilot. Each question is listed with a summary comparing the results.

Question 1: How beneficial was the growth log requirement for improving your language and/or interpreting skills?

Day students: 100% reported "very" or "somewhat" beneficial results, an increase of 33%.

Evening students: 100% reported "very" or "somewhat" beneficial results, an increase of 100%.

Question 2: When thinking about your ASL skills, how much did they improve?

Day students: 100% reported "significant" or "some" improvement, an increase of 33%.

Evening students: 100% reported "some" or "limited" results, an improvement of 34%.

Question 3: When thinking about your English skills, how much did they improve?

Day students: 80% reported "significant" or "some" improvement, a decrease of 4%.

Evening students: 100% reported "some" or "limited" improvement, an increase of 50%.

Question 4: When thinking about your ASL-to-English interpreting skills, how much did they improve?

Day students: 100% reported "significant" or "some" improvement, an increase of 33%.

Evening students: 100% reported "significant" or "some" improvement, an increase of 33%.

Question 5: When thinking about your English-to-ASL interpreting skills, how much did they improve?

Day students: 100% reported "significant" or "some" improvement, an increase of 33%.

Evening students: 100% reported "some" improvement, an increase of 66%.

Question 6: How often did you meet with your professor to discuss your growth-to-competence log activities?

Day students: 100% met with faculty three or more times, an increase of 83%.

Evening students: 100% met with faculty three times, an increase of 100%.

Question 7: When you met with your professor to discuss Growth-to-Competence log activities, how helpful were these meetings?

Day students: 100% reported that meetings were "very helpful," an increase of 33%.

Evening students: 100% reported that meetings were "very" or "somewhat" helpful, an increase of 100%.

Question 8: How much time did you devote to Growth-to-Competence activities on a daily basis?

Day students: 100% reported spending 15 minutes or more on GTC activities on a daily basis, an increase of 33%.

Evening students: 50% reported spending 15 minutes or more on GTC activities on a daily basis, an increase of 50%.

Questions 9 and 10 focused on mindset. These answers were reported on the postpilot survey. The first question explores whether students view interpreting skill as an innate ability. This is indicative of a fixed mindset.

Question 9: True or false: Skilled interpreters possess innate abilities that give them an edge.

A "true" response indicates that the respondent may believe that innate ability is a criterion for skilled interpreting. Such a fixed mindset could imply that students may not fully embrace skills development activities because they believe that such natural talent is sufficient for skills improvement.

Day students: 60% of students indicated "true"; 40% indicated "false."

Evening students: 100% of student indicated "false."

Question 10: True or false: Interpreters develop their skills through practice and experience.

A "true" response indicates that the respondent believes that skills improvement can be achieved through skills development activities such as those described in this pilot. This view would be indicative of a growth mindset. All students agreed with this statement before and after the pilot.

In order to further flesh out interpreting students' views of mindset, additional research is warranted—particularly, crafting survey questions that more carefully segregate growth and fixed mindsets. As worded, the questions highlighted here could reflect someone who has a fixed mindset but who also perceives practice as beneficial.

7.   Summary and conclusion

All data are based on self-assessments by the students. No objective measure of improvement is available; however, the significant increases that were reported almost across the board indicate that students found the pilot beneficial. An exciting development was the number of students who planned to continue their GTC activities after the pilot was complete. Where students once saw the GTC requirement as drudgery, they now see it as a tool for professional development.

With one exception, students reported significant improvement in self-assessed language and interpreting skills. Furthermore, they reported greater satisfaction with the GTC course requirement and more frequent interaction with faculty on their individual learning needs.

One skill area—English Skills Development—decreased after the introduction of deliberate practice in the day program students. Investigation into why this decrease occurred would be beneficial for identifying activities and approaches to be avoided or, conversely, employed as part of deliberate practice. Anecdotally, students reported that English skills development is challenging, as it is their first language, and identifying areas for improvement, beyond vocabulary building, is more difficult than identifying needed improvement in their second language, ASL.

An interesting result occurred on the measurement of mindset. In the pre-survey, some students did exhibit a fixed mindset by agreeing with the statement that interpreting is an innate ability. By the end of the study period, fewer students agreed with the statement, but some still believed it to be true.

Ensuring validity in action research is challenging because the teacher undertakes so many roles when conducting the study (i.e., designer, implementer, and interpreter). Researchers can take steps to enhance validity such as using anonymity when completing surveys (Gay & Airasian, 2000). Anonymity was used for this study. One drawback, however, to anonymous survey completion is that it was difficult to tie pre- and postresearch results to a particular student, thereby marking specific individual change difficult to determine. This requires

some kind of tracking mechanism—perhaps, number identification—to ensure comparison between the pre and postresearch surveys.

Several areas for additional research include mindset, which offers an intriguing area for study. If mindset can be changed, as Dweck (2006) asserts, then helping students to identify their mindset—and helping those with a fixed mindset develop one that is growth oriented—may result in students taking more risks in the classroom and embracing self-directed learning activities by investing more time-on-task—both activities are necessary for the development of expertise.

Ericsson (2001) describes a three-step process for the study of superior interpreting performance on the basis of extensive research into expert performance in other domains. The first step is to analyze reliably superior performance of expert interpreters, identifying authentic tasks that "capture the essence of interpreting and show a clearly superior performance of the expert interpreters" (p. 209) and identifying and explaining mediating mechanisms that account for the superior performance. On the basis of this observation, practice activities can be identified that lead to the assimilation of those mechanisms (Ericsson, 2001, p. 209). Investigating the development of expert performance among accomplished ASL/English interpreters using this template may help to further uncover techniques used by practitioners to enhance their work. In addition, surveys of seasoned, nationally certified interpreters regarding their self-directed learning activities could help inform the development of deliberate practice within the field.

Implementation of deliberate practice pilots that are skill specific may help to identify techniques that can address common challenges for interpreting students. As Winston (1990) demonstrates with accent reduction, goal identification on behalf of students can result in improved performance. Common challenges among students include fingerspelling comprehension and production. Development of a pilot specifically geared toward improvement of these crucial skills could yield positive results and identify approaches that could be used with many interpreting students. However, given the idiosyncratic nature of teaching, learning, and skills development, some individualized goals will be essential for helping students achieve their maximum potential in the classroom—and these individualized goals should remain the centerpiece of deliberate practice.

8.   Acknowledgments

9.   References

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Using Web-Based Training to Improve Skills Among Bilingual Dual-Role Staff Interpreters

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Abstract

The growing demand for medical interpretation calls for innovative training approaches. The authors used a repeated-measures design with a comparison group to assess the impact of web-based training on the knowledge and confidence of staff who were hired in an administrative or clinical support position (e.g., registered nurse) as their primary role but who also use their bilingual skills to serve a secondary role as interpreter; these individuals are referred to as *dual-role staff interpreters*. The authors also explored the association between (a) gender, ethnicity, first and second language spoken; and level of education and(b) the improvement in knowledge and confidence. One-hundred fifty dual-role staff interpreters at a large health care system completed a pre-test followed by a web-based training and a post-test. The comparison group included 49 dual-role staff interpreters, all of whom completed the pre- and post-tests without taking the training. Mean knowledge scores for the intervention group increased significantly. Improved knowledge scores for the comparison group were not statistically significant. Interpreters' confidence did not improve. Significant predictors of improved knowledge scores were education and previous training. Online training could be a useful tool to enhance interpreters' skills.

Keywords: interpreters; web-based training; health disparities; limited English proficient (LEP) patients

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Using Web-Based Training to Improve Skills Among Bilingual Dual-Role Staff Interpreters[2]

1. Background

According to the 2000 U.S. Census, 47 million residents—nearly one in five—speak a language other than English at home. During the last few decades, this group has more than doubled (from 11.0% in 1980 to 17.9% in 2000), whereas the population that speaks only English has decreased (from 89% in 1980 to 80% in 2007; Shin & Bruno, 2003; Shin & Kominski, 2010). Similarly, the 2000 U.S. Census reported that more than 40 million U.S. residents do not speak the same language as their health care providers, and more than 21 million are considered *limited English proficient* (LEP), speaking English less than fluently. California has some of the most racially, ethnically, and linguistically diverse communities in the United States, with 26% of its residents being foreign born—the highest percentage of any state in the nation (Grant Makers in Health, 2003). California represents one of the fastest growing LEP populations in the country, with a growth of 42% between 1990 and 2000. In 2005, 42.3% of Californians 5 years of age and older were considered LEP, compared with 19.4% of the total U.S. population (Moreno, Otero-Sabogal, & Newman, 2007).

Changing demographics are not just limited to the United States; global migration to European countries has increased since 2000 (Herm, 2008). In 2005, migrants made up 8.5% of the European population. Similar to the United States, Europe—with an increased proportion of migrants—is facing the formidable challenge of how to provide high-quality language services to its foreign-born residents. Language and communication problems among patients with medical providers in European countries mirror the difficulties seen in the United States. Priebe and colleagues (2011) conducted a study to identify the experiences of providing health care to European migrants; participants were 240 health care professionals in 16 European countries (covering more than 85% of the European Union [EU] population). These authors found that most participants reported experiencing language barriers when attempting to communicate with doctors. Immigrants' inability to communicate their medical concerns due to language difficulties put them at risk for being misunderstood and misdiagnosed. Participants reported that patients undergo extensive physical examinations and diagnostic tests to compensate for the inability to communicate. With the changing demographics in the United States and Europe, the implications for language services and trained bilingual health care professionals are enormous.

Language barriers in health care may ultimately result in poorer clinical outcomes (Standing & Chowdury, 2008) and increased medical errors (Witmer, Seifer, Finocchio, Leslie, & O'Neil, 1995) as a result of patients' and providers' inability to communicate with one another regarding symptoms, diagnosis, and treatment options. It has been shown that inadequate interpretation services increase the chances that patients will not be able to follow doctors' orders, creating an indirect hidden cost in health services (Woloshin, 2005). From the patient's point of view, pervasive language barriers easily discourage them from seeking timely medical care. Not surprisingly, non-

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[2] *Editorial note: IJIE and the Conference of Interpreter Trainers does not endorse the use of unqualified interpreters in any context but recognizes the value in providing training to those people who are employed in hospitals and who may be called upon to interpret.*

English-speaking patients are reluctant to seek services from providers who are unable to communicate effectively with them. For example, a study of the use of two prenatal clinics in the southwestern United States revealed that Spanish-speaking women would consciously avoid a clinic whose staff had no bilingual capabilities (Ngo-Metzger et al., 2007).

Language barriers in health care impede access to care regardless of the country of origin. The collapse of the Soviet Union in 1989 substantially increased the numbers of refugees and immigrants to the United States from that region. A qualitative study to explore the experiences of various age groups of immigrant women from three former Soviet Republics (Belarus, Russia, and Ukraine) indicated that because of language barriers, women had difficulty discussing with physicians the medications that they were taking (Ivanov & Buck, 2002). Similarly, in the last decade, Spain has become one of the countries in the European Union with the highest number of immigrants. About 64.5% come from Latin America, 22.1% come from Africa, 9.3% come from Europe, and 4.1% come from Asia. A study from the Spanish National Health Survey (NHS) in 2006 showed that immigrants reported that language barriers led to more frequent use of emergency services (Carrasco-Garrido, Jiménez-García, Hernández Barrera, López de Andrés, & Gil de Miguel, 2009).

Overcoming language barriers to access health care is critical for the well-being of millions of patients who do not speak the same language as their medical provider. The United States and Europe lack sufficient bilingual providers to meet the overwhelming linguistic needs of patients. The use of a large contingent of onsite professional medical interpreters is perceived as too costly for health care institutions of all sizes. Consequently, medical providers resort to other means of communicating with their patients—including enlisting family members, friends, and bilingual staff whose primary job responsibility is not medical language interpretation. Hiring certified medical interpreters should be the gold standard practice to provide the best interpretation to patients. However, the use of untrained bilingual staff who may lack the required education, knowledge of medical terminology, and familiarity with interpreter protocols is still a common practice in health care settings in both the United States and Europe. These bilingual staff members are often referred to as *dual-role staff interpreters* because they were hired in an administrative or clinical support position (e.g., registered nurse) as their primary role, but they also use their bilingual skills to serve a secondary role as interpreters. Often, organizations such as the one in this study employ professional interpreters for face-to-face interpretation needs, but the demand exceeds the capacity, and the company then must resort to bilingual staff serving as interpreters. Although this practice has its limitations, it is critical that companies provide high-quality training to bilingual staff so that they effectively serve as dual-role staff interpreters when professional medical interpreters are not available; such training has the potential to ultimately enhance patient services through improved patient–provider communication.

Ensuring competent medical interpreters for patients can improve quality of care, patient satisfaction, and follow-up care, and can reduce unnecessary testing, misdiagnosis, and inappropriate treatment (Hutchins, Fiscella, Levine, Ompad, & McDonald, 2009). In the United States, the Office of Civil Rights Title VI Act of 1964 recommends that all medical interpreters be tested for language competency and trained in interpreter skills (U.S. Office of Civil Rights, 1964). Specifically, the California Healthcare Interpreting Association (CHIA) recommends that all medical interpreter trainings include interpreter skills, interpreter code of ethics, cultural competence, role of the interpreter, and medical terminology (California Health Interpreters Association, 2002). Additionally, training should incorporate an evaluation to measure competency in skills, ethics, terminology, and roles (Hutchins et al., 2009). Regardless of U.S. legislation, a formal standard to train medical interpreters does not exist yet, and the responsibility of fulfilling training recommendations is left to individual health care facilities Despite the mandatory interpreter law in the U.S., the use of professional interpreters remains low as shown by a study conducted in four Boston emergency departments. However, most patients brought a friend or family member to serve as the interpreter for the clinical encounter (Ginde et al, 2010). In European countries the movement towards having legislation to formalize interpreter's certification and to standardize training is very slow. Spanish legislation is moving toward recognition of sign languages and the suitability of bilingual education for deaf students at all educational levels (Fernández-Viader &Fuentes, 2004). In Switzerland, a survey of attitudes and practices regarding communication with LEP patients found that there is variation across professions and hospital departments at the Geneva University Hospitals (Hudelson &Vilpert, 2009).

1.1. Health care interpreting standards

Interpretation in a medical context requires very specific skills. Merely being "bilingual" does not automatically make an individual an effective interpreter. Quality interpretation requires not only proficiency in both languages, including specialized medical terminology, but also "critically important memory skills, the ability to negotiate a three-way conversation, and basic knowledge of cultural attributes that can influence health" (Grant Makers in Health, 2003). To date, many countries lack a national mandate requiring the use of trained interpreters to communicate with foreign language–speaking patients, and consequently, institutional policies concerning language assistance vary considerably from nation to nation. The U.S. standards of practice for interpreters are more developed than those of other countries (Hudelson & Vilpert, 2009). The U.S. Health and Human Services Office of Minority Health (OMH) developed Culturally and Linguistically Appropriate Services (CLAS) (Health and Human Services Office of Minority Health, 2001) as standards for access to language services and organizational supports for cultural competence. Following HHSOMH's lead, CHIA (2002) also developed standards of practice, which "serve as the basis for the development of interpreter training curriculum" (p. 10-14) and was used to develop the web-based training for bilingual dual-role staff interpreters for this study.

1.2. Web-based education

In recent decades, there has been a rapid growth in online learning for health care professionals to fulfill continuing education requirements (Pullen, 2006). More than 1.6 million students took at least one online course in 2002 (The Sloan Consortium, 2003). Studies show that students learn best with a medium that allows for interaction with a teacher and reflection-in-action which means to reflect critically in day-to-day practices and life. (Liaw, Pearce, & Keppell, 2002). The advent and convenience of the World Wide Web allows health care workers to participate in interactive learning using video vignettes, case studies, and question–response methodology at times that are convenient for their schedules.

Health care interpreting experts recommend that training move beyond development of linguistic skills and the discussion of professional codes of ethics to incorporate specifics of the medical setting and the interpersonal role of health care (Angelelli, 2004a, b) This requirement calls for the enhancement and development of specific skills related to the process of interpreting (e.g., active listening, note-taking) and expansion of interpersonal areas, such as the patient advocate role, the interpreter's responsibilities in the patient's continuum of care, and the maintenance of neutrality (Angelelli, 2006). By incorporating other aspects of the health care interpreting experience in training, students take a more holistic approach to the task and acquire specific real-world interpreting skills.

Web-based training (WBT) is often the best medium for full-time health care employees who need to update their knowledge or skills, such as dual-role staff interpreters in a medical setting who often are medical administrative staff and do not possess the expertise of a medical interpreter. The literature shows that WBT is equivalent to other instructional methods in terms of gains in, and satisfaction with, learning, as long as the educational principles are applied (Cook & Dupras, 2004). A study to improve medical student interviews with LEP patients using WBT curriculum resulted in short-term improvement in knowledge and attitudes necessary to interact with LEP patients and interpreters. The interactive format allowed students to receive immediate formative feedback and be cognizant of the challenges and effective strategies in language-discordant medical encounters (Kalet, Gany, & Senter, 2002). Studies comparing multimedia and traditional educational approaches suggested an improvement in students' performances using multimedia (Erwin & Rieppi, 1999).

Online instruction has the advantages of allowing students to work at their own pace and to participate in interactive learning with immediate feedback and self-assessment. Additional advantages include being able to deliver stimulating and current material to large groups throughout various geographic locations, even when faculty and face time are limited. Online instruction is especially convenient for training students in the medical field, including physicians and nurses who usually do not have regular schedules that are convenient for continuing education courses. One recent study compared the effect of using WBT alone with the effect of using WBT in addition to hands-on training with pediatric residents to measure knowledge of preventive oral health and confidence. Both methods resulted in increased knowledge, efficacy, and practice of preventive oral health (Talib,

Onikul, Filardi, Simon, & Sharma, 2010). Similarly, a separate study compared different strategies for delivering an e-curriculum to clinicians to assess knowledge, confidence, and communication about dietary supplements using e-mail, the web and electronic reminders. All delivery strategies tested comparable levels of improved knowledge, confidence, and communication scores among the participants (Kemper, Gardiner, Gobble, Mitra, & Woods, 2006). Another study with Australian health educators showed that learners who were enrolled in a WBT acquired the knowledge disseminated through the educational experience course and used it in their work (Pullen, 2006). Although educational applications of the web will continue to grow, well-designed trials are needed (Gagnon et al., 2009) to study challenges of web-based curriculums including cost, access, educational content, and instructional design (Janicki & Liegle, 2001).

Few studies thus far have focused on WBT and interpreters. Of the studies that do exist, most focus on comparing provider satisfaction with different types of interpretation methods and describing the interpretation errors of ad hoc interpreters compared with those of professional interpreters (Nápoles et al., 2010). In this study, we hypothesized that dual-role staff interpreters would improve their interpretation skills after participating in a WBT and would report higher knowledge and confidence scores than those who did not participate in the training. We also explored the association between (a) gender, ethnicity, first and second language spoken, and level of education and (b) improvement in knowledge and confidence.

2.   Method

2.1.   Sutter Health, an integrated health care system

Sutter Health comprises 26 hospitals, five medical foundations, and more than 3,000 physicians. It serves 23 municipal counties throughout Northern California, delivering inpatient and ambulatory services to approximately 18.4% of the State's patients, representing wide cultural, ethnic, and linguistic diversity. According to U.S. Census 2010 data, 1.5 million residents within the communities that Sutter Health affiliates serve can be categorized as LEP and speak languages other than English at home. Of the total LEP population, 49% speak Spanish, 12% speak Indo-European, and 39% speak Asian languages at home (U.S. Census Bureau, 2000). Sutter Health is the largest health care system in Northern California and the ninth largest in the United States. Its interpreter service needs represent a national trend as U.S. demographics continue to change. Most Sutter Health hospitals use dual-role staff interpreters, contract with external vendors for face-to-face professional interpreting, and provide telephone interpreter services to meet the language demands of their LEP patient population.

2.2.   Participants

The study sample consisted of 1,112 dual-role staff interpreters who passed the language competency test at Sutter Health (for a description of this test, see Moreno et al., 2007). The examination tested accuracy, comprehension, communication, and medical terminology in English and in the language other than English spoken. Language competence tests were administered in 16 different languages. The majority of the bilingual staff tested passed at the medical level (56%), and approximately one third (34%) passed at the basic level. Staff who passed the examination at the basic level were able to speak both English and the language other than English fluently and had some knowledge of basic medical terminology. These staff members are best used for nonclinical interactions such as making appointments at the front desk. Staff who passed at the medical level had college-level reading and writing in both English and the language other than English and were fluent in medical vocabulary. They were deemed linguistically fit to provide bilingual communication support at a medical encounter.

2.3. Design

This was an action research study (O'Brien, 2001) in response to a large-hospital-system need to train dual-role staff interpreters. We used a pre–post training design with a comparison group to examine the effects of both the web-based Interpreter Skills Training Course (between-subjects factor: intervention group vs. comparison group) and the knowledge and confidence improvement scores before and after the intervention (within-subjects factors: before and after, time effect). To assess the participants' pre-existing knowledge, skills, and confidence, all participants completed a pre-training evaluation and a demographic questionnaire. The course was designed with five learning modules and a post-test for each module.

2.4. Interpreter web-based curriculum training

In 2000, Sutter Health started training dual-role staff interpreters using a traditional group-training approach. The training content was provided in one session using a PowerPoint presentation, with time allotted for questions and answers. The training was arranged at each Sutter Health facility. However, the growing demand for medical interpretation services at Sutter Health's 26 affiliated hospitals was beyond capacity and would not have been cost effective. To meet the training demand and to set a standard for interpreter skills in a clinical setting, a team of web consultants, interpreter researchers, and health educators developed a WBT that was interactive, self paced, and easily accessible and that addressed different levels of knowledge and skills. Curriculum development took approximately 12 months and followed the *Sutter Health Publishing Standards* (Sutter Health, 2011), which were created to ensure that all e-learning courses at the organization were successfully published on the HealthStream Learning Centre, Sutter Health's learning management system (LMS). Theoretical framework

This project was an action research study (O'Brien, 2001) that aimed to solve Sutter Health's concerns about systematically training dual-role staff interpreters in a more efficient way.. First, we identified the problem. Second, we planned and tested a potential solution (i.e., WBT compared with no training). Third, we collected and analyzed data to learn how successful the WBT was. Fourth, we took best practices and lessons learned for future improvement of the training curriculum.

We also adapted learning principles from Bandura's *cognitive theory of learning* (Bandura, 1986), which explains how people learn and gain confidence through observing others' behaviors, attitudes, and outcomes. To facilitate learning by imitation, we used professional medical interpreters as role models in the video case studies. The curriculum also used instructional design concepts (Gagne, Briggs, & Wager, 1988), including clear definition of learning objectives, variety of presentation styles, multiple exercises, learner-controlled pace, testing and feedback, clear navigation, and consistent layout.

To provide the foundation for the WBT, we adapted a combination of different learning theories, including constructive, cognitive, and behavioral theories. In total, 84 images and video segments, adapted from The California Endowment (2002), were used throughout the training modules to illustrate the main points. Our training objectives used Bloom's (1956) classification of educational objectives. Bloom's taxonomy provides a structure in which to categorize instructional objectives and assessment. Bloom's taxonomy enabled us to prepare objectives and, from there, derive appropriate measures of learned capability and higher order thinking skills. The curriculum also incorporated multimedia development principles for a highly effective e-learning design using Mayer's research philosophy (Mayer, 2005). Those principles have been validated repeatedly, and researchers have found that they ensure learning outcomes of proven value. Some of Mayer's learning principles view each interpreter as a unique individual with unique needs and backgrounds. Thus, the curriculum provides learning opportunities for beginners and advanced interpreters. The importance of considering the individual learner's background and culture was emphasized by providing case studies with interpreters from diverse backgrounds. The WBT had eight reflection activities to increase awareness of the participants' cultural values, beliefs, and practices. The 14 brief video segments featured three distinct case studies of interpreter interaction with patients of diverse ethnic and linguistic backgrounds.

2.5. Procedures among participants

To implement CHIA's linguistic standards at Sutter Health, we assessed dual-role staff interpreters' bilingual skills using a validated language evaluation test. Results showed that one in five dual-role staff interpreters did not have competent bilingual skills (Moreno et al., 2007). A total of 840 dual-role staff interpreters from 26 Sutter Health hospitals were tested for Spanish (75%), Chinese (12%), and Russian (5%) language competence in English and the language other than English spoken. Two percent failed the competency test, and 21% possessed a limited ability to read, write, and speak both languages. The study uncovered interpretation errors, including omissions and word confusion, which can negatively affect clinical outcomes and can potentially lead to miscommunication and medical errors. In this study, we took the preliminary assessment results one step further, using a WBT to train dual-role staff interpreters to facilitate communication between LEP patients and providers.

The intervention group was made up of only those dual-role staff interpreters who passed the aforementioned language competency test at the basic and medical levels and who were, therefore, qualified to take the WBT. Each participant had a personal Sutter Health username and password to log into the online WBT template (HealthStream). The first step of the training was to complete a demographic questionnaire including age, gender, affiliated medical facility, education, previous training experience, and spoken languages. Next, participants answered a 23-question pre-test, enabling us to assess knowledge, overall interpretation ability, effective communication skills, cultural competence in interpretation, and interpreter code of ethics (see Appendix).

After the initial assessment, participants had 3 weeks to complete the five modules and individual post-tests at their own pace. Each participant had three opportunities to fail and retake each module and post-test. The WBT contained interactive learning tools, including participant question-and-answer exercises throughout the course and post-tests. Certificates of completion were given once the participant successfully completed the 20-question post-test after the last module. HealthStream is set up to allow each participant to move forward once the previous module is completed and once the post-test is passed with an 80% success rate. The 10 questions for the first four modules post-tests are randomly drawn from a pool of questions specific to that particular module; the final post-test consists of 20 questions covering topics from all five modules.

The comparison group was identified through a pool of dual-role staff interpreters who had passed the language competency test at the basic or medical level but had not completed or enrolled in the WBT. The comparison group was solicited via an e-mail communication, and group participants self-selected to participate in the study. Comparison group participants completed the same 23-question pre-test administered to the intervention group and, 3 weeks later, completed the same 20-question post-test administered to the intervention group. The 3 weeks between pre- and post-tests was based on the estimated time allotted for the intervention group to complete the entire WBT. Unlike the intervention group, the comparison group did not complete the WBT on HealthStream. This group did not receive a certificate of completion, but participants were given a $30 gift card for participating.

2.6. WBT modules

The five WBT modules are made up of 88 separate web pages. Table 1 presents an example of WBT learning objectives, activities, knowledge, and confidence post-test questions.

Table 1: Example of web-based learning objectives, activities, and knowledge-based and confidence-based post-test questions

Learning objective	Activity	Knowledge-based post-test question	Confidence-based post-test question
Identify skills that support the patient–provider relationship. Describe how to use first-person voice.	*First-person voice* is defined, followed by first-person voice examples. The dual-role staff interpreter identifies which statements are in the first person. When the participant scrolls over the statement, a pop-up box indicates whether the selection is correct.	During an interpreting session, the interpreter's positioning can facilitate or hinder interaction between patient and provider. Which is the best position for the interpreter? a) The interpreter is next to and slightly behind the patient. b) The interpreter is between the provider and the patient. c) The interpreter is next to the provider. d) All of the above.	True or False: An interpreter should not accept an assignment in which she/he is not confident of being able to interpret accurately and completely.

2.6.1   Module 1: Introduction to health care interpreting

Module 1 presents an overview of the training and reviews the levels of interpreter services at Sutter Health. This module describes the roles, responsibilities, and protocols of an interpreter in a clinical setting. Additionally, it details how to conduct an appropriate interpreter session, describing where to stand during the interaction and the importance of using first-person speech. At the end of the module, staff were prompted to take the 10-question post-test. Upon completing the post-test, staffs receive a score and feedback is provided to further reinforce learning materials.

2.6.2   Module 2: Communication skills in health care

Module 2 focuses on patient–provider–interpreter communication, common errors, ways to handle complex interpreting situations, and tools to support interpreter communication. Visual aids, examples, and case studies are used to teach the importance of health care interpreter communication roles and ways to identify those roles. After completing the second module, staff are prompted to take a 10-question post-test to measure their communication skills and knowledge.

2.6.3   Module 3: Cultural competence during interpreting

Module 3 reviews organizational management strategies that interpreters can use to support culturally competent care, CLAS standards, patient demographics, challenges and solutions to providing culturally appropriate health care services, and culture-specific issues typically encountered in medical interpreting. This module provides practical examples depicting how to create culturally competent interpretation interactions. The case study in this module highlights cultural influences in a patient's experience and the use of staff skills and tools to assist the patient. Self-assessment tools are used throughout the module to help staff reflect on their cultural beliefs and experiences. The 10-question post-test covers content and themes introduced in this module.

2.6.4   Module 4: Code of ethics principles

Module 4 reviews the CHIA Code of Ethics and introduces staff to California Standards for Health Care Interpreters (California Health care Interpreting Association, 2002). The 10-question post-test measures skills and knowledge related to ethics and interpreter standards.

2.6.5   Module 5: Medical vocabulary

Module 5 presents common medical terminology and clinical tests, concluding with a variety of resources and informational pages for bilingual staff who want to learn more about health care interpreting or are interested in pursuing a professional interpreter certificate. After the fifth module is completed, interpreters are prompted to take a 20-question post-test, which combines information from the previous four modules. The 23-question pre-test and the 20-question post-test contain the same questions, which allowed us to compare the results and assess improvement of knowledge, skills, and confidence. Table 1 provides an example of typical module objectives, content, and post-test questions assessing knowledge and confidence.

2.7.   Statistical analyses

First, we explored descriptive characteristics of the sample for both the intervention and comparison groups. Univariate analyses using chi-square tests allowed us to determine whether the observed proportions for the dichotomous variables differed from the expected proportions for each of the demographic characteristics among both groups. Second, we compared dual-role staff interpreter knowledge means before and after the intervention by study groups using paired t-test comparisons. Third, we used a general linear model (GLM) repeated measures analysis of variance (ANOVA) to examine the effects of both the WBT (between-subjects factor: intervention group vs. comparison group) and the improvement knowledge scores before and after the intervention (within-subjects factor: before and after, time effect). This procedure provides an ANOVA to test the null hypotheses about the main effect of the online training intervention and the effect of the knowledge differential pre-post test.. In addition, the GLM repeated measures ANOVA allowed us to test the effects of covariates and investigate interaction effects. Finally, this procedure allowed us to use unbalanced models in which each cell in the model

contained a different number of cases (e.g., different sample size of the intervention and comparison groups). When making multiple comparisons, we used the Bonferroni correction (Jost, 2009) to adjust the significance level to account for multiple comparisons.

3. Results

3.1. Demographic characteristics

Table 2 presents the demographic characteristics of the study participants. Overall, both the intervention and comparison groups had similar demographic characteristics, including gender, age, first and second language spoken, level of education, previous training, and ethnicity. The majority of participants were women (89.9%), were younger than 40 years of age (68.7%), spoke English as a first language (68.8%) and Spanish as a second language (77.6%), had any college level (74.6%), had no formal interpreter training (64.6%), and were of Mexican, Latin American, or Spanish origin (76.6%). In addition to these similarities, the two groups also showed differences: The intervention group had more previous interpreter training than the comparison group, $\chi^2(1, N = 195) = 11.37, p < .001$; tended to be older, $\chi^2(1, N = 198) = 5.07, p < .02$, than the comparison group; and learned a second language outside their home (i.e., learned second language at school or lived abroad), $\chi^2(1, N = 196) = 6.51, p < .01$, as opposed to the comparison group, who did not. Given that respondents had the option to refuse to answer any of the survey questions, the number of respondents is not consistent across characteristics for the intervention group.

3.2 Knowledge improvements

Table 3 presents the knowledge score means with the intervention and comparison groups before and after the implementation of the WBT. For the intervention group, there was a significant increase, $t(1) = –20.71, p < .001$, in interpreter knowledge mean scores before ($M = 12.74$) and after ($M = 17.59$) the WBT. In contrast, the interpreter knowledge mean scores in the comparison group remained unchanged, $t(48) = 0.81, p = .41$, before ($M = 11.78$) and after ($M = 12.18$) the 3-week period between the pre- and post-test. The interpreter knowledge mean score was 4.84 for the intervention group but was only 0.04 for the comparison group.

Table 4 presents the results in the multivariate GLM repeated measures ANOVA. Overall, education-relevant variables were more related to interpreter knowledge improvement scores than were demographics. Individuals in the intervention group produced higher before–after interpreter knowledge score differences, $F(1, 1) = 107.83, p < .001$, than did the comparison group. In addition, individuals with any amount of college education, $F(1, 1) = 13.3, p < .001$, and those with any type of previous interpreter training, $F(1, 1) = 5.90, p = .016$, tended show greater improvement in their interpreter knowledge scores than did the comparison group. Among the demographic variables, age, $F(1, 1) = 3.79, p < .05$, was more associated with interpreter knowledge improvement than was gender, $F(1, 1) = 0.011, p = .91$, or race/ethnicity/Hispanic origin, $F(1, 1) = 0.19, p = .65$.

When testing for within-subjects contrasts, differences in before-and-after interpreter knowledge emerged. Overall, interpreter knowledge means were significantly higher in the intervention group after the WBT than before, $F(1, 1) = 10.12, p < .001$. Additionally, two statistically significant interaction effects emerged for the before-and-after conditions: WBT, $F(1, 1) = 79.271, p < .001$, and education, $F(1, 1) = 6.39, p < .01$. To better understand these interaction effects, we present profile (interaction) plots in which each line point indicates the estimated marginal means of the before-and-after interpretive knowledge score adjusted for covariates (age, gender, race/ethnicity, education, and previous interpreter training).

Table 2: Demographic characteristics of intervention and comparison groups

Demographic characteristic	Intervention group		Control group		χ^2	df	p
	n	%	n	%			
Gender					0.346	1	.556
Male	14	9.30	6	12.20			
Female	136	90.70	43	87.80			
Age (yrs)					5.074	1	.024
< 40	96	64.40	40	81.60			
≥ 41	53	35.6[a]	9	18.4[b]			
First language					3.501	1	.061
English	98	65.30	39	79.60			
Other	52	34.70	10	20.40			
Second language					0.156	1	.061
Spanish	113	76.90	39	79.60			
Other	34	23.10	10	20.40			
Place second language was learned					6.513	1	.011
Home	88	59.50	39	79.60			
Other	60	40.5[a]	10	20.40			
Race/ethnicity					1.798	1	.18
Hispanic/Mexican	110	74.30	41	83.70			
Other	38	25.70	8	16.30			
Education					2.823	1	.093
Less than college	42	28.40	8	16.30			
Any college	106	71.60	41	83.70			
Interpreter training					11.372	1	.001
No	86	58.10	40	85.10			
Yes	62	41.90	7	14.90			

ab = Significant differences at $p < .05$; ac = Significant differences at $p < .001$.

Table 3: Interpretive knowledge means and levels of significance, before and after training

Group	Before and after WBT	Paired-sample statistics				Paired before- and after-WBT differences							
									95% CI of the difference				
		M	*N*	*SD*	*SEM*	*M*	*SD*	*SEM*	Lower	Upper	*t*	*df*	Significance
All participants	Before WBT	12.5	199	2.682	0.19	−3.754	3.582	0.254	−4.255	−3.253	−14.782	198	< .001
	After WBT	16.26	199	3.207	0.227								
Online training group	Before WBT	12.74	150	2.489	0.203	4.847	2.866	0.234	−5.309	−4.384	−20.715	149	< .001
	After WBT	17.59	150	1.27	0.104								
Comparison group	Before WBT	11.78	49	3.118	0.445	−0.408	3.505	0.501	−1.415	0.599	−0.815	48	.419
	After WBT	12.18	49	3.866	0.552								

Table 4: General linear model (GLM) repeated measures analyses of variance: Main and interaction effects

Source	Tests of between-subjects effects				
	Sum of squares	*df*	Mean square	*F*	Significance
Intercept[a]	623.762	1	623.762	125.971	< .001
Age[a]	18.766	1	18.766	3.79	.053
Gender[a]	0.057	1	0.057	0.011	.915
Race/ethnicity[a]	0.978	1	0.978	0.197	.657
Education[a]	65.921	1	65.921	13.313	< .001
Any previous interpretive training[a]	29.259	1	29.259	5.909	.016
Online interpretive training skills course[a]	533.98	1	533.98	107.839	< .001
Error	930.91	188	4.952	0	0

Note. [a]*df* = 1.

Figure 1 presents the Before-and-After Condition (pre-test to post-test) × WBT (intervention and comparison groups) interaction effects. The estimated before-and-after interpreter knowledge marginal mean scores increased significantly for the intervention group but remained the same for the comparison group. The estimated interpreter knowledge score mean difference between the intervention and comparison group was very small before the WBT but increased significantly after the intervention, showing nonparallel lines, or interaction effects.

Figure 1: Before-and-After Condition × WBT Interaction Effects

Estimated Marginal Means of Interpretive Knowledge Before and After the Online Interpretive Skill Training

Covariates appearing in the model are evaluated at the following values: Age = 2.06, gender = 1.91, race/ethnicity = 2.63, education = 2.94, any previous interpretive training = 1.68
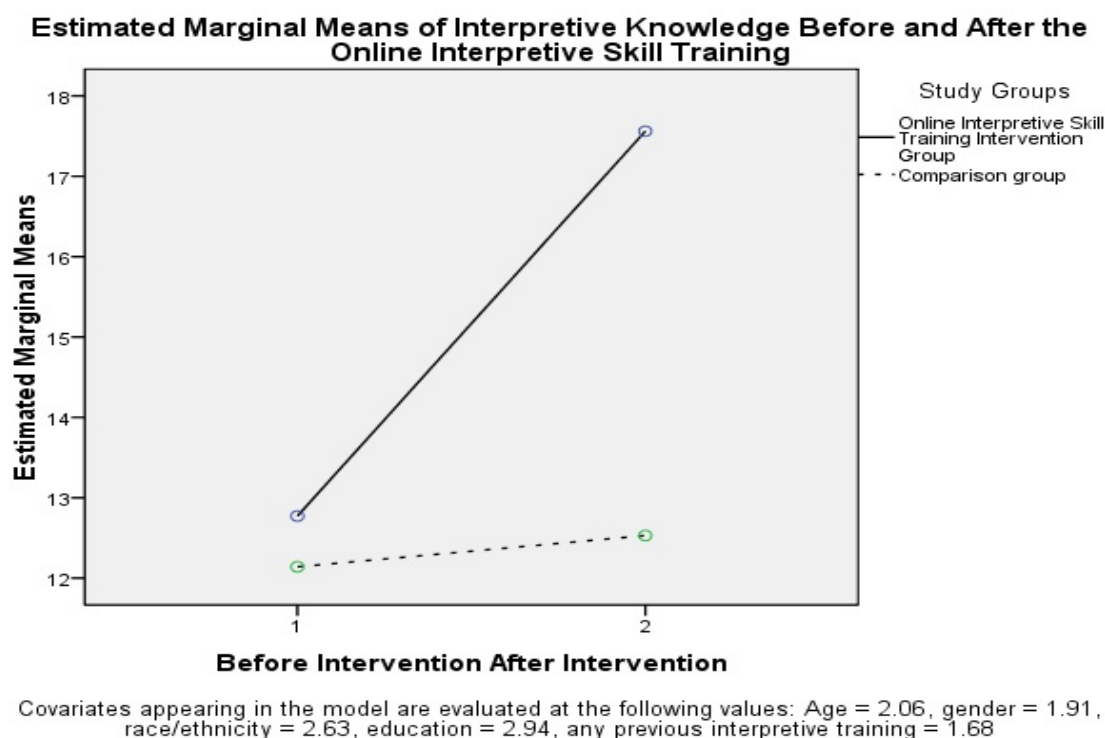
3.2. Interpreters' confidence in their ability to do their jobs

Participants in both groups expressed a high degree of confidence in the ability to provide interpreter services, with each group being equally confident, as shown in the pre-test, $\chi^2(1, N = 171) = 0.001$, $p = .95$. There was no significant improvement in confidence after the WBT (in the intervention group) and after the 3 weeks (in the comparison group), as evidenced by the results of the post-test, $\chi^2(1, N = 170) = 1.55$, $p = .21$.

4. Discussion

Our findings show that untrained dual-role staff interpreters can improve their knowledge of core concepts to a level that will allow them to interpret in a medical setting after participating in a WBT. Interpreters showed significant improvements in understanding the interpreter's role as a member of the patient–provider–interpreter triad as well as the respective boundaries, responsibilities, protocols and code of ethics. Our findings from this study support the conclusion that it is possible to train ad hoc interpreters in a medical setting. Similarly, another recent study showed that trained ad hoc interpreters were less likely to make errors with patients who spoke another language and were less likely to make clinical errors than were ad hoc untrained interpreters (Gany et al., 2010). Our results confirm conclusions from another study with Australian health care professionals (Pullen, 2006) showing knowledge improvement after using web-based continuing health education courses.

Our study suggests that the type of learning experience provided in our WBT curriculum is effective in improving knowledge of core interpreting concepts. The multiple strategies and presentation styles used in the HealthStream curriculum include advancing the interpreter through five self-paced modules highlighting

fundamental concepts for interpreting in a medical encounter, tailoring the content to dual-role staff interpreters at a basic level as well as at a medical level, and addressing the cultural and language needs of the diverse LEP patient population served. In addition, the training reinforces interpreters' learning through each module by asking them to address case studies, using audio and video aids, and providing individual feedback throughout the training. Although the combination of learning strategies successfully improves dual-role staff interpreters' knowledge, we do not know what strategy—or combination of strategies—played a critical role in our results. Further studies should address this question. Although our curriculum asked the interpreter to learn actively by engaging in real-life scenarios, it is limited in its coverage of the key interpreter skills suggested by Angelelli (2006), including cognitive processing, interpersonal, linguistics, professional, setting-specific, and sociocultural-related skills.

Results also indicate that there was no improvement in the intervention group's confidence when compared with pre-test scores and when compared with the confidence differential of the comparison group. A potential explanation for this finding is that the WBT mostly addresses knowledge and subject-matter content but not confidence-building activities. Another possible explanation for the lack of improvement in confidence scores is that the self-ratings of confidence can be influenced by social desirability bias. Additionally, awareness of skill level improves as interpreters become more skilled; however, at the same time, interpreters become more conscious of their lack of knowledge in certain areas as their skills improve (i.e., they begin to know how much they don't know), and affecting self-ratings. These issues could have affected the confidence questions in the study. Future research that refines the confidence measure would provide helpful insights. Our findings also illustrate that there are many dual-role interpreters who have a poor knowledge base and low awareness of their lack of skills but who may feel confident to serve as interpreters. Caution should be used with health service organizations that currently employ unskilled staff to serve as dual-role staff interpreters.

Focus groups that were conducted with Sutter Health dual-role staff interpreters after they participated in the training suggest that they would like to continue seeking training to improve their knowledge and their confidence in managing difficult situations during a medical encounter. Examples of learning objectives to be incorporated in future trainings may include keeping up to date with the latest guidelines, improving knowledge of medical terminology, using techniques to pace interpretation, and managing the triadic patient–provider–interpreter communication. Confidence-related skills to be taught include how to deal with role conflicts when interpreting in a medical encounter, managing the requests of a patient's relatives, working with rushed and anxious physicians, and being assertive with providers when attempting to clarify roles. Given the limitations of addressing the aforementioned complex issues in a WBT, future WBT programs could use interactive learning strategies such as clinical simulation and group training to enhance complex behaviors. A more appropriate method of evaluating complex interpreter skills is to conduct observations of professional interpreters' encounters with doctors and patients. One observational study (Laws, Heckscher, Mayo, Li & Wilson, 2004) evaluated the quality of medical interpretation in a pediatric outpatient setting and explored the patterns and correlates of errors and failures in interpretation. The authors found that 66.1% of segments were interpreted with substantial errors or omissions, or were not interpreted at all.

As expected, individuals with any level of college education and those with any previous interpreter training tended to improve their interpreter knowledge scores, as compared with their counterparts, who did not improve at all. A study conducted by Refki, Avery, and Dalton (2008) indicated that individual characteristics can impact the interpreter's belief about whether a certain knowledge or skill should be considered a core competency. These characteristics include length of training, trainees' experience with previous training or having gained knowledge from taking relevant courses, and the number of interpreting encounters performed (Refki, Avery, & Dalton, 2008).

4.1. Limitations

This study has some limitations. The use of nonrandomized small samples limits the generalizability of our results. Given Sutter Health's policy for study participation, random selection of interpreters was not possible. In addition, participants' self-selection to the study may have biased our findings. It is possible that the most motivated interpreters were the ones interested in participating. There is still potential for improving our measures

of knowledge and confidence in interpretation and in assessing other key interpreter skills. Particularly, the validity of the question that we use to assess confidence (i.e., "How confident do you feel in your ability to interpret?") may need further study. Despite the design of the instructional modules, the WBT was intended to address the most critical interpreter skills. It used proven strategies to facilitate critical thinking, exploration, and integration. Blended strategies, in which face-to-face and online methods for learning are combined, would produce the best of both learning modes (Bourne, Harris, & Mayadas, 2005) to improve interpretation of complex skills such as cultural communication styles, values, beliefs, and attitudes and, in turn, would improve interpreters' confidence. Interpreting is a profession requiring a complex set of skills that cannot be adequately taught in a single short course. Our approach is appealing, convenient, and effective in responding to real-world training needs in large health care organizations. However, this type of training has shortcomings for interpreters. WBT gives the interpreter less of the one-on-one attention that is often necessary for the improvement of communication skills. Future research is needed in which the authors combine a mixture of face-to-face and virtual interactions among a group of interpreters led by one or more coaches over an extended period. Studies show that combining online and face-to-face instruction has a greater advantage than courses that are offered exclusively online or exclusively face to face (Means, Toyama, Murphy, Bakia, & Jones, 2009). In addition, allowing the participants and instructors opportunities to communicate with one another asynchronously, through either a "chat room" or e-mail, could improve the learning of complex skills (Pullen, 2006). Efficient WBT combined with other interpreter training strategies needs to be explored and evaluated in further studies as we attempt to improve the skills of untrained bilingual staff (Ramirez, Engel, & Tang, 2008) in their role as dual-role staff interpreters.

WBT can be used as a promising option for large health care organizations with high language-services demands. However, strict organizational and government regulations should be established to limit interpretation only by competent bilingual staff who are properly and consistently trained. In addition, hospitals can help with the appropriate allocation of resources by setting and enforcing standards for using certified interpreters and for motivating trained dual-role staff interpreters to become certified interpreters. Unfortunately, given the high demand for interpreters, many providers find it convenient to use untrained dual-role staff interpreters with insufficient bilingual skills. In addition, providers often "get by" in providing interpreting services for the patient, only to have negative consequences later. In a recent study (Schenker, Pérez-Stable, Nickleach, & Karliner, 2011), few patients (19% at admission, 12% since admission) reported that physicians spoke their language well, and even fewer (6%) reported that nurses spoke their language well. Patients reported that they "got by" without an interpreter or were barely spoken to at all by nurses (38%) and by physicians (14%) at admission.

This study provides insight into an e-learning curriculum that could be used across large, diverse health care organizations. Future studies using larger random samples are needed; such studies will enable generalizations to be made about the use of WBT for all dual-role and professional interpreters and will allow researchers to examine factors that may influence the effectiveness of a WBT intervention, including the type of technology, potential users, and practice settings (Gagnon et al., 2011) as well as the cost-effectiveness of training modalities across different clinical settings.

Although Sutter Health employs professional interpreters for face-to-face interpretation needs, the interpreter demand is at such a high level that Sutter Health providers also use tested and trained bilingual staff (i.e., dual-role staff interpreters) to interpret when certified interpreters are not available. To respond to this high demand, we are currently pilot-testing a video remote interpreter service that has a cadre of professional interpreters in many languages connecting (via computer) with providers and patients to provide real-time interpretation. We plan to report on the results of this study in the near future. Many organizations face the challenge of ensuring that sufficient resources are in place in order to provide the highest quality interpreting services, and it is likely that the ability to meet this challenge will continue to be influenced by other competing priorities. The training of interpreters absorbs resources and needs firm support from organizational leadership, the availability of effective training programs, and the interest of the staff to be trained. As the interpreting field continues to advance, more evidence is required for how best to design, use, and disseminate WBT curricula for interpreters.

5. Acknowledgments

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Appendix

Sample of Questions on Sutter Health Online Interpreter Skills Training Demographics Questionnaire

Question 1	What is your occupation?
Question 2	What is your primary language?
Question 3	Where did you learn the second language that you speak?
Question 4	What is your race/ethnicity?
Question 5	How confident do you feel in your ability to interpret?

Pre- and Post-Training Evaluation Questions

Question 1	During an interpreting session, there is a three-way partnership among patient, provider, and interpreter. Which role is most important?
A	Provider—who brings medical expertise
B	Patient—who brings knowledge about symptoms, personal health beliefs, and practices
C	Interpreter—who brings linguistic and interpreting skills
D	All of the above
Question 2	True or false: If a patient talks for a very long time or gives information that does not seem relevant, it is the responsibility of the interpreter to redirect the conversation.
A	True
B	False
Question 3	True or false: If a patient asks for medical advice, a staff interpreter who is also an RN can assume the duties of RN as well as the duties of interpreter and respond to the patient's request.
A	True
B	False
Question 4	True or false: The interpreter's beliefs toward folk remedies have little influence on the interpreted encounter.
A	True
B	False
Question 5	True or false: An interpreter should not accept an assignment in which she/he is not confident of being able to interpret accurately and completely.

A	True
B	False
Question 6	True or false: If the patient is rude or swears, this does not need to be interpreted because you may offend the provider.
A	True
B	False
Question 7	True or false: In California, the law mandates the disclosure of information to health care providers by interpreters when there is evidence of abuse or when a person is threatening harm to him- or herself or others.
A	True
B	False

Creating Your Own Interpreting Materials for Use in the Classroom

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Abstract

Currently, there are a few excellent manuals and books on the market for practicing the 3 modes of interpretation. However these materials are more appropriate for advanced spoken language students of court interpretation or practicing interpreters interested in polishing their skills. The speed of the recordings (105–165 words per minute) are very challenging for inexperienced but long-term prospective court interpreters. In this article, the author focuses on how to develop activities that require students to create their own scripts and recordings—that is, their own classroon materials—for use in an Introduction to Court Interpretation course. The author also reflects on the problems that arise from having students become authors in the classroom.

Keywords: classroom materials; skill-building and practice; recordings

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Creating Your Own Interpreting Materials for Use in the Classroom

In the United States, according to the rosters on the Idaho Supreme Court's (2011) web page, at the time of writing there are currently 24 certified court interpreters, but only 17 of those are living in Idaho. Every year, many individuals sit for the certification exam but fall short of the coveted 70% score mandated by the Idaho Supreme Court. Many of these talented and assiduous individuals ask me—as one of the in-state facilitators for the Idaho Court Interpreter certification program and a professor at Boise State University—if there are any university courses that could help them polish their linguistic and/or interpreting skills. Unfortunately, there were not any specific classes in interpretation in the state until spring 2008.

In fall 2007, in response to these inquiries and to a growing need in the community, I was awarded a grant by the College of Arts and Sciences at Boise State University for the development of a remedial program preparing students to participate more fully in the state's program, as students in the state program struggled with legal terminology, and this class allowed them to expand their legal vocabulary and extend and polish their basic interpreting skills. In spring 2008, Boise State University offered the subject Spanish 381 (Introduction to Court Interpretation) for the very first time. The class is now offered every spring as part of our regular undergraduate catalog (typically, the state's program starts in mid-May). To enroll, students must have successfully taken English 102 (English Composition), Spanish 303 (Advanced Spanish Conversation and Composition), and Spanish 412 (Advanced Spanish Grammar and Syntax). Most the students are current undergraduates, but the class is open to community members as well, provided that they can demonstrate the equivalent knowledge and skills as those shown by students who took all three required classes. In spring 2011, I had 27 students enrolled: Eleven were native or heritage speakers, and 16 were Spanish-language learners. The student population is usually composed of students who have tried and failed to pass the certification exam or who are planning to initiate the process of becoming certified. Furthermore, I have students who attend simply because of what they call the "practicality" of the vocabulary. "Practical" is the buzzword of choice because many of our elective classes are literature based, and students become very familiar with literary vocabulary. However, there are always a few students who plan to live and work abroad, yet they greatly lack the terminology to carry out daily tasks in a Spanish-speaking country.

The class curriculum focuses on vocabulary development and skill building. Regarding vocabulary, each week students are assigned thematic lists of about 30 words that they must memorize. We start with legal vocabulary, clothing, car parts, and appliances. Later, we cover weapons, drugs, action verbs, insults, and state-of-mind adjectives. To practice the vocabulary, we use activities such as crossword puzzles, word searches, Pictionary, and charades.

One of my main challenges has been finding level-appropriate materials for use in the classroom to practice interpreting skills. During the class-planning stages, I reviewed several books and manuals published on the subject; these publications were accompanied by CDs for oral practice. I was already familiar with Holly Mikkelson's *The Interpreter's Edge* (1995), considering that the Idaho Supreme Court requires use of the book during their skill-building workshops. Although all books reviewed were excellent and provided ample opportunities for in-class activities and self-study, all of them seemed more appropriate for a more advanced class.

Faced with the dilemma of what materials to use in order to make the class a productive experience to inexperienced but enthusiastic prospective interpreters, I decided to integrate activities that would require students to create their own materials. This strategy would allow us to use only vocabulary that had been introduced in previous class meetings versus vocabulary that had not been covered in class. Reusing the vocabulary is paramount so that it becomes part of the students' active vocabulary, and it reduces the *affective*

filter—a term coined by Stephen Krashen in 1981 (Wilson, 2000). The hypothesis was that anxiety lowered the language-learning students' ability to retain comprehensible input. Using student-created materials with vocabulary previously covered "provides the necessary comprehensible input to those students who are not at a level yet which allows them to receive comprehensible input from 'the real world'" (Wilson, 2000). Student-created materials also enable easier assessment through mock oral certification exams. In my experience, if in the exam I introduce a word that students have not learned in my class, or in previous university classes, it creates unnecessary stress that negatively affects the students' performance.

After the initial weeks, which are dedicated to interpreting protocol and theory, we move on to simultaneous interpretation. We start with the simultaneous mode because, in Idaho, the oral certification exam is usually administered in two phases, starting with only the simultaneous portion. If an examinee scores at least a 50% on this first portion, then he or she may continue with the second phase of the exam. Idaho Administrative Court Rule 52 (2008) states that "an individual who has received an overall score of 55 percent or higher on the certification exam without reaching the certified or master level, with no single score falling below a 50 percent" will be considered a Conditionally Registered Court Interpreter.

Before students actually start interpreting simultaneously, they must create scripts to be used by themselves and their colleagues. The first step in creating materials for use in the classroom is to have each student draw five flashcards from a pile that I previously prepared. Each flashcard contains a word from the thematic lists. Then individually—and using the words that they drew—students must write a short story (several paragraphs) in English using, at minimum, all five words. (Students are encouraged to add more words from previous assignments.) In this short story, they must pose as an eyewitness, a defendant, or a victim. I ask the students to underline the five words that they drew as well as any word that has been already covered in class. I remind them once more that during our first class exam, they will be assessed only on the words underlined. Figure 1 demonstrates some examples of students' work.

Figure 1: Examples of students' work

> I was making the perfect meal for my husband one night. It was really late at night and I was really tired, so after work I changed into my 1) nightgown. I went to the kitchen and started to prepare dinner. I put on my 2) apron and started to cook. All of the sudden, I heard a loud noise outside and saw that my husband got into a wreck and hit a tree. I ran outside in my nightgown and apron and saw that the car was not ours. The police came soon after. There was so much damage to the car, the 3) airbag went off, the 4) windshield was broken, and the whole front 5) bumper was smashed in. I did not know what was going on. The police took my husband away, and the next day he was charged with 6) grand theft. He was sentenced to 5 years in 7) prison without 8) parole.

> Every morning the 1) alarm on the 2) coffee maker wakes me up for school. I pull the coffee out of the 3) freezer, so I can make coffee for my mom. Personally I only drink tea, so I also take out the 4) teakettle too. Today, however, I woke up late and didn't make my mom the coffee. She was pretty sleepy as she drove me to school in her 5) robe and 6) nightgown. Right before we got to school someone ran a stop sign and hit us. Luckily the 7) air bag went off, but because of it we were unable to see the person's 8) license plate as they drove away. Now they are being charged with 9) hit and run, which is a 10) misdemeanor.

I then ask the students to type and submit their stories electronically via Blackboard, a website-based course management system that enables students and instructor(s) in the same course to share materials such as document and audio files. Students also record their short stories using downloadable free software such as Audacity. Students are given specific instructions on not only how to use the software to record their voices but also how to make a recording that can be used by inexperienced interpreters—that is, a recording with about 90–100 words per minute. These recordings are also shared through Blackboard itself: The students' recordings allow multiple opportunities for students to use the same vocabulary that we have previously covered but in different contexts.

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After approximately 6 hours (or 2 weeks) of instruction, we move on to consecutive interpretation. Once again, we create new scripts for this mode, sometimes using the previous simultaneous scripts and converting them into question and answers and at other times, using completely original scripts integrating the vocabulary that has been introduced in the last 2 weeks.

At this time, I introduce the concept of *scoring units* based on the overview of the exam content by the National Center for State Courts. "Scoring units are particular words and phrases that are selected to represent various features of language that interpreters encounter in their work, and that they must render accurately and completely" (National Center for State Courts, 2005, p. 5). I refer back to the words that I had asked them to underline as an example of general and technical vocabulary. I then ask the students to try to incorporate a few more scoring units such as a name, date, or number. Examples can be seen in Figure 2.

Figure 2: Further examples of students' work

> Q: Could you please state your name and address <u>for the record</u>?
>
> A: My name is Maria Santos. I live on 355 Main St., here in Boise.
>
> Q: What were you doing the night in question, that is, <u>January 12th</u> of the current year?
>
> A: I was in the kitchen preparing a delicious meal for my husband Juan.
>
> Q: Did anything out of the ordinary happen while you were in the kitchen?
>
> A: Yes, yes indeed. I heard a loud noise outside.
>
> Q: And what time was it?
>
> A: It was about <u>11 or 11:15</u> at night.
>
> Q: So you heard a loud noise. And what did you do then?
>
> A: I ran outside in my <u>nightgown</u>, with my <u>apron</u> on and all, and saw that my husband had had an accident.
>
> Q: What kind of accident?
>
> A: He hit a tree with the car.
>
> Q: So, Mrs. Santos, while you were working the night of <u>February 5th</u>, did you observe any suspicious behavior?
>
> W: Well, I saw two teenagers standing by the <u>teakettles</u> and the <u>coffee makers.</u> They were looking all around them and then they hid something in their backpacks. I knew they were trying to steal something, otherwise why would they be in the <u>appliances</u> department?
>
> A: <u>Objection</u>, your Honor, the witness is speculating.
>
> W: <u>Sustained.</u> Mrs. Santos, please answer only the questions and refrain from giving your opinion.

Once these scripts have been typed, students again must submit them electronically via Blackboard. However, for the recordings, students must now work in pairs to record the questions and answers. The first semester in which the class was offered, I allowed students to work alone, but the two different voices seem to ensure a better rendition/interpretation. It appeared that when students heard two voices, they could more easily interpret from Spanish to English and from English to Spanish versus repeating what they heard in English.

We dedicate the last 3 weeks of the semester to sight translation. Once more, we either revisit the old scripts or create new ones with the vocabulary introduced during the previous weeks. Students are asked to write a new script or edit an old script but to type it as if it were an affidavit. In doing so, students must incorporate some formulaic expressions such as "I attest," "I swear or affirm," " in witness thereof," and so forth. An example can be seen in Figure 3.

Figure 3: Example of an affidavit script

	I, John Smith, 43 years of age, domiciled in 357 Main St., Boise, Ada county, state
	of Idaho, <u>swear or affirm </u>that on January 12th at about 11:00 pm I was working in
my	garage when I saw a car hit a tree. Soon after that I saw a woman in her early
twenties run	outside in her nightgown and apron. It appeared to me she knew the man in the car
since	she started yelling at him. She was calling him a drunk, a looser. I immediately called
the	police fearing that this may be a drunk driving incident. <u>I attest</u> that the foregoing is
true	and if I were to testify in court my testimony would be essentially the same. <u>In</u>
<u>witness</u>	<u>thereof</u>, I sign my name below.

Students submit the scripts for sight translation via Blackboard, but no recordings are made. We do use them for in-class practice.

In reflecting on these class activities, it is true that it provided me with many scripts and recordings for simultaneous interpreting practice as well as consecutive interpreting and sight translation practice. However, I did have some doubts in working with this material. One of my fears was, for instance, is it "accurate"? That is, could a person really be sentenced to 5 years in prison without parole for grand theft auto? Or would an attorney object if a witness were merely speculating? May a wife testify against her own husband? I found myself in a quandary: Do I sacrifice content for vocabulary and skill's sake? Is quantity more important than quality? Would these scripts mislead students as to what really happens in court? After much thought, I decided that I need not jeopardize content in order to have an abundance of easy, short scripts for the class. I opted to invite a guest speaker every semester to enlighten all of us. The first semester, when I (as well as students) needed the most guidance, I invited a judge, a prosecutor, and a defense attorney. The last two semesters, I have had either a defense attorney or a prosecutor who helped point out all the legal blunders the students made—blunders that I did not feel qualified to correct. These experts have been kind enough to read through the initial 25 scripts and provide us with a wealth of information that we probably would not have sought or received had we not come up with questions of our own. In other words, all the legal inaccuracies of the scripts become catalysts for discussion. In one particular instance, a student mentioned that the defendant had received his fourth charge of driving under the influence (DUI)—a misdemeanor. The defense attorney jokingly said that most of his clients who had been charged with a fourth DUI really would have hoped that was the case, but in Idaho, the third DUI (not the fourth) becomes a felony (not a misdemeanor).

The course has now been offered four times. Although enrollment was rather low the first 2 years, the class in spring 2010 had 24 students. Instead of a final in-class exam, students take the written screening English exam at the Idaho Supreme Court. In spring 2010, 11 of 24 students passed. Of those 11 students, 2 students decided to take the oral certification exam in fall 2010. One of those students passed the first portion but did not pass the second portion. I invited that student to a debriefing session for some feedback on the class and classroom materials. Some of the questions I posed included "Did the material help him prepare adequately for the oral certification exam?" and "Were there any shortcomings?" The student stated that he thought more individual practice was needed on his part—not only with student-generated scripts but also with other scripts available for purchase. He added that he had continued making his own scripts and recordings to memorize vocabulary, instead of using only index cards. He thought it was very beneficial to memorize words in context and to practice the skills, as well.

In conclusion, creating our own classroom interpreting materials do provide us with many learning and practicing opportunities. In my opinion, the student-created scripts are not detrimental to the students' progress. After all, this class was originally designed, in part, as a remedial, 300-level class. Although none of my university students have yet become certified court interpreters, I have seen significant improvement between the first in-class interpreting exam and the final in-class interpreting exam— not only in the amount of vocabulary learned and retained but the in the accuracy and completeness of their renditions. I have also observed that when students were asked to simultaneously interpret one of the recordings from *The Interpreter's Edge* (Mikkelson, 2011)—which had been recorded at 125 words per minute—the level of anxiety and stress

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was minimal, and the delivery was much smoother than what I had experienced while teaching straight from *The Interpreter's Edge* during the Idaho Supreme Court's workshops.

Cornwall

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Striving for an "A" Grade: A Case Study of Performance Management of Interpreters

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Abstract

Research regarding the efficacy of an interpreted education for deaf students has suggested that the practice is fraught with challenges. This could be because interpreters provide merely the illusion of access in a mainstream setting (Winston, 2004), or it may be because many education systems are simply not interpreter ready (Patrie & Taylor, 2008), among other factors. A primary concern is often the proficiency and skill level of interpreters working in education settings. In this article, the authors report on a best-practices process of diagnostic skills analysis, performance management, and a tailored series of ongoing training opportunities undertaken by a cohort of interpreters based at a secondary school for deaf students in Western Australia. The project that is described, and the performance evaluation principles and training practices adopted, may be easily embraced by other organizations employing interpreters; managers and mentors of interpreters; as well as by individual interpreters themselves.

Keywords: interpreters; education; ongoing training; best practices; diagnostic skills analysis; performance management; professional development

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Striving for an "A" Grade: A Case Study of Performance Management of Interpreters

1.   Introduction

The broader context of skill development and training for interpreters reaches far beyond the scope of entry-level education programs for work in the profession. Ongoing training for interpreters is critical to (a) mitigate the skills gap that exists for many practitioners upon graduation from programs and (b) prevent the fossilization of skills in more experienced practitioners (Bontempo & Napier, 2007). An onus on interpreters to access ongoing training throughout the duration of their career is a stipulated tenet of many ethical codes of conduct and guidelines adopted by interpreter associations and is a condition of maintaining interpreter certification and licensure in several countries around the world. Providing suitable professional development opportunities to practitioners to help them meet these requirements may be the remit of interpreter associations, educational institutions, or the employers of interpreters. In terms of employers, some may be more industrious than others in creating training programs and skill development plans that are based on individually identified skills gaps and a performance management process catering to the needs of interpreters in the workplace. Regardless of employer capacity to do this in an adequate fashion, it remains incumbent on individual interpreters to maintain or advance skills and to participate in ongoing skills assessment, self-evaluation and reflection, and professional learning activities. This appears to be more straightforward for interpreters to comply with when they work for larger employers, some of which provide this type of ongoing performance management and training support to meet the needs of individuals. In the case of signed language educational interpreters in particular, however, this seems to be a rare practice. In this article, we report on one exception to the rule—a best-practices project of diagnostic skills analysis, performance management, and tailored ongoing training opportunities initiated by an employer of Auslan[2]/English interpreters at a public secondary school in Western Australia. The case study presented here took place within an educational context. However, we believe that the principles and process of performance management that we share here can be applied to interpreters employed by any organization.

2.   Background and rationale

Shenton College Deaf Education Centre (SCDEC) is a Western Australian (WA) public school that caters to deaf or hard-of-hearing high school students, typically aged 12–17 years. SCDEC is fully funded by the state government's Department of Education and has a reputation as a "Centre of Excellence." The school is situated within one of the top public high schools in the state, Shenton College, with the larger school population totaling more than 1,200 students. The 25 deaf and hard-of-hearing students enrolled at SCDEC are supported by a mix of

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[2] *Auslan* refers to Australian Sign Language.

full-time and part-time staff, including eight teaching staff and 20 nonteaching staff (e.g., interpreters, note-takers, onsite captioners, and administration staff).

The Department of Education in WA requires that each school link its school plan to the Department's overall aim. The stated aim of the Department is for all students to reach their learning and skills potential and to contribute to society. To enable the Department's aim and the school plan to be implemented, teachers and nonteaching staff are required to participate in professional learning activities that are linked to the school plan. To identify the specific skills gaps and to determine what type of professional learning is required for each staff member to assist them in achieving the school plan, each staff member undergoes a mandatory performance management process, overseen by the school principal. Given the Department's focus on the education of children, the professional learning that is made available at school level across WA is largely geared toward the critical skill development and maintenance needs of teaching staff rather than the training needs of nonteaching staff.

This means that interpreters working in schools are typically unable to access "ready-made" professional learning on site in their workplace, suited specifically to their professional development needs as interpreting practitioners. In recognition of this, in recent years the WA Institute of Deaf Education (WAIDE), a statewide Department of Education service for deaf and hard of hearing students, has provided increasing formal support to individual interpreters working in mainstream school settings throughout WA. Such support in schools from this centralized service has been warmly welcomed by interpreters, particularly those working on a solitary basis in a school, isolated from other interpreting colleagues. Interpreters are employed at the local level by individual schools, not by WAIDE though, so providing the range and extent of desirable support and professional learning opportunities to these interpreters across many schools throughout the state can be challenging. SCDEC however has a significant number of interpreters on staff, indeed considerably more than any other school in WA, forming a critical mass in one school. It was therefore important for SCDEC to provide an effective performance management process on site for this substantial group of employees with specialised skills and professional learning requirements. Despite appreciating this need, there was no internal knowledge source or expertise based within SCDEC to accurately evaluate the performance of the interpreters on staff, identify gaps in skill, and develop professional learning tailored to the needs of the interpreters. Consequently, to ensure that the interpreters were properly supported to play their part in the implementation of the SCDEC school plan, in 2008 the principal of SCDEC, Bethel Hutchinson, sought out the professional expertise of an independent external consultant. Karen Bontempo was the consultant appointed to conduct individual diagnostic skills analyses of the interpreting team and to develop a professional learning program suited to the needs of the individual interpreters on staff at SCDEC.

Educational interpreters in WA are employed under the job title of "Education Assistant—Auslan" by the Department. Although regarded differently from the typical "Education Assistant" assigned to students with learning difficulties or disabilities, proper recognition of the complexity of educational interpreters' specialized work—and their employment status—is still not as it should be. This is particularly apparent outside WA in other parts of Australia. For example, it is not compulsory for interpreters to hold qualifications in interpreting in order to work in a school; therefore, many interpreters in primary and secondary schools in Australia have less than adequate Auslan proficiency for the task required of them and hold no interpreter certification. For a number of reasons outside the scope of this article, there is a much more effective system and structure in place for educational interpreters in WA than for those in other states of Australia (Bontempo & Levitzke-Gray, 2009; Potter & Leigh, 2002), with Potter (2010) noting that nearly 50% of educational interpreters in WA have completed an interpreter education program and/or hold interpreter certification at the paraprofessional level (entry-level interpreting certification in Australia, awarded by the National Accreditation Authority for Translators and Interpreters [NAATI]).

At SCDEC, a pleasing anomaly exists, with 90% of the interpreting team holding interpreter accreditation and the remaining interpreting staff enrolled in an interpreter education program at the time of the project. This places SCDEC in a unique position in WA, let alone in Australia. The process of interpreter evaluation and performance management initiated at SCDEC was, therefore, underpinned from the start by an encouraging organizational culture for interpreters.

A case study in performance management of educational interpreters

A formal diagnostic skills analysis of this number of interpreters in a school environment had never taken place before in Australia. Formal school-based interpreter-specific performance evaluation opportunities appear to be more widely available in the United States (e.g., the Educational Interpreter Performance Assessment [EIPA] process) and have been applied to community interpreters in WA at the initiative of the WA Deaf Society (Bontempo, Goswell, Leneham, & Tsapazi, 2007), but an undertaking of this nature and scale in an educational environment in Australia was a first to our knowledge. Given the link between interpreter competence and outcomes for deaf students (Schick, Williams, & Bolster, 1999; Winston, 2004), it was anticipated that taking a proactive, performance-oriented approach toward developing interpreter skills on the job should have positive effects in the classroom for deaf children and their peers as well as healthy outcomes for practitioners, administrators, teachers, and parents.

3.   Structure and process

Once the consultant was appointed, it was vital that we obtain "buy–in" from the interpreters on staff so they would appreciate that the process posed no threat—only the potential for gains. The school principal sent a notice to interpreters in advance of the onsite visit by the consultant to clarify the structure and process of the performance management project. Assurances were made regarding the parameters of the project: The process was simply a way of trying to grow the skills of individual interpreters. As part of this program, the interpreters would engage in a one-on-one diagnostic skills evaluation, analysis and discussion process; then, they would participate in a tailored program of learning events over a period of time. Interpreters were advised that employment contracts were not at risk as a result of the process and that this was intended to be a supportive performance improvement exercise. Interpreters were given the consultants' contact details and were provided with the performance evaluation rubric in advance. Participants were also advised that they were welcome to contribute to the rubric if they felt that any aspects were missing or if they felt that any section was inappropriate to include.

Participants completed a competency self-evaluation form 2 weeks in advance of the consultant's onsite visit. The purpose of this form was to assist interpreters in focusing on the range of competencies central to their role and to encourage self-analysis of their skills in advance of the monitoring period—a helpful exercise in terms of reflective practice. The form also directed the consultants' attention toward aspects of performance that the individual interpreter identified as a concern. Such identification included the appreciation that areas of priority may be debated—for example, the area that an individual may identify as a weakness may not be the most critical concern in regard to their performance; similarly, some interpreters may be unconsciously competent and, therefore, unable to see where they are doing particularly well.

The preliminary paperwork also served as a reality check whereby the consultant could compare self-evaluation of competency and reported skills gaps with actual performance as measured by the consultant on site by showing the interpreter any variance between the forms. The self-evaluation forms were returned to individuals at debriefing sessions.

The consultant visited the school on stipulated days/times of the week over a 2-week period in the middle of the school year in order to observe and evaluate the work performance of individual interpreters in classrooms— that is, observing them interpreting in their everyday work setting. Each interpreter was observed for one class period (lasting up to 60 minutes, depending on whether the interpreter was working in the senior school or the middle school), and the session was filmed. The evaluation did not focus on the first 10 minutes of performance during the observation period, to allow the interpreter time to warm up and to allow time for any initial performance anxiety to subside. The consultant completed detailed notes and comments for each individual on a specially designed rubric during the observation period (see Appendix). The rubric provided the categories for the diagnostic skills analysis and was informed by the findings of Bontempo and Napier (2007), which highlighted a common range of skills gaps in interpreters. Observational data based on performance was collected in written form, but in addition, footage of each individual was captured to (a) provide evidence for personal evaluation and debriefing later and (b) provide clear examples of work performance when reviewed in conjunction with the

rubric. The diagnostic skills analysis gave an indication of current levels of occupational performance and identified specific skills areas upon which the interpreter could improve. Strategies and resources for self-development were outlined to individual interpreters in a debriefing session held post observation.

The initial process in 2008 included 16 educational interpreters at SCDEC. The favorable feedback received by the principal, and the positive outcomes arising from the process in 2008, led to further external review of the educational interpreters during the following year. In 2009, nine interpreters participated in the performance management process. The format was altered based on the 2008 experience. The 2009 project included the following two additions: (a) interpreters were not able to choose the class in which they were observed (in 2008 they were given a choice) and (b) filmed "modeling" took place during a number of subjects (including Year 8 science, Year 11 English, Year 10 home economics, a Year 11 Deaf Center support class, and a senior school assembly), whereby the consultant worked as the interpreter, thus allowing the regular interpreter of that class to observe the consultant and then discuss the interpreted session afterwards with the consultant. This modeling took place after the initial observation and debriefing session with the individual interpreters concerned. Modeling offered the opportunity for interpreters to witness how specific linguistic features and effective coping strategies could be integrated into interpretations in the classroom, rather than an exclusively theoretical discussion with the interpreter about options they could implement in the future.

Annual meetings were held with SCDEC teachers in 2008 and 2009 to apprise them of the performance management process. The purpose of these meetings was to gain their support and to increase teachers' awareness of the interpreters' work.

4.   Data collection and analysis

As noted, interpreters were directly observed and evaluated by the consultant from "within the space" in order to capture performance in their authentic work environment. As the consultant was not an employee of SCDEC at that time, this was particularly useful in allowing the consultant to understand the bigger picture regarding operations at the school level, to appreciate classroom dynamics, and to get a better sense of the deaf students with whom the interpreters were working. Relevant permissions were obtained to film the interpreters in classrooms, and discussions were held with mainstream teachers in advance to explain the purpose of the filming.

The DVD footage of each interpreter's work was collected and kept by the principal of SCDEC as part of performance management records compliance, with copies made for the individual interpreter. It was noted to the principal that all data collected and feedback documented for the interpreters needed be treated with some caution in regard to the following considerations:

- The performance measures were taken in a certain place, on a certain date, and at a certain time. They were, therefore, frozen-in-time "snapshots" of performance and could not be regarded as comprehensive indicators of performance across other contexts, or with a different audience or altered subject matter.
- Due to the aforementioned reason, it was also impossible to compare the performance of one interpreter with that of another interpreter. Unless two interpreters were undertaking the task of interpreting the same event (which was the case with only two interpreters out of all the interpreted events observed over the 2 years—and, even then, they interpreted different parts of an interpreted event, not the same parts, so again, it was difficult to "compare"), it should be understood that job events cannot be fairly compared with one another because of the wide variety from classroom to classroom: different students, different subject matter, different day, different time, different teacher, different classroom environment, different background knowledge, and so forth.
- It was noted that not all the interpreters were able to work in their preferred classroom environment for the observation experience, particularly in 2009. To be observed and evaluated in a less comforting environment may have had a negative impact on interpreter performance. Conversely, though, it was noted that practitioners who performed at only a "just adequate" level of performance in a nominated class of their preference should be monitored to ensure that they are not placed in classes, or with children, that are beyond their skill levels.

- Typically, and due to the context, the consultant was largely able to view only monologic instructional discourse interpreted from English into Auslan. The performance evaluation records and feedback to interpreters was, therefore, primarily reflective of skill and competence in one language direction only.

Data collection was hampered, to an extent, by classroom context, content, and teacher delivery style. Some classes contained more teacher-centered instructional discourse than others, whereas other classes were more interactive, particularly if the lesson was more practical in nature or if a discussion-based activity was taking place. Some classes contained few opportunities for data collection due to the independent-study nature of that particular lesson. In the latter instances, if the interpreter was barely working at all, the observation session was rescheduled.

Debriefing was scheduled for immediately after the interpreted class to facilitate the most effective recollection of decision-making processes; this allowed interpreters to reflect on these processes and discuss them while also analyzing their interpretations, with the consultant's guidance. Overall strengths and weaknesses were identified individually in the one-on-one debriefing sessions with interpreters; recommendations for improvement were made, and suggestions for change were offered to each interpreter. These sessions were typically 1 hour long. The footage could be viewed during the session, and the completed performance evaluation rubric was made available to each interpreter. The interpreters' self-evaluation of their skills (submitted to the consultant 2 weeks prior) was also brought up and discussed in the debriefing session in order to address any areas of concern flagged by interpreters themselves and, where applicable, to apply these concerns to the recently observed interpreted class.

During the debriefing sessions in 2008 and 2009, interpreters were asked several specific questions by the consultant before walking through the details recorded on the rubric and analyzing the footage with the interpreter. These preliminary questions included some or all of the following: How do you feel? What were you happy with? What do you feel worked? What could you do differently next time, and why? Do you think the teachers' aims for the lesson were conveyed effectively via your interpretation? Did your interpretation allow the student to participate in the lesson? The question presented at the end of the debriefing session was: How do you feel about the evaluation process you have just been through? The consultant found the interpreters to be very forthright in their responses and generally conscious of areas of both competence and incompetence in their performance.

5.   Training opportunities and professional development action plans

We designed and delivered professional learning sessions arising from the outcomes of the self-evaluations, the observations of the consultant, and the resulting discussions in the debriefing sessions. Training days targeted at the needs of the educational interpreters were scheduled for the student-free days available at the start of each quarterly term in the school year. The professional learning days incorporated issues regarding performance that were observed as being global in nature—that is, skills deficits or concerns noted in most of the interpreters, or activities that could enhance the skills development of all participants. These global issues are described in more detail in the next section.

During the professional learning sessions, where possible and appropriate, select footage of individual interpreters demonstrating good practices was screened to the group (with the permission of the interpreter). In addition, sample footage of some of the modeled interpreting in classrooms by the consultant was viewed; we showed this footage to exemplify features and practices that could be adopted by other interpreters or to illustrate specific concepts under discussion in the professional learning session.

In addition, the participants wrote their own professional development plans during the first professional learning day and revisited these plans at later sessions. When writing the plans, participants bore in mind the overall goals of SCDEC and targets for the Department of Education and were informed by (a) the self-competence evaluation conducted by the interpreter prior to the performance evaluation; (b) the observation experience, footage, and completed rubric written by the consultant; and (c) the debriefing discussion that took place post observation. Goals for each individual were developed and documented. Each interpreter submitted this

individual plan to the principal in 2008, and goals were evaluated, revised, and reported on in 2009 after the second iteration of the performance management process, with new plans written for either skills maintenance or further development in 2010.

We encouraged interpreters to focus on their specific goals when asking for future feedback on their work from mentors (either formal or informal) and from team interpreters as well as from other peers and consumers, where applicable. The opportunity for interpreters to self-determine their own professional development plan as part of the performance management process was critical. They identified their own particular goals that they felt were achievable and then developed strategies and a time frame for attending to these goals. We encouraged interpreters to seek out mentors (from within the SCDEC interpreting team, the Deaf community, or the wider interpreting community) as part of their ongoing skills development. In addition, we strongly recommended that they take up membership of the local interpreting association, the Australian Sign Language Interpreters Association (ASLIA), attend Deaf community events, and participate in external training and professional development opportunities for signed and/or spoken language interpreters in the local area.

6.   Performance and progress

Overall, based on the data collected during the stipulated periods, interpreters employed at SCDEC generally met or exceeded performance expectations in the observed sessions. It was evident that a handful of interpreters on staff had more experience and skills to draw on than did some other interpreters on staff, and these interpreters typically delivered stronger performances during the evaluation period. The few interpreters on staff who did not yet hold NAATI accreditation—as well as those who could be described as "novice" practitioners holding recently awarded NAATI accreditation—demonstrated more significant skills gaps, as might be expected, and as supported by research in the field (Bontempo & Napier, 2007, 2009).

6.1. Skills gaps

The following skills gaps were observed at times in the various interpretations:

- Lack of discourse markers.

- Issues with discourse cohesion.

- Insufficient use of depicting signs, constructed dialogue, and constructed action.

- Confusion of space/placement properties.

- Illocutionary force not always conveyed.

- Prosodic features of Auslan not fully utilized—loss of speaker style and affect.

- Inappropriate positioning of interpreter in the classroom.

- Incidental communication in the environment not transmitted.

- Translation style leaning toward a dominant literal style with too much intrusion of English source text features when classroom context really lent itself to a more dynamic, or free, translation style.

- Superficial processing of information—operating at sentential level rather than discourse level.

- Difficulties, at times, in meeting the linguistic needs of students with minimal language.

Many of the aforementioned topics formed the basis of a series of training days conducted with interpreters and were the focus of professional development goals for individuals. Improvements were seen over time regarding some of these issues, with fewer of these skills gaps appearing in the later performance evaluations. Interpreters who delivered better interpretations and had more sophisticated coping strategies tended to be NAATI-accredited interpreters with several years of experience. A number of these interpreters, although not all

of them, had not only educational interpreting experience but also community interpreting experience or had extensive experience interpreting for native signers—which, they noted during debriefing sessions, had scaffolded their skill sets for work with a range of deaf children in education settings.

6.2. Positive aspects

Positive aspects of interpreter performance and manner that were noteworthy and that appeared global in nature included the following:

- Perceptive insight into skills gaps—self-evaluations were honest and largely accurate when compared to the observed data.

- Practitioners were extremely flexible and accommodating to requests and changes.

- Appropriate demeanor and interaction in the classroom and with stakeholders was observed.

- Interpreters generally represented the jargon associated with the subject area well.

- Strong evidence of preparation and background knowledge.

- Good boundary management.

Generally, the participants demonstrated a willingness to be challenged, and the vast majority of practitioners really embraced the opportunity to be evaluated and to receive feedback on their performance. Even those who were uncertain at the start appeared positive at the end of the project and saw tangible benefits in the process.

6.3. Concerns identified by interpreters

Many of the interpreters raised and shared the following concerns in relation to their work:
- Time constraints—it is difficult to "unpack" concepts in the limited time available in mainstream classes due to the pace and density of most lessons.
- Mainstream teachers often lack awareness of the needs of deaf students. This was felt to be an issue particularly in relation to compromised language proficiency and fund-of-knowledge deficits faced by some of the SCDEC students.
- The role of the interpreter is not well understood by staff and students. In addition, interpreters felt that there was little understanding and recognition among the teaching staff regarding the complexity of the interpreters' work.
- At the time of performance evaluations in 2008 and 2009, with the exception of a part-time Auslan teacher, SCDEC had no other deaf staff members on site to support students and interpreters. This resulted in a project recommendation to appoint full-time deaf staff members to valued roles in the classroom. A full-time deaf mentor was appointed in 2010, and she quickly proved to be a significant asset to SCDEC. In addition, the part-time Auslan teacher's hours were increased, and his role changed so that he became a more integral part of the teaching team.
- Many of the deaf students lack confidence in asserting their needs (to teachers and to interpreters).
- Little training is available for interpreters in regard to (a) interpreting for students who have dysfluent language and (b) the linguistic development (both typical and atypical) of deaf children.
- Interpreters felt that they were not working in an "interpreter-ready" system (Patrie & Taylor, 2008). They all reported that certain common issues have a significant impact on their work—issues regarding role, employment status, pay, teacher–interpreter relationships, school community awareness, and student's "linguistic readiness" to work with interpreters were all raised.
- There was perceived encouragement of "learned helplessness" among deaf students, and perceived low teacher expectations of deaf students, both of which frustrated the interpreters.
- Sometimes, there was visual confusion in the classroom, with teachers learning Auslan occasionally trying to sign at the same time as the interpreter. Interpreters appreciated that this was balanced with the need for teachers to interact directly and to establish relationships with deaf students; however, they did

feel that this created some tension for them in terms of doing their work effectively when attempts to sign persisted during lessons, particularly if the signs used were incorrect.

6.4. Progress

The original performance management innovations occurred in 2008 and 2009. In 2010, the consultant started teaching at SCDEC and was no longer able to conduct the performance evaluations of interpreting staff as an independent external party. Therefore, with the intention of interpreters taking increased ownership over their professional growth and development, SCDEC purchased four flip cameras and mini-tripods to enable the interpreters to film themselves and then reflect on their own work. We anticipated that the interpreters would have the skills and knowledge to be able to do this in a meaningful fashion themselves in 2010, having been through a guided process previously. In addition to the previous learning experiences with the consultant, interpreters were sponsored to participate in an external professional development session in 2010 with Jemina Napier, a highly esteemed Australian educator, researcher, and interpreting practitioner. The workshop focus was on reflective evaluation and analysis of one's own interpreting work. Interpreters filmed samples of their work during 2010. Time was set aside during the timetable and on professional learning days where the interpreters paired up with one another, reflected on their performance, and critiqued their skills within the successful evaluation framework established in 2008 and 2009.

Feedback from the interpreters on the learning gained using the flip cameras in 2010 was extremely positive. Indications of how beneficial the self-evaluation approach was in 2010 prompted the decision to continue with self-reflective practice in 2011, with some further adaptations to enhance the approach. In 2011, each interpreter gathered at least two samples of interpretations from each term. These samples were from two different classes; however, in each term, the same two classes (same teacher, same group of students, etc.) were filmed to obtain a longitudinal sample of work over the year. Interpreters analyzed his or her own performance and nominated a colleague to conduct a critical peer review of the footage. At the end of each term, time was given for the interpreters to view the footage and analyze the work samples. The expectation is that by the end of 2011, the samples will show evidence of interpreter improvement in areas of concern identified in the first sample. An assumption is that samples can be more fairly compared, considering that controls are in place for class environment, teacher, and student over the year. Time was also allocated in 2011 for deaf mentors on staff to review performance footage and to provide feedback to the interpreters for skill enhancement purposes.

In January 2011, interpreters attended the "Supporting Deaf People Online Conference", a virtual conference with themes specific to Deaf education and educational interpreting. SCDEC sponsored their attendance and encouraged staff to access a broad range of other external professional learning experiences in 2011. In March 2011, Marty Taylor, of Canada, an interpreter educator and scholar of international repute with a particular interest and publication record in the field of educational interpreting, was brought into the school by the principal of SCDEC to conduct training with the interpreters.

In regard to 2012 and beyond, some thought has been given to a hybrid internal/external evaluation, including increasing the role of the deaf mentors in formally supporting interpreter skill advancement. Further thoughts include the possibility of allowing for a wider feedback loop and receiving input from teachers and students as well as from a peer or an external consultant in the evaluation process. It is intuitive that an enhanced understanding of language acquisition, teaching and learning principles, adolescent development, and the linguistics of both Auslan and English could assist interpreters in their work with deaf students. Professional learning addressing some of these issues is planned for SCDEC interpreters in 2012. The agenda, as we move forward, also includes implementing a more formalized mentoring program and increasing opportunities for team interpreting. In addition, we intend to safely extend the skills of interpreters by encouraging them to work outside their comfort zone, providing support and training as needed. Finally, the intention in 2012 is to tackle some of the broader issues identified by interpreters in an effort to make the school system more 'interpreter-ready'.

7.   Recommendations, resources, and project evaluation

Detailed consultant reports provided to the principal in 2008 and 2009 noted overall levels of performance and included evaluations of interpreted events for each interpreter as well as recommendations for future development of interpreters' skills. The following list details some of the general recommendations in the reports:

- Allow onsite access to DVDs, books, journal articles, reference lists, and so forth, to encourage professional learning during down time in the timetable or when students are absent.
- Increase SCDEC and interpreter networks within the Deaf community.
- Employ more deaf staff in key roles.
- Interpreters to seek out mentors (formal or informal, internal or external).
- Interpreters to network with interpreting peers external to SCDEC.
- Attend suitable external workshops and training, not just the internal professional learning provided by SCDEC.
- Read current literature regarding educational interpreting.
- Complete an interpreter education program (where applicable).
- Become a member of ASLIA.
- Participate in ongoing self-evaluation and monitoring by peers.
- Prepare/liaise more directly with teachers.

Interpreters were provided with extensive resources as an outcome of the consultant's report. SCDEC took the following actions in response to the recommendations listed in this report:

- Compiled a comprehensive list of skill advancement suggestions and activities to work through.
- Provided interpreters with a detailed list of relevant reference material and reading suggestions (developed by Jemina Napier and Karen Bontempo for ASLIA).
- Purchased a range of DVD practice material, textbooks and journals.
- Arranged copies of journal articles, book chapters, and websites to review during down time or to read during class times in which students were mainly doing independent study or taking an examination.
- Created an "interpreters resource room." Interpreters were given a dedicated separate learning space including bookshelves, computers, TV/DVD equipment, chairs, desks, etc. This was designated a place to prepare, reflect, review, and discuss work with colleagues. This was in addition to the existing interpreters' office located in the adjoining room, which is a more social, open space where timetables are kept and team meetings are held.

Measures that we used to evaluate the success of the project indicated extremely positive results; these measures included the following:

- Individual face-to-face feedback on the process.
- Evaluation forms for all professional learning sessions.
- Copies of the professional learning plans developed (and respective timelines and goals met).
- Principal and administrator evaluation of efficacy of the consultant's work.
- An evaluation form on which interpreters could rate and provide feedback on the overall performance management process; the consultant's conduct and interactions with interpreters.

From 2010 forward, there was a great deal more ownership over the performance management process by the interpreters, as they were increasingly empowered to be reflective and reflexive practitioners. Opportunities to give feedback in various ways to management were created through the project. Interpreters were able to clearly stipulate their training needs as practitioners and also to identify what proved helpful and effective for them in the performance management process. In these ways, SCDEC is working toward best practices in the performance management of interpreters.

8. Conclusion

To enable effective learning in a student, one looks for best practices surrounding the teaching and learning experience. In this instance, part of that equation is ensuring that (a) the interpreter's work meets an appropriate standard and (b) that the value of this work is properly recognized and reinforced within the organizational system. Although the case study presented herein describes the efforts of one school in trying to address issues of performance quality and ongoing training of a cohort of interpreters, the latter notion of working within a system that properly acknowledges and supports the complex work of interpreters is a much bigger issue—and the larger system is much more difficult to revolutionize from the ground up.

To assist in the understanding and recognition of interpreters and to aid in creating an "interpreter-ready" environment, there needs to be a more effective job description and employment category that is specific to educational interpreters in Australia. There also needs to be salary differentiation, recognizing the qualifications and experience of those in the role. This, in turn, would offer incentives for educational interpreters to complete interpreter education programs, participate in ongoing professional learning and training, gain accreditation, and stay working in schools as interpreters, highly valued for the multifaceted, challenging work that they do. Patrie and Taylor readiness of the wider school community is flagged by Patrie and Taylor (2008) as a key factor in creating an interpreter-ready environment. Not only must administrators, parents, teachers, and interpreters understand one another's roles, but the students—deaf and hearing—must also understand the interpreter's role and how to work with the interpreter for the best outcome. These interpreter-readiness issues are part of the bigger picture and remain as areas needing improvement at SCDEC, within the larger school community, and within the broader education system in Australia.

Ultimately, staff are the most valuable resource of an organization. Every employee affects productivity in the workplace and has an impact on the organizational culture. SCDEC management values interpreting staff and want to help continually improve interpreters' skills, believing that improved performance by practitioners should support better outcomes for deaf students. This performance management project sent a clear message to staff that SCDEC considers interpreters worth the investment, and SCDEC recognizes that it is indeed fortunate to employ so many interpreters with appropriate credentials and good interpreting skills.

However, SCDEC still has much to learn and improve upon in regard to various aspects of an interpreter-mediated education experience for deaf students. Given the work described in this article, it seems that SCDEC might score a "B" grade for effort and results in regard to developing a meaningful performance management process and in offering skill advancement opportunities to educational interpreters. However, until the bigger and broader issue of creating an interpreter-ready system in education settings can truly be addressed and rectified, SCDEC will need to keep striving toward achieving that elusive "A" grade.

9. Acknowledgments

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Appendix: Educational Interpreter Performance Evaluation Rubric

Interpreter's Name: _____ Date: _____ Class setting/context: _____

Elements to Consider	Comments
1. Interpreting Aspect	
1.1 Equivalence of message (appropriate for context? Contains textual integrity and fidelity? Info exchange is successful, overall?)	
1.2 Avoids distracting mannerisms that impact on performance (whispering, vocalizations, upper body shifts, inappropriate eye gaze, etc.)	
1.3 Uses appropriate time lag to allow concepts to be conveyed accurately	
1.4 Miscues (omissions, additions, substitutions, intrusions, anomalies)—any strategic?	
TRANSMISSION ACCURACY: 1 2 3 4 5	*5 = VERY ACCURATE*
2. Language Aspect	

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2.1 Comprehends source message (English vocabulary, denotative/connotative meaning, Auslan signs/fingerspelling/numbers)	
2.2 Paralinguistic elements (facial expression, pace, size of signing space, mouth movements, etc.; English prosody/inflection)	
2.3 Articulation (clear production of signs, fingerspelling, numbers, etc., in Auslan. Clear production in English at correct volume.)	
2.4 Uses correct grammar and structure in target message (complete thoughts in English and Auslan; use of space, classifiers, tenses, indexing, etc., in Auslan)	
2.5 Fluency ("smoothness," control and flow of language; comprehensibility/ease of viewing or listening to target text—care taken not to overly smooth out rough source text)	
2.6 Vocabulary and register (using correct signs, right style of language, appropriate vocabulary, idioms, strategies for unknown/key vocab, etc.)	

OVERALL LANGUAGE SKILLS: 1 2 3 4 5   5 = *EXCELLENT*

3. Interaction/Role Aspects

Bontempo and Hutchinson

3.1 Roles specific to education (classroom context adjustments; checking student comprehension; purpose and intent of lesson made clear?)	
3.2 Managing overlap, turn-taking (and indicates speakers), questions, interruptions, clarifications, and introductions	
3.3 Handling ethical dilemmas and demonstrating ethical behavior (e.g., apparent preparation for lesson took place)	
3.4 Social/cultural/professional sensitivity (use of appropriate strategies to gain attention; facilitation of social interactions with peers; interpreter interaction with student/s and teacher/s)	
MANAGING INTERACTION/ROLE: 1 2 3 4 5	5 = *EXCELLENT*
4. Professional Conduct	
4.1 Environmental management (to extent possible), appropriate positioning, accessibility of class/content in general	

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4.2 Appearance/presentation, demeanor, punctuality, posture, etc.	
4.3 Response to errors/overall confidence	
4.4 General attitude, conduct, and body language	
OVERALL PROFESSIONALISM: 1 2 3 4 5	5 = EXCELLENT
5. General Comments	

A Professional Development Initiative for Educational Interpreters in Queensland

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Abstract

In June 2007, the Transition to Auslan Project—an initiative of Education Queensland (the title used to refer to the State Department of Education in Queensland, Australia)—commenced. The project consists of a range of professional development opportunities designed to assist Education Queensland staff, who are responsible for working with students who are deaf to develop and enhance their skills in the use of Australian Sign Language (Auslan). The professional development activities of the Transition to Auslan Project also aimed to develop bilingual pedagogical practices in teaching students who are deaf and who use Auslan. In this article, the author describes one of the elements of the Transition to Auslan Project—professional development for educational interpreters. The background, planning, development, delivery, and outcomes of this professional development program are outlined and discussed.

Keywords: educational interpreting; professional development; distance education

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A Professional Development Initiative for Educational Interpreters in Queensland

1.   Background—The Transition to Auslan Project

The Transition to Auslan (TTA) Project commenced in June 2007. The Queensland State Government in Australia allocated $30 million to the Department of Education (Education Queensland) to be used over a four-year period. The purpose of the TTA was to assist staff (i.e., teachers and teacher aides) who work with students who are deaf and who use Australian Sign Language (Auslan) to enhance their skills in the use of Auslan and the application of sign bilingual pedagogy.

   Teacher aides were employed to fill two important roles in schools: (a) Teacher Aide: Educational Interpreters (TA:EIs) and (b) Teacher Aide: Auslan Language Models. In this article, I focus on professional development initiatives for TA:EIs.

   TA:EIs are required to fulfill the role of interpreter in the classroom, facilitating communication between the classroom teacher and the student who is deaf as well as communication between the student who is deaf and other students in the regular classroom. In addition, TA:EIs may be required to undertake tasks expected of any teacher aide, such as resource production and one-one-one activities with students.[2]

   The TTA was devised to encompass a range of initiatives and activities, including professional development and training, policy development, and significant philosophical and infrastructure change in schools throughout Queensland.

   The intention of the TTA—announced by the then Minister for Education, Training, and the Arts—was that by 2012, the Department of Education, Training, and the Arts (now known as the Department of Education and Training [DET]) would systematically phase out the use of Signed English[3] and adopt Auslan as the language of instruction for those students who are deaf or hearing impaired who require or request access to schooling that uses signed communication. Such a significant change in philosophy and approach required extensive, ongoing training for all staff (particularly, teachers and TAs)

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[2] As of the time that this article was written, the role of TA:EI in Queensland has no specific requirements in terms of education or qualification. Accreditation as an interpreter (*accreditation* is the term used in Australia for qualification or license as it pertains to interpreting practitioners) is listed as a desirable attribute on the position description, and TA:EIs are encouraged to pursue accreditation.

[3] *Signed English* is a system of manual communication that was contrived to represent all elements of spoken English in a manual form.

1.1. *General training initiatives*

At the commencement of the TTA, DET employed a staged process to improve workforce capacity in the area of Auslan instruction and sign bilingual pedagogy. A range of professional development strategies relating to Auslan was implemented for staff working with students who are deaf or hearing impaired. Some of the initiatives included the following:

- A three-semester, part-time course (offered online) in Auslan delivered by Griffith University at remote sites in Nambour and Bundaberg.

- Two consecutive programs leading to a Graduate Certificate[4] in Auslan Studies delivered by the Mount Gravatt campus of Griffith University. This two-year, part-time program was first conducted with a cohort of students in Brisbane, Townsville, and the Gold Coast, and the second was conducted with a cohort of students in Brisbane, Cairns, and Toowoomba.

- A three-semester Certificate II course in Auslan conducted through Southbank College of Technical and Further Education (now Southbank Institute of Technology) in Queensland.

A broad range of additional professional development activities have been created and delivered in the four years since implementation of the TTA, focusing on topics such as The Auslan to English Continuum, Bilingual Pedagogy, The Language Experience Approach, Signing Mathematically, Deaf Culture and Community, Deaf History, and Introduction to Auslan Linguistics. These activities vary in duration from two hours to a full day.

1.2. *Targeted training initiatives*

Since the beginning of the TTA, TA:EIs have been able to access these professional development activities to improve their skills, knowledge, and understanding of Auslan and sign bilingual pedagogy. In November 2009, the DET hired a Project Officer (i.e., the author) who was given specific responsibility for the development and delivery of targeted professional development activities for TA:EI staff around the state, commencing in January 2010. The nature of this program is described in detail in the section that follows.

2.   The Professional Development Program

2.1. *Background*

Geographically speaking, Queensland is a very large state—in fact, it is the second largest state in Australia (Western Australia being the largest). The distance from Queensland's southern border with New South Wales to Bamaga on the northern tip of Cape York is 2,785 kilometers (1,730 miles). The total area of Queensland is 1.7 million square kilometers (1,056,331 square miles), making it seven times larger than the United Kingdom.

The total population of the state of Queensland is 4,574,797 (Queensland Government Office of Economic and Statistical Research [QGOESR], 2011a). Most of the state's residents live in Brisbane (population of 1.06 million in the metropolitan area; QGOESR, 2011b), with the remainder living in the major coastal centres of Cairns (pop. 168,251), Townsville (pop. 185,768), Gold Coast (pop. 527,828), and Sunshine Coast (pop. 330,934) as well as the inland centres of Toowoomba (pop. 162,057) and Mount Isa (pop. 21,994; QGOESR, 2011b). The large size

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[4] At Australian universities, a Graduate Certificate is the lowest level of postgraduate qualification that can be achieved. Typically, an individual initially would study at the Bachelor's degree level and then pursue further specialist studies at the Graduate Certificate level. In the program described here, students possessed a Bachelor of Education degree prior to entry. Graduate Certificate programs are usually 1 year in duration if studied full time, 2 years in duration if studied part time.

of the State and its comparatively small population create challenges in the delivery of professional development for a range of people, not only TA:EIs.

For the purposes of planning and funding, Education Queensland has divided the state into seven regions: Far North Queensland, North Queensland, Central Queensland, Darling Downs South West, South East, North Coast, and Metropolitan. Figure 1 shows the boundaries of the education regions and the location of Brisbane and other major regional cities and towns.

Figure 1: Department of Education and Training (DET) regional boundaries (Queensland Government DET, 2010)
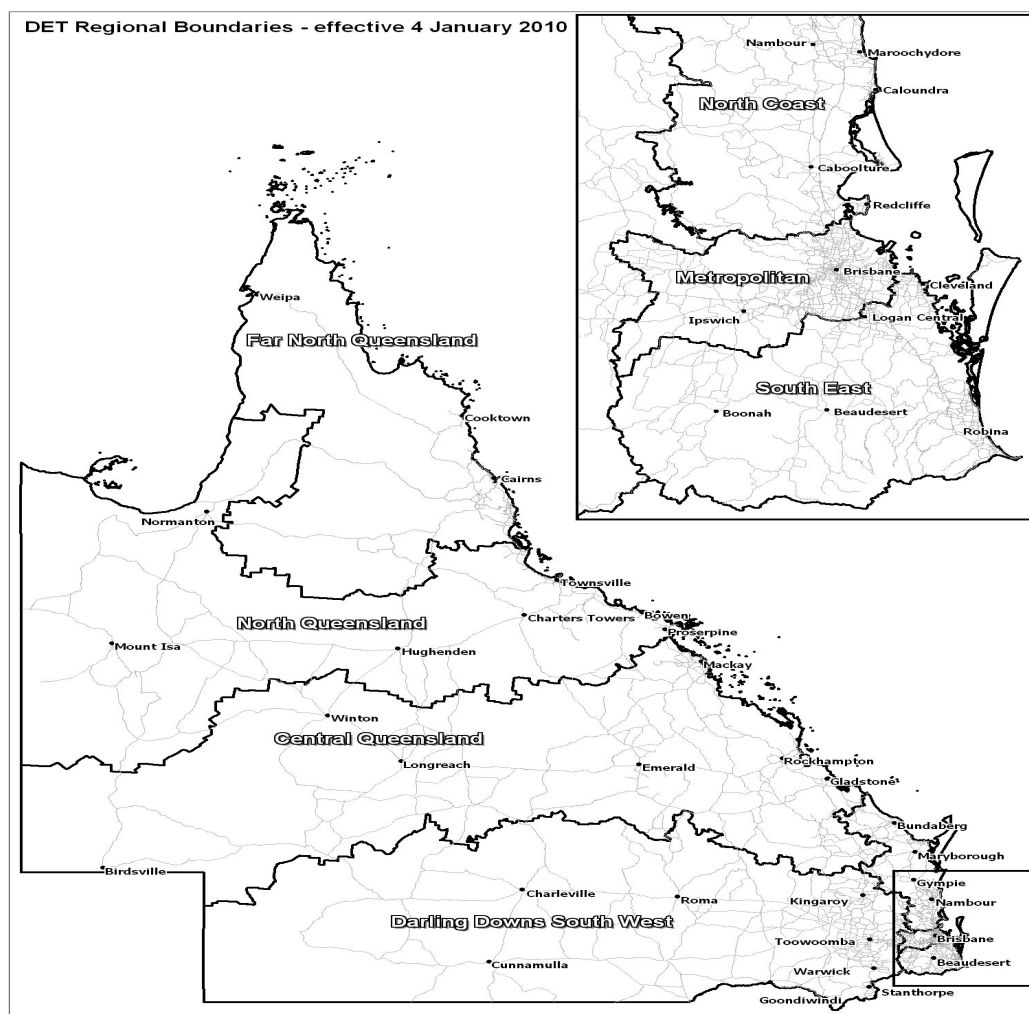
At the beginning of 2010, 96 TA:EIs were employed by Education Queensland. At the time of writing (March 2011), 144 TA:EIs were working in early childhood, primary, and secondary settings around the state, from Weipa in the north to Miami in the south and Mount Isa in the west. All of these staff members work a variety of hours each week: Some work full time, whereas others work part time (on only some days of the week). In addition, although many TA:EIs are "clustered" in schools in Brisbane and larger regional cities and towns or are within a regional area that is close to other colleagues, a significant number (14) work in isolation—that is, that particular TA:EI is the only person within his or her school (and, probably, the only person in the entire town or region) with sign language skills.

2.2. Considerations and challenges in designing the program

Examination of research literature on professional development for educational interpreters (EIs) found that even when job tasks are clearly delineated, EIs frequently experience difficulties managing the boundaries of their role in ways that community interpreters do not. Antia and Kreimeyer (2001) reported that there is some debate about whether an educational interpreter's facilitation of communication between parties in a classroom involves only the process of interpreting between a spoken and manual language or also involves additional responsibilities such as language modeling and encouraging communication with peers who are not deaf or hard of hearing. Stewart, Schein, and Cartwright (1998), Potter and Leigh (2002), Winston (2001), and Shaw and Jamieson (1997) also found that interpreters teach, tutor, and decide what information is and is not important to be relayed to the student.

A number of researchers have attempted to define the actual tasks that educational interpreters undertake in the course of their work. Stewart and colleagues (1998), Bowman and Hyde (cited in Potter & Leigh, 2002, p. 49), Yarger (2001), Stinson and Liu (1999), and Jones, Clark, and Stoltz (1997) found that interpreters reported having performed a broad variety of jobs in their role. Such jobs included interpreting in academic and vocational classes; interpreting for after-school activities; filling "gaps" and clarifying with the student who is deaf; reinforcing material covered in class; taking notes for students who are deaf; tutoring; grading class papers; helping students with homework; caring for hearing aids and FM systems; implementing speech lessons; adjusting to requirements of specific situations (e.g., changes in classroom dynamics); teaching study skills; preparing instructional materials; guiding students in the completion of work; and motivating the student. Story and Jamieson (2004) added additional responsibilities to that list, such as classroom supervision while the teacher is away from the class, grading work, and arranging classroom or hallway displays (p. 54).

A further issue to be considered was the self-perception of the TA:EIs for whom the workshops were intended. It appeared, from informal conversations with them, that the TA:EIs did not see themselves as interpreters. Many had moved into the interpreting role after having originally been employed as a teacher aide with no requirement to use signing skills. It was decided, therefore, that at least part of the first workshop would be dedicated to ensuring that all the TA:EIs were aware of the elements of their position description and to covering strategies for defining and negotiating their interpreter roles in their specific setting, as well as focusing on the further development of their interpreting skills.

Several other important issues were considered when planning the first workshop. One was to determine a means by which to deal with geographic distance and the spread of the TA:EI population. The sheer size of Queensland created challenges in the logistics of delivering professional development. If workshops were conducted outside the local area, travel time needed to be considered in order for TA:EIs to attend.

The second factor considered in the design and delivery of the program was the target audience's years of experience. Some TA:EIs had only been in the position for a few weeks or months, whereas others had as much as 10 years' experience working as an interpreter in an educational setting. A third consideration was the range of settings in which the TA:EIs were employed: from early childhood through senior secondary level.

Finding the time to engage in professional development was a significant issue for the TA:EIs. As teacher aides, every minute of their working day is accounted for in providing support to the student(s) and the teacher. This workload leaves little time to access online or other training activities, and this lack of paid time to attend professional development also serves as a disincentive to working outside of school hours. Similar to the plight of community interpreters, TA:EIs find that the schools, and Education Queensland, often have trouble recognizing the importance of their role. This lack of recognition occurs both inside and outside the profession—that is, educational interpreting is often perceived by community interpreters to be work of lesser skill and importance (Potter & Leigh, 2002).

2.3. *The professional development program*

As far back as 1996, Stewart and Kluwin noted the following:

> [A]lthough acknowledged, the critical nature of the role that interpreters play in the education of deaf students has not met with efforts to nurture the growth of that role professionally. Instead, as their numbers have grown rapidly, educational interpreters essentially have been left to their own devices in trying to adjust to the interpreting demands of each student and ensure their effectiveness in facilitating the exchange of information. (Stewart & Kluwin, 1996, p. 29)

The importance of a tailored program of professional development for TA:EIs cannot be overstated. In the 2010 school year, four full-day workshops were offered to TA:EI staff in January, April, July, and October. These workshops were offered on declared *student free days* (SFDs), which are days set aside by Education Queensland so that staff may engage in professional development activities when students do not attend school. Traditionally, there is at least one SFD in each school term of the year.

Student-free days were deemed to be the most effective time to deliver training, considering that (a) it is not appropriate to withdraw a TA:EI from the classroom when the student who is deaf is present and (b) it is generally impossible to find replacement staff member. This limitation meant that the total amount of face-to-face training that could be offered in the 18 months remaining in the TTA (from January 2010 to June 2011) would be six days.

The first workshop, in January 2010, was offered on two consecutive SFDs, with half of the TA:EIs travelling to Brisbane on each day. In total, 80 TA:EIs attended—40 on each of the 2 days. Travel from the home region was fully funded by the TTA, along with accommodation and a daily allowance. Given the self-perception of many of the participants that they were not "really" interpreters, some of the workshop time was set aside to explore the nature of their role and to relay the seriousness of its responsibilities. Subsequent to the workshop, all TA:EIs were given electronic access to a copy of the position description for their role, as a reference document to ensure that confusion about role boundaries and responsibilities did not continue.

Participants were also informed about the Australian Sign Language Interpreters' Association (ASLIA), were directed to the ASLIA website, and were encouraged to become members. Other aspects of this workshop included an examination of the mental skill of prediction (to help them prepare for interpreting tasks) and a scripted process for dealing with various ethical dilemmas. The day ended with practical activities in which the participants used their prediction skills to prepare for and then interpret a math and science lesson. The "lessons" were a series of specially designed, prerecorded vignettes, which emulated classroom content at early childhood, primary levels, and secondary levels. Participants were able to choose the vignette that best matched their current employment situation.

The second workshop, in April 2010, focused on examining the process of interpreting and the steps involved in producing an accurate interpretation. The participants learned about and practiced the mental skills of chunking and content mapping as preparation for interpreting and explored strategies for gaining clarification when needed. The cognitive and metacognitive skills of language analysis, conceptualization, memory, and pragmatic analysis are considered by Schick (2004) to be of critical importance for interpreters. Participants were given the opportunity to practice these skills with specially produced materials in both Auslan and English. Examples of Auslan were also taken from YouTube to provide practice at interpreting from Auslan into English.

As only one SFD was available in April 2010, TA:EIs were grouped according to the region in which they worked, and the workshop was delivered simultaneously at four sites around the state by four qualified, experienced presenters. These presenters are also employed by the TTA in the role of Project Officers or Regional Auslan Support Officers. All are qualified teachers of students who are deaf, and all are accredited interpreters. This model of simultaneous presentation was used for the three remaining workshops.

The sites used for this second workshop were Cairns, Hervey Bay, the Brisbane Central Business District (CBD), and a southern suburb of Brisbane. TA:EIs from Far North Queensland and North Queensland attended in Cairns, and those from the North Coast region attended in Hervey Bay. TA:EIs in the Metropolitan region

attended the Brisbane CBD workshop, and those from the South East and Darling Downs South West regions attended the workshop in the southern Brisbane suburb.

The third workshop, in July 2010, focused on basic Auslan linguistics—in particular, sentence types. The day began with a discussion of the basic elements of Auslan: phonology and morphology. Discourse analysis was introduced as a topic, including its definition and purpose. Most of this workshop comprised an examination of grammatical rules related to the following sentence types: declaratives, imperatives, negatives, topicalization, questions (yes/no, *wh*–, and rhetorical), and conditionals. Again, participants were given the opportunity to complete activities in which they compared these sentence types in English and Auslan and then interpreted from Auslan to English and English to Auslan using specially produced materials related to educational settings. The sites used for this activity were Townsville, Caloundra, the Brisbane CBD, and the same southern suburb of Brisbane. The same regional groupings were used for this and the final workshop.

The final workshop of the year, in October 2010, examined discourse analysis as it applies to educational interpreting. A great deal of time was dedicated to discourse analysis and interpreting practice from Auslan to English and English to Auslan, using specially filmed footage as well as footage from TeacherTube (an online resource that operates in a similar fashion to YouTube) which related to educational themes and concepts. Schick (2004) states that an educational interpreter may need to scaffold the student's learning by modifying content, repeating key concepts, or emphasizing new vocabulary. Therefore, it is essential that the educational interpreter understand not only the process of interpretation but also the child him or herself, from a developmental and educational perspective. Getting this understanding across to the interpreter is imperative in order to assist him or her in making informed, appropriate decisions about the modifications that he or she may need to make to the teacher's message. These decisions must facilitate the teacher's desired outcomes and be in the best educational interest of the student who is deaf.

In the first part of the final workshop, participants discussed the use of fingerspelling as well as the pedagogical tools of chaining and sandwiching [5] and practiced both expressive and receptive fingerspelling. In the second part of the workshop, participants discussed and practiced interpreting numerical information, including cardinal and ordinal numbers, age, height, time, sport scores, money, fractions, percentages, decimals, word problems, nonspecific amounts, and number incorporation. The content of this workshop was decided upon primarily because many TA:EIs had reported difficulties in interpreting numerical information—in particular, Maths. Participants first discussed with the facilitator how to interpret these particular numerical concepts and were then given the opportunity to practice interpreting pre-recorded activities from Auslan to English and English to Auslan.

In the final part of the workshop, participants discussed and practiced using a series of interpreting evaluation forms. They were encouraged to use these forms analyze and evaluate their own interpreting performances. The sites used for this final activity were Cairns, Hervey Bay, the Brisbane CBD, and the south side of Brisbane.

One beneficial by-product of these face-to-face workshops is that TA:EIs who are from remote and regional settings have had a valuable opportunity to meet with colleagues from other schools across the State and discuss issues relevant to them. Workshops also tended to be as much about informal encouragement, support, and mentoring as they were about formal content. They also enabled participants to engage in productive group discussion about negotiating their interpreting role in school and interpersonal relationships.

2.4. Resourcing

As mentioned previously, attendance at all workshops—regardless of location—was fully funded by the TTA. This funding covered flights and accommodation as well as a daily allowance. Activities were diversified and

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[5] *Chaining* refers to the use of multiple representations of a word—for example, fingerspelling the word, then signing it, pointing to the written form of the word, writing the word, and then signing or fingerspelling it again. *Sandwiching* refers to the practice of fingerspelling, signing, then fingerspelling a word. These techniques are used to bridge or connect Auslan and English.

extended to cater to varying skill levels in each group and in recognition that TA:EIs work in settings that range from early childhood to senior secondary. A range of source material options was made available (early childhood, primary, and secondary content and delivery) for all activities, which enabled the participants to work at a level that best matched their needs.

A great deal of time was invested in the preparation of resources for all of the workshops. Materials were produced by either filming and editing specific activities that focused on an aspect of Auslan or searching online resources such as the Education Queensland Learning Place (an online repository of curriculum resources for Education Queensland staff) or other related sites such as TeacherTube for suitable stimulus materials.

After each workshop was completed, the content was made available on a Blackboard site that has been established specifically for TA:EIs. The Blackboard site was established via the Education Queensland Learning Place website, a professional development site for all Education Queensland staff. Follow-up quizzes and activities as well as links to relevant readings have been generated and placed on the Blackboard site after each workshop; this enables TA:EIs to engage in further practice of the skills learned in the face-to-face workshops. They can also deposit completed written activities in the drop box (a feature of Blackboard that allows for electronic submission of work) for assessment and feedback. The Blackboard site also contains external links to the ASLIA website, useful YouTube videos, and a discussion board to encourage interaction with colleagues.

The addition of the discussion board was considered a valuable way for TA:EIs in regional and remote areas to make contact with colleagues. Yarger (2001) states that interpreters in rural areas are isolated from the support of other interpreters and tend to have a difficult time establishing and maintaining a clear concept of their position. Story and Jamieson (2004) note that isolation occurs when there is no face-to-face contact on a regular basis with other competent users of the same language. This isolation is amplified when interpreters work in remote rural locations apart from other interpreters or members of the Deaf community (Story & Jamieson, 2004). Langer (2004), in a study of Internet usage among a population of American Sign Language interpreters, found a great deal of benefit in the use of the Internet for social and collegial purposes. A very large percentage (95%) of interview participants in her study reported that discussion groups served a valuable purpose—being a resource for information exchange. In addition, 95% of the respondents also considered the list a forum for discussion of issues relevant to their jobs, such as comparing and contrasting interpreting work in different environments, exploring the differences between urban and rural settings, and about how other interpreters handle similar problematic situations (Langer, 2004). Eighty-four percent of Langer's respondents reported that they view the list as a non-threatening, non-judgmental "support group"—a safe place that offers camaraderie.

2.5. Outcomes

Participants completed an evaluation after each of the four workshops. Comments were overwhelmingly positive in nature, both in terms of the extent of the learning and the relevance of the information and activities. A selection of typical responses to the final evaluative question from each workshop is shown in the Appendix.

The comments from participants indicate that many of them appreciated and enjoyed the workshop series and broadened their understanding of their interpreting role as well as the skills that they need to perform it effectively. The TTA project ended in June 2011; however, it is hoped that professional development for this group of staff will continue beyond this end point.

This article summarises an initiative which aimed to provide targeted professional development to a group of interpreters who had previously not had a great deal of opportunity to access such activities. It is hoped that the outline provided here will be of use to other professional development planners who work with EIs.

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4. Appendix

Participants' evaluative responses after each workshop in response to the stimulus "The most useful ideas or techniques I have learned during the workshop are …"

Workshop	Response
1	• I really enjoyed the ethics part and the discussion on the differences between interpreting in educational setting[s] as opposed to the community. • The importance of an interpreter's role and how broad it really is. • It was interesting to hear others' experiences and their solutions to different circumstances. Group activities enabled this to happen naturally, but discussions from questions [that were] raised also made it happen. Thought it was a good mix of practice + theory.
2	• Asking the teacher key questions at the beginning of the lesson will be very useful when interpreting the lesson (i.e., "What is the objective of the lesson?"). • Content mapping —having a plan to produce the most effective communication I can. • Practicing chunking helped me evaluate my capacity to retain information and then relay it. I was fascinated by how the density of information in the English section really affected [our determination of] how long [it would be] until we needed to stop, and that I could not chunk anything in Auslan until I understood what was being discussed.
3	• Having the technical terminology to explain what we do. • Wait and determine meaning before beginning interpretation. Meaning authenticity is more important than actual words used. • New terms and better understanding of linguistics. • To deliver the content of the lesson to my students in a better way.
4	• The importance of fingerspelling. The different ways to use chain and sandwich to bridge between Auslan and English. • That I need to do more self-analysis and evaluation and get more feedback from my colleagues. I need to practice my fingerspelling. Recognize my lag time.

Interview With a Scholar and a Gentleman: Christopher Stone

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Abstract

This open forum article highlights an interview conducted with Christopher Stone, who is a research associate at the Deafness Cognition and Language Research Centre at University College London. In this interview, he describes his introduction to the Deaf community and the road to becoming an interpreter and interpreter–researcher. He describes his doctoral research, in which he examined the work of Deaf interpreters and translators, the roots of this work, and the evolving nature of a Deaf translation norm. His findings reveal the important role that Deaf people play in the community, formally and informally, bridging linguistic and cultural differences between Deaf and non-Deaf people. His findings offer interpreters and educators opportunities to examine their own translation assumptions and to learn about the ways in which Deaf interpreters and translators perform their work in order to produce an effective translation. Finally, the article describes some of the current research projects that have emerged from Dr. Stone's seminal work, including a study of interpreter aptitude, interpreter cognitive control, and team interpreting strategies.

Keywords: interpreters and interpreter education; translation; Deaf interpreters; ghostwriters; team interpreting; aptitude testing, British Sign Language (BSL); written English

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Interview With a Scholar and a Gentleman: Christopher Stone

In this Open Forum, we broaden our discussion of interpreting research by holding a conversation with Christopher Stone. Stone trained as a British Sign Language (BSL)/English interpreter at the University of Bristol's Centre for Deaf Studies from 1995 to 1997. He returned to Bristol to complete his doctoral dissertation, in which he examined Deaf professionals working within the television news arena, whose job was rendering English into BSL. Rachel Sutton-Spence was Stone's PhD supervisor. His dissertation, which was titled "Toward a Deaf Translation Norm," was published by Gallaudet University Press in 2009.

Stone works with the Deafness Cognition and Language (DCAL) Research Centre at University College London (UCL). Currently, he is undertaking a longitudinal study examining predictors for sign language learning and sign language interpreter aptitude. His study, funded by the Economic and Social Research Council,[3] examines second-language acquisition in a new modality (manual gestural as opposed to oral gestural) as well as cognitive predictors for learning and functioning as a sign language interpreter. He has also collaborated with Robert Adam and Breda Carty in exploring Deaf[4] people's work as translators and interpreters within the Deaf community and at the institutional interface. In the second phase of DCAL, Stone will be looking at interpreters' cognitive control and how interpreters work in teams. As with previous interviews, we hope that this conversation introduces readers to the important work that Stone is doing in the area of Deaf people working as interpreters and translators, and we hope that this conversation may stimulate dialogue among readers about these same issues.

Deb: Tell us about your entry into the Deaf community and interpreting.

Christopher: While attending Exeter University in the South West of England studying chemistry, I wanted to give something back to the community, so I went to the Student Community Action (SCA) office—which is a type of student society. One of the options was to volunteer for a playgroup with Deaf children. I started in the playgroup as a volunteer, and I got along well with the children. Over the weeks, my communication with the children improved, and that led to mixing with the community, being invited to monthly social events, and so on. I then finished my degree and knew that I didn't want to do chemistry anymore! During my third year, I had a study year abroad in France . . . where I met someone who had Deaf parents who were American Sign Language (ASL) users. All of a sudden, things started to gel—so when I returned to Exeter University to do my fourth year, people told me to apply to Bristol University's Centre for Deaf Studies (CDS).

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[3] The Economic and Social Research Council of Great Britain (Grant RES-620-28-6001), Deafness, Cognition and Language Research Centre (DCAL).

[4] Editorial note: *Deaf people* are those who use sign language and consider themselves part of the Deaf community, as opposed to *deaf* or *hard-of-hearing people,* who define themselves solely as having a hearing loss. The IJIE editorial policy is to use the convention of lower case 'd' – deaf – so as not to make any judgment about the cultural status of deaf people (See Editorial of Volume 1). However, in the context of this article, the research undertaken by Christopher Stone on ghostwriting and Deaf interpreters specifically focuses on gaining insights from those who would traditionally be considered members of the Deaf community with early exposure to sign language and the Deaf community. As such, at his request, throughout this article the term Deaf is used as this represents the identities of his informants.

I applied, not wanting to be an interpreter but wanting to be more fluent in the language (BSL), and the best way to do that was . . . via the immersion experience of the interpreting stream. Luckily, my training cohort had 24 hearing and 16 d/Deaf students. The expectation was to use BSL all the time and to be sensitive to a culture that you didn't have full knowledge of at that point. It was a tall order—but fun and hard work. It was an exceptional program.

I loved the interpreter training and interpreting, so that's what I ended up doing. Upon graduation, I landed my first job in Uganda working with a Deaf person from the CDS, Gloria Pullen. I did a 1-year stint with her when she worked as development project manager in Lira, Northern Uganda. She had trained interpreters and had undertaken research across Europe, and so she could offer me feedback, such as " I don't understand you the interpreter" versus "I don't understand you the speaker," so I always feel like I have 7 years' training—4 fun years, 2 academic years, and 1 year's apprenticeship, which also involved my living in a house with Deaf people. That first year, working with her [Gloria Pullen] in another country was an intense experience that was like 3 years of experience anywhere else! It was so good—the Deaf community has been very generous to me.

Deb: Tell us about your work role now at the (DCAL) Research Centre in London.

Christopher: As I was completing my PhD, Professor Bencie Woll invited me to apply for a post at DCAL, which would involve me managing the interpreting for DCAL [and] doing some interpreting and some research—all of which was of interest to me. So I began in 2006 with DCAL, working half time, which allowed me to continue working as a freelance interpreter, too. I asked to increase my hours to 3 days a week, and I have been able to recruit two in-house interpreters that now do the bulk of the in-house interpreting. I interpret a little within DCAL (the hard stuff!), conduct my own research projects, and manage a team of interpreters. It is not a typical career (whatever that is)—I have been lucky to be on the crest of a wave! We finished the first 5 years of funding and were recently awarded another 5 years from the ESRC.

Deb: Your PhD dissertation really broke new ground. Can you describe your research?

Christopher: The roots of my research work stem from my experiences in Bristol and Uganda, where I had always seen Deaf people work as interpreters. This gave me a frame of reference for Deaf people as interpreters. On day one of my career, I teamed with a Deaf interpreter and continued to do so throughout that year in Uganda. All of these experiences were formative (without me realizing) and shaped the PhD that I ended up doing.

When I started my PhD, there was much discussion by Deaf people and hearing interpreters around [the idea of] Deaf and hearing people interpreting on television. I was curious about Deaf views on the differences between Deaf and hearing interpreters. I undertook ethnographic interviews with Deaf people from Deaf families who worked rendering the English news into BSL on television. I was interested in how they conceptualized what they were doing, who they thought they were doing it for, what interpreting models they may have had exposure to, and how they thought this might differ from the experiences of hearing interpreters. Those interviews framed my work and made it "Deaf-led." It led me to record and analyze interpreted broadcast news with Deaf and hearing interpreters and looking at the prosody of the BSL product. It also led me to analyze the pragmatic decisions the interpreters made from a relevance theory (RT) perspective (an inferential approach to pragmatics; see Sperber & Wilson, 1986/1995). This, in turn, gave rise to my third study—getting Deaf and hearing interpreters to render the same text, examining the process they undertook as well as the prosody and pragmatics. All of this appeared to capture the essence of the descriptions that my interviews with Deaf people gave me of what they did and how that may differ from the descriptions of hearing people; all of these factors, I think, contribute to what I call a *Deaf translation norm.*

The ethnographic interviews also revealed a history of Deaf people supporting other Deaf people by "translating" and "interpreting." In my experience of presenting my work, Deaf people identify with—and recognize—what I describe. When talking with Sharon Neumann Solow about my work . . . she said, " My dad was like that!" So, I think, ostensibly, I am just a messenger. It feels like a big bluff and that I should not take the credit for merely sharing information [that is already] known to Deaf community members. It is only due to the trust that my interviewees gave me that I am able to talk about a Deaf translation norm. As such, I feel a big responsibility when I talk about it, and I am pleased when people recognize the description I give, as it feels like I have done justice to my participants.

I have been privileged enough to be trusted by Deaf colleagues with the information and stories that they have told me. I do not hail from the Deaf community, so I need to be careful with the information shared with me —not let my informants down. I also try to present my research in sign language as often as possible so that Deaf people can access the information directly.

It fascinates me that when I was trained, I was never told about a Deaf translation norm, yet the global Deaf community recognizes these "hidden histories" of Deaf people as language brokers, translators, and interpreters for other Deaf people in Deaf schools, Deaf clubs, and Deaf organizations—these people who are known in Australia as "ghostwriters." They may translate a letter, explain a loan application, take a letter dictation from a sign language, inform people of the news, explain subtitles—all of these activities inform Deaf people from their earliest years of translation and interpreting and create a cultural expectation for a bilingual person within their community. I was never told this—we just learned that "attitude" is really important. Should we tell new students about this community experience? the Deaf community translation norm of more literate Deaf people supporting less literate Deaf people? Ghostwriters have been doing this since time immemorial, but this norm should also inform interpreters about how Deaf people understand English, what interpreters could do, and what interpretation could look like.

As interpreters, we could be looking to understand how language brokers are situated in the Deaf community, how they behave, and what community ethics look like—and, of course, *what* they do that forms the translation norm. When we examine the work of Deaf interpreters, we should look at a number of features—for example, "Where did Deaf people apply effort in the interpreting?" Using relevance theory as a framework, where are Deaf interpreters enriching the target language to include additional linguistic and cultural information to make it possible to be understood with the least cognitive effort? And when are they impoverishing or reducing the target language, making it pragmatically heavy (for a non-native language user) but still ensuring the least cognitive effort for the Deaf consumer? These "in and out" decisions of native language users can inform our practice and can help us better design our target language output for our audience.

In the United Kingdom, Deaf interpreters (DIs) are starting to work in areas that may have traditionally been seen as "hearing" work and also are undertaking English support—that is, ghostwriting—only they are now being paid. In the United Kingdom, we have verbatim speech-to-text reporters (STTR), which is also known as computer assisted real-time captioning (CART), offered as part of the access requirements for hard-of-hearing people. DIs are beginning to expand their interpreting work to include using an STTR "feed"—that is, scrolling English captions and translating from the captions into BSL, ASL, International Sign (IS), and so forth. This approach extends the television work that Deaf translators/interpreters do from an autocue. And who knows what will happen when independent speech recognition is available?

Often, when Deaf interpreters work, there are no complaints about their work from their Deaf consumers. Ironically, hearing interpreters might complain about or critique the Deaf interpreters. This was the case when the Association of Sign Language Interpreters for England, Wales and Northern Ireland (ASLI) employed Deaf interpreters to work from STTR to BSL for the annual general meeting and conference for the first time. Hearing interpreters felt that they were in a position to suggest how they would do things differently and how nuances were being missed without wondering whether the nuances missed were merely things that were either not judged to be relevant or just became implicit in the BSL interpretation. At that conference, one of the Deaf interpreters also seamlessly worked from ASL, Irish Sign Language, and IS—four languages for the price of one—and, yet, many hearing colleagues missed that expertise. Interestingly, when they needed to rely on the Deaf interpreter, there was no critiquing or complaints! It would seem, then, [that] the hearing interpreters experienced the same pleasure that many Deaf people express when watching Deaf interpreting and that the DIs ensure optimal access.

I am pleased that we now see courses emerging for Deaf translators and interpreters. Several Deaf interpreters have graduated from university courses in the United Kingdom. John Walker in the University of Sussex, United Kingdom, is running a pilot course for DIs working between BSL and either German Sign Language (DGS), Polish Sign Language, or Czech Sign Language. John has been instrumental in working with me and other interested parties to move forward the registration categories for DIs working between BSL and another sign language or to BSL from English autocue. At Hamburg University, Germany Professor Christian Rathmann has began running three different courses: one for DIs working between DGS and German on autocue, a second for DIs working between DGS and another sign language, and a third for DIs working between DGS and IS. In Canada, at the Association of Visual Language Interpreters of Canada (AVLIC) conference, Robert Adam and I were able to use the services of a DI (Nigel Howard); Robert and I presented in BSL, and Nigel interpreted into

ASL. We met two DIs enrolled in and undertaking full interpreting programs and supported further recognition for DIs within AVLIC. This suggests that it won't be long before hearing interpreters and DIs are working alongside each other in ever increasing contexts, so there could be an exciting future for teams of "mixed" interpreters.

Deb: What would you like interpreter educators and interpreters to understand about your findings?

Christopher: There are several things we need to think about: One is the history of sign language interpreting, and which prominent Deaf figures inform that history. For example, Breda Carty, in a recent *Sign Language Studies* article titled "A Grave and Gracious Woman," has uncovered a remarkable story from the 17th century, the careful reading of which identifies that fact that Deaf and hearing interpreters worked together so that a Deaf person could be accepted by the Puritanical Church. Given that this happened in an institutional context in the 17th century, why not now? We would, however, need courses that differentiate teaching for different learners with different knowledge and skill gaps (i.e., Deaf people, hearing people with Deaf parents, and people who are hearing/Deaf community "naïve," which may include hard-of-hearing people).

Watching the Deaf interpreters undertaking media interpreting sheds light on rendering a better product. A second thing we need to think about is ways to strengthen translations by understanding the processes that Deaf interpreters use in their work. Further analysis of the practice of translation and interpretation when performed by Deaf interpreters may also give us further resources for the classroom. When interpreting, what strategies do Deaf interpreters use to produce work that is much more like a translation? Can those techniques be taught to us as non-Deaf interpreters, so that we can learn how to render a better cultural and linguistic product?

As for professionalism and professional behavior, there is much we can learn by watching . . . Deaf professionals; how do they behave within and with their community, how do they interact at the Deaf clubs, and how do they continue to be active in the community while still being party to information gleaned there? Learning from Deaf interpreters would broaden our understanding of professionalism, role, and interaction. Their perspectives shine a brighter light on the role and ethical practice of interpreters, and this may provide us with a framework to attach to translation.

Deb: What one aspect would you like interpreters and educators to apply to their interpreting work and the teaching of interpreters?

Christopher: Addressing which jobs are "Deaf interpreter" jobs—for example, the translation of websites or the filming of DVDs: Should hearing interpreters accept that work? or refer it to our Deaf interpreter colleagues and encourage them to do that work? What about written translation—what questions should we be asking ourselves before we do that work? These conversations invite professionals in the field to shift their understandings of the traditional work for non-Deaf interpreters that may be better done by Deaf interpreters.

Deb: What is next on your research agenda?

Christopher: Robert Adam and I interviewed older people 50–80 years of age in Australia and the United Kingdom. All of them were known to be ghostwriters, and their stories tell us about the responsibility and roles of ghostwriters. We have an article coming out in the journal *Babel,* looking at the ghostwriter role's cultural capital in the Deaf community. We want to extend the interviews to younger Deaf people, 16–30 years and 31–45 years, as it seems that younger Deaf people still identify with this experience of ghostwriting.

These days, Deaf people are not freaked out by English and use it with technologies such as MSN, Skype, and Facebook; they are showing confidence in using English in these forms of social media. But, still, people are saying, "Yes, I do English support for my friends." We now see informal networks developing—and at sites other than Deaf school, Deaf clubs, or within the family—sites such as within mainstream schools or at work. So, that invites more questions about how the ghostwriting role is evolving, what expectations people hold for us as interpreters, and how the community is changing, too.

I am currently conducting two studies. One is a longitudinal study of interpreter aptitude and the cognitive skills that underpin interpreting. As I continue to gather data, I hope to (eventually!) identify aspects that support interpreter education. The second study is with you [Deb Russell]; we are collaborating on an IS team pilot study, part of which we reported on at the 2011 conference of the World Association of Sign Language Interpreters. We are looking at team strategies, preparation and differences between Deaf and non-Deaf interpreters among other things. We are also hoping to build on a Clément study (1986) and his subsequent work that focuses on the

cultural identity of bilinguals, and we will be looking to extend that study to sign language interpreters.
 One of my colleagues at DCAL is just finishing her PhD, and another colleague is hoping to start one, so we are hoping to combine a postdoctoral post and a PhD studentship in a grant. We are applying for money to tease out how preparation influences the performance of the interpreter in educational settings.

Deb: Are there questions I should have asked you but didn't?

    Christopher: Yes: "Would I advise people to undertake a PhD? Would I do it all again?" And the answer would be "Absolutely!" I feel that I have been so fortunate and, I would say, lucky—although Lorna Allsop always tells me that there is no such thing as luck. Even so, one needs to be in the right place at the right time—I was "lucky" in that the opportunities were there, and I was smart enough to grasp them. A PhD in Interpreting is a wonderful thing to engage in, even if you don't have a further academic career in mind. You can move back into being a full-time interpreter and bring with you all the learning of the PhD experience, supporting your colleagues and Deaf people with newly gained knowledge. If people are asking themselves, "Should I undertake a PhD?" to them I would say, "Why not? Go on . . . treat yourself!"

Deb: Thank you for taking the time to share your experiences with us. Once more, I am adding someone to my "researchers to watch" list, placing your name at the top of the list!

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Characteristics of Effective Interpreter Education Programs in the United States

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Abstract

The goal of this study was to expand the limited research that currently exists in the field of interpreter education—specifically, as it relates to the *readiness-to-credential gap,* the consensus in the field that students graduate from interpreter education programs (IEPs) but are not ready to obtain the minimal interpreting credentials set forth by the field at both the state and national levels. To accomplish this goal, in this article the author identifies programs that have a low readiness-to-credential gap and analyzes the characteristics that are contributors to each program's success, so that improvements can be made in current IEPs. In this article, the author presents some principal findings of the study; for more information, please refer to the full dissertation report (Godfrey, 2010

Keywords: interpreter education; interpreter education programs (IEPs); school-to-work gap; school-to-credential gap

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Characteristics of Effective Interpreter Education Programs in the United States

1. Background

Signed language interpreting is a relatively new profession in the human services field. Interpreters are needed in areas including but not limited to education, employment, medical, legal, financial, state and local government services, and public accommodations for people with widely divergent linguistic needs. Recent legislation in the United States mandates the provision of signed language interpreters in a variety of settings.

Historically, the first interpreters for deaf people were family members, educators, and clergy (Winston, 2004). As the field moved toward professionalization, signed language interpreter education programs (IEPs) became the primary method for producing professional interpreters. However, there remains debate about how to properly educate interpreting students so that they emerge from IEPs as competent practitioners (Patrie, 1995; Stauffer, 1995; Witter-Merithew & Johnson, 2005).

In the United States, three types of interpreting credentials are recognized within the profession. At the national level, the Registry of Interpreters for the Deaf (RID) is the governing body that establishes and sustains standards that define the field of signed language interpreting and that monitors the practice of interpreters. A first interpreting credential is that the holder of RID's generalist certificate has met or exceeded a nationally recognized standard of minimum competence in interpreting (RID, 2005) and is deemed qualified to interpret in a variety of settings. A second interpreting credential that has national acceptance—although on a more limited scale—is the Educational Interpreter Performance Assessment (EIPA; Schick & Williams, 2004). A third interpreting credential is a state-level credentialing body, often referred to as a *state quality assurance screening* (QAS).

Anderson and Stauffer (1990) first described a crisis situation in the field of signed language interpreting as the *readiness-to-work gap,* which is also referred to as the *readiness-to-credential gap.* The two concepts are closely related, and the terms are often used interchangeably; however, there is a distinction. The former (*readiness-to-work gap)* indicates that students graduate but are not ready to gain employment as an interpreter practitioner who is competent to provide services across a wide variety of settings (Patrie, 1995; Witter-Merithew & Johnson, 2005). The latter (*readiness-to-credential gap)* indicates that students graduate and may be employed to provide rudimentary interpreting services in limited settings but are not yet ready to obtain interpreting credentials set forth by the field at either the state or the national level. Both terms indicate that IEP graduates are not ready to enter the interpreting profession as fully qualified and certified professionals. The sheer demand for interpreters and poor governmental regulation ensure that some poorly qualified individuals will, in fact, work in situations that exceed their professional skills. This reality makes the task of statistically measuring the readiness-to-work gap difficult, if not impossible; using credentials to measure preparedness is a more objective and quantifiable way to gauge the actual qualification of IEP graduates. Because of this unfortunate reality, it may be more appropriate to identify a discrepancy in skills and capability on the job as the *readiness-to-credential gap.*

2.   Attempts to address the readiness-to-credential gap

Soon after the Anderson and Stauffer (1990) study, several authors (Frishberg, 1995; Patrie, 1995; Robinson, 1995; Stauffer, 1995) wrote about the readiness-to-work gap. These authors confirmed that the gap still existed. Over a decade later, Witter-Merithew and Johnson (2005) reiterated the now-familiar lament from stakeholders regarding the continued existence of the gap between completion of a program and readiness for competent practice as evidenced by interpreting credentials. In three major independent initiatives, researchers have attempted to lessen the readiness-to-credential gap. In the 1980s, the field began to expand the condensed skills-focused training from primarily 2-year programs housed in community colleges and vocational training centers to broad-based, liberal-arts, 4-year degree programs (Johnson & Witter-Merithew, 2004). The understanding was that a longer period of training would yield more competent graduates, thereby decreasing the readiness-to-credential gap. Next, the Conference of Interpreter Educators (CIT) developed national standards for interpreter education. These national standards were introduced "to be used for the development of education and self-analysis of post secondary interpreter education programs" (CIT, 1995, p. 2). These standards were adopted by the Commission on Collegiate Interpreter Education (CCIE) when official accreditation of programs began in 2007. Finally, Witter-Merithew and Johnson (2005) met with stakeholders in the field of interpreting and interpreter education to identify entry-to-practice competencies and to develop a detailed list and explanation of each one. However, despite the move to 4-year programs, the adoption of recognized standards for interpreter education, and the establishment of entry-to-practice competencies, there remains debate about how to properly educate interpreting students so that they emerge from IEPs as competent practitioners.

2.1.   Specific curricular characteristics that affect readiness of successful IEPs

There is a lack of agreement, profession wide, about what an interpreter must know and do in order to be most effective at his or her job (Roy, 2000) as well as the scope and sequence of what should be taught in IEPs. In the current literature, researchers include various potential curriculum-related strategies for effective interpreting education programs. This current literature is discussed in the paragraphs that follow.

Cokely's (2005) study revealed that most entry-level interpreters engage in one-on-one interpreting. In this study, the author suggested that the focus of interpreter education should be more discourse based (i.e., interactive) and less monologue based. Many researchers agree that interpreting should be taught using discourse analysis (Roy, 2000; Winston & Monikowski, 2000). Researchers have found teaching translation skills to be an effective technique because it aids students with a deeper understanding of the interpreting process and allows students to hone discrete skill sets without the time-imposed pressure of simultaneous interpreting (Cokely, 2005; Winston & Monikowski, 2005). The inclusion of self-assessment (Johnson & Witter-Merithew, 2004; Winston, 2004) is also recommended as an integral part of the IEP curriculum. In this type of curriculum, students then take responsibility for their own learning and foster lifelong learning habits (Winston, 2004).

Community-based learning also plays an important role in interpreter education. One area that is lacking is a period of supervised interpreting practicum, such as that required in the professions of education and medicine (Dean & Pollard, 2001). During the early years of the interpreting profession, novice interpreters were apprenticed through involvement and interaction within the Deaf community (Winston, 2004). This practice diminished with the inception of formal academic programs (Cokely, 2005), much to the detriment of interpreters. Monikowski and Peterson (2005) acknowledge the limitations of the classroom environment and promote service learning as a way to enhance what students learn in the classroom. As interpreter education "shifted into academia, it has, albeit unintentionally, lost experience and expertise of the [D]eaf community" (Monikowski & Peterson, 2005, p. 209).

Witter-Merithew and Johnson (2004) stated that the solution can be found in collective agreement about entrance and exit criteria for IEPs. Many researchers believe that one reason for the current readiness-to-credential gap is the lack of an important prerequisite—that is, skills and fluency in American Sign Language (ASL) on the part of students entering IEPs. It is unfortunate to note that successful ASL course completion does not guarantee competence in ASL. Therefore, IEPs need to establish stricter entrance criteria and, equally important, exit requirements (Stauffer , 1995). Most graduates of IEPs indicate that the programs from which they graduated did not have any specified exit requirements (Witter-Merithew & Johnson, 2005).

2.2. *"Other-than-curricular" characteristics of successful IEPs that affect readiness*

In the literature, the focus is less related to the attempts to reduce the readiness-to-credential gap relative to "other-than-curricular"–related characteristics of successful IEPs. One other-than-curricular characteristic has to do with the length of the IEP. Interpreter credentialing professionals agree that 2 years is just not enough time to prepare skilled interpreters (Johnson & Witter-Merithew, 2004; Shaw, Collins, & Metzger, 2006). Another solution may be to hire more qualified interpreter educators and to establish more stringent hiring criteria: Winston (2004) suggests that one critical challenge that IEPs confront daily is the ability to identify and assess qualified, competent teaching staff. IEPs need educators who are skilled and competent not only as instructors but also as practitioners (Roy, 2000). Educators who have advanced training in language study and who are researchers (Roy, 2000) are better positioned to have success in preparing students.

3. Method

In this study, I anticipated identification of "specific curricular" and "other-than-curricular" characteristics that contribute to lowering the readiness-to-credential gap. Thus, I sought data that would address related questions— that is, questions concerning the characteristics of successful IEPs.

3.1. *Participants*

In fall 2009, the National Consortium of Interpreter Education Centers (NCIEC) conducted the Interpreter Education Program Needs Assessment (NCIEC, n.d). The population for this study on the readiness-to-credential gap was the 2-year and 4-year interpreting training programs that participated in the 2009 NCIEC IEP Needs Assessment (NCIEC, n.d). Programs whose responses indicated a lower readiness-to-credential gap (6–18 months) were considered the more effective IEPs and were categorized as Tier One schools. The nine Tier One programs were invited to participate in the next phase (Phase Two) of the data collection; five of the nine invited schools agreed to participate. During Phase Three, and using the list of schools from the NCIEC website (NCIEC, n.d.), I sent a second assessment tool to all of the 2- and 4-year IEPs that had been in existence for the minimum amount of time required for an entire class to complete the program.

3.2. *Survey instrument and interviews*

As noted in the previous paragraph, in this study I used the data collected by the 2009 NCIEC IEP Needs Assessment. The survey included information that was related but not limited to the following items:
- Program age, level, and location
- Teaching staff, staff educational background, and interpreting credentials
- Program budget, program enrollment, class size, and entrance and exit requirements
- Student demographics and student load
- Timeline for completion of the credentialing process at the state and national levels

During Phase Two, semistructured interviews were conducted with approved program representatives. I developed the interview questions, which were then reviewed by a content expert as well as an expert in program evaluation. The interview was piloted by four former IEP coordinators. On the basis of their feedback, I modified the instrument to increase ease and understanding, and I added additional questions to ensure a comprehensive collection of relative data.

In Phase Three, I used the information collected from the literature review, the NCIEC Interpreter Education Program Needs Assessment, and the Tier One investigation to develop an assessment tool that categorized suggested characteristics, curricula, and practices of IEPs. The first portion of the survey asked respondents to

identify the approximate amount of time, relative to graduation, required for students to earn credentials. The options for respondents were (a) *State-administered credential;* (b) *EIPA of 3.5–3.9;* (c) *EIPA of 4.0 or higher;* and (d) *National level (RID).* Respondents were asked to select one of the following time frames: (a) *They have them upon graduation;* (b) *1–6 months;* (c) *6–12 months;* (d) *13–18 months;* (e) *19–24 months;* (f) *More than 2 years;* and (g) *We do not track.* Date ranges were selected to parallel the NCIEC study. The two additional time frames—*They have them upon graduation* and *1–6 months*—were added because they were not included in the original NCIEC survey. In the second portion of the survey, respondents were asked to rate (using a four-point Likert scale) how each item on the scale defines their institution or is used by their institution (1 = *great extent;* 2 = *moderate extent;* 3 = *minimal extent;* 4 = *we do not include it*). To encourage further discussion of the identified characteristics, I provided a section for comments after each question on the survey. The same instrument verification process was followed for both the interview questions and the survey questions.

3.3. *Data collection procedures*

In this study, I used survey data and personal interviews as part of a sequential, mixed-method design conducted in three distinct phases of data collection. The study began with a quantitative analysis of preexisting data, followed by a semistructured, interview-driven qualitative investigation and concluded by a quantitatively and qualitatively analyzed survey.

Phase One used preexisting data collected by the NCIEC during the 2009 NCIEC IEP Needs Assessment. The data collected during Phase One were used for two distinct functions. First the data from the NCIEC Needs Assessment were used to identify the population for Phase Two of the data collection. Second, information from the 2009 NCIEC Needs Assessment was used for statistical computations. The questions—which related to the average time, postgraduation, that students needed to secure initial national-level professional credentials taken from the 2009 NCIEC Needs Assessment—were used to establish an IEP group ranking system (see details in the last paragraph of previous subsection). Institutions that replied "6–12 months" or "12–18" months were grouped into Tier One; institutions that replied "19–24 months" were grouped into Tier Two; and institutions that responded "More than 2 years were grouped into Tier Three. Institutions that responded "Do not currently track" were eliminated from the study sample.

In Phase Two of the data collection, five institutions were queried. The primary means of data collection in this phase was a semistructured phone interview with an approved program representative. The interview contained open-ended questions to allow the participant to respond in any manner that he or she wished. Interviews were recorded, and written transcripts of the sessions were made. Both the original recording and the hard copy transcript were filed.

In Phase Three, an invitation to participate in the electronic survey was sent via e-mail to all of the qualifying programs (*n* = 126) listed on the NCIEC website. Each invitation included either an individual link or an electronic code so that participation could be tracked. Weekly email reminders were sent during the 2 subsequent weeks.

4.   **Results**

Reporting of the results is organized relative to the research questions. Sections consist of quantitative and qualitative results, as appropriate. For the qualitative results, Phase Two respondents are identified alphabetically (Respondent A–Respondent E) and Phase Three respondents are identified numerically (Respondent 1– Respondent 26).

4.1. What is the readiness-to-credential gap of IEPs in the United States?

Descriptive statistics were used to address research Question 1. Tables 1 and 2 present data from the 2009 NCIEC IEP Needs Assessment. Table 3 demonstrates the credential rate of the queried institutions. The largest percentage ($n = 14$, 42.4%) indicates institutions that require a period of more than 2 years from the time students graduate to the time that they earn their credentials at the national level.

Table 1: Credential Rate—Phase One Data (NCIEC)

Institutions divided by tier	Frequency	%
Tier 1: 6–18 months	9	27.3
Tier 2: 19–24 months	10	30.3
Tier 3: More than 2 years	14	42.4
Total	33	100

Table 2 demonstrates the timeline for credentialing using Phase Three data. State-level credentials are earned at a much faster rate than are national-level credentials.

Table 2: Timeline for Credentialing—Phase Three Data

Readiness-to Credential gap	State frequency	%	National frequency	%
They have them upon graduation	9	34.6	1	3.8
1– 6 months	1	3.8	2	7.7
6–12 months	5	19.2	2	7.7
13–18 months	2	7.7	6	23.1
19–24 months	1	3.8	3	11.5
More than 2 years	5	19.2	7	26.9
Missing	3	11.5	5	19.2
Total	26	100	26	100

Table 3 indicates the measures of central tendency for the credential rates. The average amount of time needed to earn state level credentials is 7–12 months, whereas the average amount of time needed to earn national-level credentials is 18–20 months—the approximate the midpoint between 13–18 months 19–24 months—which is represented by a mean score of 2.619. The majority of programs indicate that their graduates are able to earn state-level credentials upon graduation but that more than 24 months are required to earn national-level credentials.

Table 3: Measures of Central Tendency for Credential Rates—Phase Three Data

Factor	N	M	Mdn	Mode
State level	23	4	4.00	6
National level	21	2.619	3.00	1

Note. 6 = Upon graduation; 5 = 1–6 months; 4 = 7–12 months; 3 = 13–18 months; 2 = 19–24 months; 1 = More than 2 years.

Using these data, the readiness-to-credential gap can best be explained that graduates from 4-year program may be able to secure state-level credentials upon graduation but may take up to 1 year to earn national-level credentials. Graduates from associate-level programs may require almost 2 years for state-level credentials and more than 2 years for national-level credentials.

4.2. What curricular-related characteristics of successful IEPs affect readiness?

For the purpose of this study, the term *curricular-related characteristics* refers to any item that is related to program requirements, instruction, and/or assessment. Both quantitative and qualitative data were used to address this research question.

4.2.1 Quantitative results

Table 4 indicates the extent to which IEPs incorporate various curricular factors, as found in the Phase Three survey. Almost 81% indicated that they incorporate self-analysis to a great extent. A total of 69.2% of the programs indicated that they incorporate critical thinking to a great extent, and 65.4% of the programs indicated that they incorporate discourse-based instruction to a great extent.

Table 4: Incorporation of Curricular Factors—Phase Three Data

Curricular factor	Great extent (%)	Moderate extent (%)	Minimal extent (%)	Do not include it (%)	Did not answer (%)
Discourse-Based Approach	65.4	34.6	0	0	0
Discourse Analysis	46.2	50	3.8	0	0
Consecutive Interpreting Instruction	53.8	42.3	3.8	0	0
Transcription	7.7	53.8	26.9	7.7	3.8
Translation	23.1	57.7	11.5	3.8	3.8
D-CS	34.6	26.9	26.9	11.5	0
Critical Thinking	69.2	23.1	7.7	0	0
Self-Analysis	80.8	11.5	3.8	0	3.8
Preparation for Credential	34.6	38.5	15.4	0	11.5
Service Learning	30.8	38.5	3.8	19.2	7.7
Portfolios	26.9	30.8	19.2	11.5	11.5

Note. D-CS = Demand-Control Schema (Dean & Pollard, 2001).

Table 5 presents chi-square results using the Phase Three data for curricular factors relative to state- and national-level credentialing rates, respectively. Thirteen tests failed to reach the conventional rejection alpha level of .05 and, therefore, failed to reject the null hypotheses. The single exception was service learning at the state level. The

four programs that indicated no inclusion of service learning require a period of more than 2 years before the student can obtain state-level credentialing.

Table 5: Chi-Square for Curricular Factors—Phase Three Data

Factor	State			National		
	χ^2	*df*	*p*	χ^2	*df*	*p*
Consecutive Interpreting Instruction	9.20	10	.513	7.370	5	.195
Discourse-Based Approach	6.17	10	.800	4.341	5	.501
Discourse Analysis	6.491	10	.772	4.105	5	.534
Transcription	23.514	20	.264	7.012	15	.957
Translation	22.697	20	.304	10.783	15	.768
D-CS	17.621	15	.283	14.733	15	.471
Critical Thinking	11.483	10	.321	11.133	10	.347
Self-Analysis	8.474	10	.583	12.255	10	.268
Preparation for Credentials	19.473	15	.193	17.045	15	.316
Service Learning	34.628	20	.022*	24.444	15	.058
Portfolio	26.398	20	.153	20.089	20	.452
Entry Requirements	10.276	10	.417	9.137	10	.519
Exit Requirements	8.532	5	.129	7.255	5	.202

Note. State, $N = 22$; national, $N = 21$.

*$p < .05$.

4.2.2 Qualitative results

Entrance Requirements

Entrance requirements differ from college to college, but there was consensus that strict entrance requirements impact student success. Four of the five programs have rigorous requirements for entrance into the interpreting portion of the program. Respondent E indicated that because the selection process into the IEP is carefully conducted, most students succeed once they are admitted. The one university (Respondent B) that does not have entrance requirements into the interpreting department indicates that the university is so selective that they enroll high-quality students into the program without any additional selection criteria.

Exit Requirements

There are differing opinions regarding the use of exit examinations. Only one of the five programs interviewed in Phase Two required an external performance examination. Three of five encourage an external performance examination but do not require it. Respondent D purported that the key to student success is setting exit requirements. She stated, "[I]t impacts their involvement and dedication and how they do their work hours and how they interact" and, therefore, concluded that establishing exit requirements does, in fact, affect credentialing. Respondent C's program requires students to undergo the Educational Interpreter Performance Assessment (Schick & Williams, 2004), however she believes that this requirement is not an extrinsic motivation that leads to credentialing; rather, the motivation to earn credentials is intrinsic.

Curriculum in General

Only one respondent, Respondent B, indicated that the strength of the program was directly related to the interpreting program curriculum. She argued that most places do what they have always done.

Instructional and Assessment Techniques

The respondents in Phases Two and Three all tended to be eclectic in their instructional approach, not favoring a specific approach or technique over another. Respondent A described her program as having more of a breadth of knowledge versus the depth of any specific approach. The same results were found for the types of assessments used. These types varied greatly among the respondents. There was no consistent approach, format, or rubric.

Practicum

In Phases Two and Three, the requirements for the practicum varied in structure and duration. Three of the five Phase Three respondents indicated that the practicum experience was one of the more critical factors to student success. Respondent C indicted that "What goes on in the classroom is a minor part of our students learning the language/culture. Internship classes are crucial to skill development."

Service Learning

Respondent C indicated that service learning has an amazing impact on the success of her students. Respondent 15 indicted "It does improve student's understanding of deaf individuals and their comfort level with them, which probably improves their performance to some extent on the state test.

4.3. What "other-than-curricular"–related characteristics of successful IEPs affect readiness?

For the purpose of this study, the term *"other than curricular"–related characteristics* refers to any item that is not directly related to program requirements, instruction and/or assessment but instead deals with factors such as type of program and student, class size, quality of faculty, adequacy of resources and technology, funding, campus and community environment, and out-of-class opportunities. Both quantitative and qualitative data were used to address this research question.

4.3.1 Quantitative results

Table 6 represents chi-square results using the NCIEC results for "other than curricular" factors relative to tier rank of the programs. Most tests failed to reach the conventional rejection level of .05 and, therefore, failed to reject the null hypotheses. The single exception in this set of data is the type or length of program. I conducted a two-way contingency table analysis to evaluate whether there was a difference in the tier rank on the basis of program length. The two variables were tiers (Tiers One, Two, and Three) and program length (2- and 4-year). Tier rank and program length were found to be significantly related, $\chi^2(2, N = 33) = 20.32, p = .00$. The decision was made to reject the null hypotheses. One-hundred percent of the schools in Tier one were 4-year programs; in contrast, none of the schools with associate levels belonged to Tier One. This trend is further amplified by the fact that 93% of the schools in Tier Three have 2-year programs, and only 7% have 4-year programs.

Table 6: χ^2 for "Other-Than-Curricular" Factors—Phase One Data (NCIEC)

Factor	χ^2	df	p
Degree type	20.315	2	.000**
Type of institution	4.997	2	.082
Minimum degree of program director	7.726	4	.102
Minimum credential for program director	9.120	4	.058
Resources	19.762	16	.231
Minimum degree for FT interpreting faculty	6.140	8	.632
Minimum credential for FT interpreting faculty	4.058	4	.398
Minimum degree for FT ASL faculty	5.063	8	.751
Minimum credential for FT ASL faculty	13.551	8	.094
Institutional support	3.861	2	.145

Note. FT = full-time; ASL = American Sign Language.

**$p \leq .01$.

Table 7 represents the results of two chi-squares for "other-than-curricular" factors. I conducted two 2-way contingency table analyses to evaluate whether there was a relationship between the tier rank and the date when the program was established. For the first chi-square, the two variables were tiers and the decade in which the program began (1970s, 1980s, 1990s, and 2000s.). The results were $\chi^2(6, N = 33) = 7.936$, $p = .243$. A similar chi-square was conducted using the same tier rank but grouping the establishment dates into larger time frames ("prior to 1990" and "1991–present"). The relationship between the tier ranks and the two-decade grouping of when the programs were established was analyzed, and the two were found to be significantly related, $\chi^2(2, N = 33) = 6.947$, $p = 31$. The decision was to reject the null hypotheses. A total of 77.8% ($n = 7$) of the Tier One schools were established subsequent to 1990, whereas 76.9 % ($n = 10$) of the Tier Three schools were established prior 1990.

Table 7: χ² for "Other-Than-Curricular" Factors—Phase One Data (NCIEC)

Factor	χ^2	df	p
Single-Decade Grouping Program Was Established	7.936	6	.243
Grouping Program Was Established	6.947	2	.031*

p < .05.

Table 8 represents chi-square results of "other-than-curricular" factors relative to state- and national-level credentialing rates. At the state level, most tests failed to reach the conventional rejection levels of .05 and, therefore, failed to reject the null hypotheses. The exception was Type of Program. I conducted a two-way contingency table analysis to evaluate whether there was a difference in the rate to credentialing on the basis of the incorporation of Type of Program. The two variables were time to credential (upon graduation; 1–6 months; 7–12 months; 13–18 months; 19–24 months; more than 24 months) and type of program (2-year or 4-year). Time to credential and type of program were found to be significantly related, $\chi^2(5, N = 23) = 14.629$, $p = .012$. The decision was made to reject the null hypothesis. At the national level, all tests failed to reach the conventional rejection levels of .05 and, therefore, failed to reject the null hypotheses.

Table 8: χ² for "Other-Than-Curricular" Factors—Phase Three Data

Factor	State			National		
	χ^2	df	p	χ^2	df	p
Degree Type	14.629	5	.012*	10.977	5	.052
Type of Students	16.299	15	.362	17.576	15	.286
Support by Community	8.780	15	.889	8.750	5	.119
Interaction with Native Users	12.157	15	.667	23.600	15	.072
Classroom Facilities	19.354	20	.499	22.708	20	.303
Resources	17.559	20	.616	25.750	20	.174
Lab Facilities	10.819	15	.765	21.563	15	.120
Technology	10.083	15	.814	24.950	15	.051
Cohort System	12.031	10	.283	13.165	10	.215

Note. State, $N = 23$; national, $N = 21$. *p < .05.

4.3.2   Qualitative results

External Opportunities for Learning

All of the Phase Two programs provide external opportunities to foster language acquisition and interpreting skill, and respondents agree that such opportunities are beneficial to the students. This is accomplished through service learning, campus clubs, classroom requirements, and individuals from IEPs actually getting out into the larger community. Most of the Phase Two programs were located within a large Deaf community, and representatives from both programs agreed that close proximity to a large Deaf population is an advantage. Respondent E believed that interaction with the local Deaf community is vital to student success. Respondent 18 echoed this sentiment by saying, "Students who willingly make friends with members of the Deaf community and interact more than the required amount of time tend to do MUCH better on their state certification exam[s]."

Teaching Staff

All five respondents discussed the importance of a high-quality teaching staff that consists of competent educators as well as practitioners. Respondent C stressed this point by saying that one of the more critical components to student success is a highly qualified staff, all of whom are credentialed, involved in professional development, and active at the national level. She went on to say that "I don't think that we would have the curriculum in the way that it is structured if we didn't have the faculty to make it so. I think that, certainly, curriculum is crucial, but the only reason we have that curriculum is because we have such qualified faculty…you couldn't have a curriculum without the faculty that supports it."

The five respondents unanimously agreed that having teaching staff who are engaged as practitioners is an important factor for student success. Respondent B supported this assertion by stating that teachers who continue their work as interpreting practitioners ultimately experience the most benefit. Respondent C added that it is important to have recent practical experience. Respondent E drove the point home by adding, "We are only as good as our up-to-date knowledge and skill[s], and we are only as good as we are invested in the community."

5.   Limitations of the study

This study had two main limitations. The first limitation was a lack of tracking of graduate credential rates on the parts of IEPs nationwide. In a 2009 NCIEC survey (Cokely & Winston, 2010), 130 programs were invited to participate. Fifty-four institutions responded to the survey. Of those, 30% of 2-year programs and 28 % of 4-year programs did not track graduate credential rates. Lack of tracking data results in a less-than-complete understanding of the current state of interpreter education in the United States. This limitation was beyond my control as a researcher.

The second limitation centered on the Phase Three Survey response rate. The return rate for Phase Three was 20%. There were several potentially contributing factors to the low response rate. The survey contained 112 questions—with 51 questions allowing for qualitative responses—and took between 20 and 30 minutes to complete. Additionally, the survey was deployed in late spring near the end of the traditional academic year. Because most IEPs are small departments staffed with a single full-time faculty member who also administers the program, that faculty member may not have had the time needed to complete the survey.

6. Discussion

6.1. What is the readiness-to-credential gap of signed language IEPs in the United States?

When considering the NCIEC data information that combined 2-year and 4-year programs and looked only at national-level credentials, the readiness-to-credential gaps can be described as follows: 27.3% of students are able to obtain credentials within 6–18 months postgraduation; another 30.3% of students are able to earn them within 18–24 months after graduation; and 42.4% of students require more than 24 months to obtain national credentials.

Using the Phase Three data, the average amount of time needed to earn state-level credentials (regardless of type of program) is 7–12 months, whereas the average amount of time needed to earn national-level credentials is between 18 and 19 months. The majority of programs indicate that their graduates are able to earn state-level credentials upon graduation, but more than 24 months are required to earn national-level credentials.

When applying the Phase Three data to further explore the credential rate at the state level, it is reported that 72.7% ($n = 8$) of graduates from 4-year degree programs are able to earn state-level credentials upon graduation. The remaining 27.3% ($n = 3$) have state-level credentials within 6–12 months. One-hundred percent of graduates have state-level credentials within 1 year of graduation. Conversely, for students in associate- level programs, only 8% ($n = 1$) have credentials upon graduation, and only 33.3% percent have their state-level credentials 1 year after graduation. For 66.7% of graduates from 2-year programs, it takes more than a year, and 41.7% require more than 2 years postgraduation to earn state-level credentials.

When applying Phase Three data to further explore the credential rate at the national level, only the graduates from one program had national credentials upon graduation—and that was a 4-year program. Fifty percent ($n = 5$) of 4-year-program graduates require 13–18 months after graduation to earn national-level credentials. Eighty percent ($n = 8$) have national credentials by 13–18 months postgraduation. Only 20% ($n = 2$) require 19–24 months, and no program requires longer than 24 months. Alternatively, when considering the average graduates from 2-year programs, 63% require more than 2 years postgraduation to earn national-level credentials.

6.2. What curricular-related characteristics of successful IEPs affect readiness?

6.2.1 Various suggested approaches

In the literature review, several approaches or skills were suggested as a means of fostering effective interpreter education. Some researchers assert that the basis for the credentialing gap is that the "monologue" approach used by most IEPs is less than effective (Cokely, 2005; Roy, 2000). The present study's results showed that 65.4% of the respondents use a discourse-based approach to instruction to a great extent in classroom discussion. Winston (2004) states that critical thinking skills are key to an interpreting education, and of the programs in this study, 69.2% incorporate critical thinking to a great extent. Winston (2004) also suggests that students need to assess their own skills and abilities, construct knowledge (vs. simply receiving it), and take responsibility for their own learning, thus fostering lifelong learning habits. In this study, 80.8% of respondents indicated that they incorporate self-analysis to a great extent. It appears that programs are including some of the suggested approaches. This may indicate a shift in what is being included in programs. Much of the literature regarding interpreter education has been written within the last decade, and books that have been published as part of the *Effective Interpreting Series* (Roy, 2000, 2005, 2006; Napier, 2009) have increased the dissemination of information, potentially resulting in the inclusion of suggested techniques. What were former gaps in instruction are now being covered by the curriculum.

6.2.2 Practicum

Dean and Pollard (2001) suggested that the requirement of more structured supervision in the interpreting practicum would lead to more effective interpreting programs. Quantitatively (Phase Three), the results regarding practicum were not significant, but the qualitative data confirmed a significant impact. In Phases Two and Three, the requirements for the practicum varied in structure and duration; however, regardless of the structure or

requirements, three of the five Phase Three respondents indicated that the practicum experience was a critical factor to student success. Respondent C indicted that "What goes on in the classroom is a minor part of our students learning the language/culture. Internship classes are crucial to skill development." These data strongly suggest that the practicum experience has a considerable impact on student success. Just as student teaching is a key experience that is integral to the development of a teacher (Guyton & McIntyre, 1990), the practicum experience is critical to the development of competent interpreting practitioners.

6.2.3 Service learning

During consideration of the Phase Three data, it was found that time to state-level credentials and incorporation of service learning were significantly related. It is important to note that the significance was not in the number of programs that incorporated service learning but, rather, in those who did not incorporate it; graduates from all four programs who did not incorporate service learning did not earn state-level credentials until more than 2 years post graduation. Students who responded indicated that service learning experiences added something unique to their understanding of what they were learning in the classroom (Monikowski & Peterson, 2005).

6.3. What "other-than-curricular"–related characteristics of successful IEPs affect readiness?

The results from this study revealed evidence that more significant differences can be observed when considering "other-than-curricular" characteristics than when considering curricular characteristics. These differences are discussed in the paragraphs that follow.

6.3.1 Type of program

The most significant difference can be seen with the type of program. The discussion of this factor has already been covered previously in this article, in the discussion centering on the current school-to-credential gap. It is abundantly clear that graduates from 4-year programs earn state- and national-level credentials at a much faster rate than do their counterparts at 2-year colleges. Despite this, 2-year degree programs outnumber 4-year degree programs almost two to one[2]. And the number of students being educated in 2-year programs exceeds the number of students being educated in 4-year programs almost three to one. According to the 2009 NCIEC IEP Needs Assessment (Cokely & Winston, 2010), a total of 1,037 students are enrolled in associate-level programs, whereas only 378 students are enrolled in baccalaureate-level programs.

6.3.2 Teaching staff

The key finding in the Phase Two qualitative portion of the study was the importance of the programs' teaching staff. This finding overwhelmingly affirms the general conclusions of the literature that one solution for reducing the school-to-credential gap lies in using more qualified interpreter educators. Clearly, there is a documented need for educators who are skilled and competent as educators as well as practitioners (Roy, 2000; Winston, 2004). Interpreter educators need to understand how learning best occurs, be able to construct learning activities based on the learner's needs, and evaluate their own effectiveness as educators (Winston, 2004). Educators who have advanced training in language study and who are researchers (Roy, 2000) are better positioned to experience success in preparing students. Winston (2004) suggested that one of the two critical challenges that IEPs confront daily is the ability to identify and assess qualified, competent faculty.

A major concern related to this finding is that according to the NCIEC 2009 IEP Assessment (Cokely & Winston, 2010), 43 signed language interpreter educators in the United States are expected to retire within the next 5 years, and it is projected that an additional 175 educators will be needed in the next 5 years. This shortfall makes the findings discussed here even more critical to the field.

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[2] See see www.rid.org

6.3.3   Age of program

Another factor that reportedly had a significant impact on the IEP's success was the time-period in which the program was established—a factor not considered in any of the literature identified in this study. A significant relationship was found between (a) the tier ranks and (b) the two-decade grouping identifying when the programs were established. The study revealed that 77.8% ($n = 7$) of the Tier Three schools were established subsequent to 1990, whereas 76.9% ($n = 10$) of the Tier One schools were established prior to 1990.

It could be that the older programs are the associate-level programs and, as previously discussed, the 4-year programs seem to be more effective than the 2-year programs when considering the school-to-credential gap. This study showed that 58% ($n = 11$) of associate-level programs were established prior to 1990, and 85% ($n = 13$) of baccalaureate-level programs were established subsequent to 1990. It could also be that associate-level programs were established long ago and may be using outdated methods and approaches.

6.3.4   Involvement in the Deaf community

There is general consensus that successful IEPs infuse the knowledge and experience of the Deaf community into every aspect of the program (Cokely, 2005; Roy, 2000; Monikowski & Peterson, 2005; Winston, 2004; Witter-Merithew & Johnson, 2004) because they are essential language and cultural models.

6.3.5   Summary

All of the Phase Two programs provide external opportunities to foster language acquisition and interpreting skill enhancement, and all program representatives who were interviewed agree that this activity is beneficial to students. Programs demonstrated a clear intention to develop and foster service learning programs, campus clubs, and activities to provide students with additional community-based interaction. Most of the Phase Two programs were located within a large Deaf community, and program directors agreed that close proximity to a large Deaf population is an indisputable advantage. The key to this finding is that regardless of the numerous opportunities that a program provides, it is the frequency with which students avail themselves to such opportunities that will ultimately influence their success.

6.4.   Additional findings

An interesting and incidental discovery in this research—one that does not directly address a specific research question—centers on the intended purpose or expected end result of a degree in signed language interpreting. The prevailing literature supports the belief that IEPs should result in credential-ready graduates. The literature bemoans the school-to-credential gap and insists that steps need to be taken to change it. A large number of researchers (Cokely, 2005; Frishberg, 1995; Patrie, 1995; Robinson, 1995; Stauffer, 1995; Winston, 2004; Witter-Merithew & Johnson, 2004, 2005)   indicate that programs need to produce graduates who are able to earn interpreting credentials after graduation. However, a few programs disagree with this school of thought. Respondent 22, for example, stated, "Ours i[s] an entry-level program. We are not preparing people for national certification." This respondent goes on to say, "[T]he goal of our program is not for students to be nationally certified. There is no way they could be ready for national certification in 3 years." Respondent 19 indicated that her program cautions students that few will be ready for the performance/interview portion of the RID upon graduation. And, finally, Respondent 6 stated, "I object to the assumption here that the goal is to lower the graduation-to-credentialing gap. Two years of seasoning post graduation with intense mentorship should be expected and not [be seen] as a catalyst to credentialing. Your metric here is flawed . . . We are not aiming to speed this process up. We are aiming to foster lifelong learning and professional development." The issue of the goal of credential-ready graduates is not universally accepted, and it will be difficult for the interpreter education professionto move forward without consensus on this important goal.

7. Implications

On the basis of these research findings, the following recommendations are offered:

- IEPs need to receive additional support that will allow them to track students. This support should come in the form of national database, which is a major need for a future research agenda..

- Opportunities for teaching staff development need to be increased. Apart from the biannual convention of the Conference of Interpreter Trainers, the field provides IEP teaching staff very few opportunities to further develop their skills.

- Two-year interpreting programs need to be restructured so that their curricula are better aligned to facilitate student transfer into baccalaureate- level programs.

- IEPs need to foster more opportunities for out-of-classroom learning. Programs need to provide students with real-world experience through interaction within the Deaf and interpreting communities through practica and service learning.

8. Conclusion and recommendations for future research

The school-to-credential gap in interpreter education is a systemic crisis whose resolution will require collaboration among all stakeholders. Because IEPs are the primary producers of interpreters, the future of the interpreting field lies in the quality of education delivered by these IEPs. If changes are not made to improve the quality of the education provided by IEPs, the status quo will remain, and the field of interpreting will stagnate while deaf individuals suffer because of less-than-competent, unqualified interpreters. Considering the growing needs of well-trained interpreting professionals—and the near-crisis-level shortage of active interpreters that looms ahead—careful attention to this issue is essential. Change is required. Witter-Merithew and Johnson (2005) summarize the direction of the interpreter education field as follows: "[I]t is time [that] we held employers' feet to the fire, set ourselves a deadline, and begin working on the infrastructures. We all own the gap" (p. 15).

As a result of this study, the following recommendations are suggested for further research:

- Acquire a better understanding of alumni's program perceptions: This study considered the perceptions of program directors. Program graduates may have differing viewpoints.

- Conduct quasiexperimental studies using control groups to empirically determine the effectiveness of various instructional approaches: This study yielded very general results regarding the effectiveness of various approaches and factors. A series of experimental designs—each of which considers a single approach—would enable more in-depth consideration of the various approaches.

9. Acknowledgment

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Conceptual Blending in American Sign Language Interpretations

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In this study, the author investigated the conceptual blending processes that occurred during American Sign Language (ASL) interpretations. Using the framework of conceptual blending (Fauconnier &Turner, 1993), the author analyzed six ASL interpretations and found two new mental spaces that are activated during interpretations. Conceptual blending has been used to analyze ASL (Dudis, 2004, 2007; Liddell, 2003) but had not been applied to ASL interpretations until this study. The conceptual blending process of ASL has found several mental spaces that are activated in blends. *Real space* (Liddell, 1995) and *event space* (Dudis, 2007) are two mental spaces that blend in ASL. The linguistic discourse of the six interpreters also indicated that these spaces are blended as well as other spaces that were newly identified through this study.

***Narrator space* and *interpreter space* were the two newly identified spaces identified through the linguistic discourse of the interpreters. By analyzing the instances of depiction, which previously have been described as *constructed action* and *constructed dialogue,* elements of *interpreter space* became visible. *Narrator space*, the second newly identified space, was visible through pronoun usage and pausing made by the interpreters. These linguistic constructions made by all six interpreters throughout the 210 minutes of interpreted text clearly indicated the existence of these mental spaces. In addition to the newly identified spaces, that data indicated that ASL interpreters created constructed dialogue in *event space* in much the same way as do signers who are deaf. The nonmanual features that Thumann (2010) identified just prior to or at the onset of depiction were also found in the instances of depiction created by the six interpreters. In this study, the author also found that all six interpreters created instances of depiction—specifically, constructed action and constructed dialogue—when it was not in the English stimulus.**

Sign Language Interpreter Shortage in California: Perceptions of Stakeholders

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The purpose of this study was to examine the similarities and differences in perceptions among agency interpreters, freelance interpreters, faculty in interpreter education programs, and members of the Deaf community regarding the shortage of sign language interpreters in California.

This two-phase study was conducted in the *QUAN-qual model,* also known as the *explanatory mixed method design.* In the first phase, the researcher collected quantitative anonymous online survey data from three groups of stakeholders ($N = 124$)—agency interpreters, freelance interpreters, and faculty in interpreter education programs—to address the research questions. In the second phase, qualitative interview data were collected from a small purposive sample ($N = 12$) selected from the same groups of stakeholders and members of the Deaf community in California. Because of the small number of survey respondents, the researcher used Fisher's exact test, when appropriate, to explore relationships between selected characteristics of participants and their perceptions.

The researcher compared results from the analysis of qualitative interview and survey data to identify common themes. Results from qualitative data analysis were useful for expanding and strengthening findings yielded by the quantitative data. The findings revealed in this inquiry add valuable perspectives from stakeholders on the possible reasons for the shortage of interpreters in California. For example, a large majority of respondents (71%) perceived that lack of health care benefits, dramatic expansion of video relay and remote video interpreting and lack of mentoring were the major factors contributing to the current shortage of sign language interpreters in California. Stakeholders further expanded by identifying an additional 11 factors that they believe are affecting the sign language interpreter shortage.

Analysis of the findings identified the current and future needs of sign language interpreters and consumers of interpreting services. The Deaf community urged the establishment of a statewide task force to address current and future needs identified in this study. Recruitment is key to encouraging the growth of the profession, and expansion of current interpreter education programs will provide greater accessibility to the Deaf community.

A Comparison of Deixis in Interpreted Lectures and Signed Language Lectures in ASL: An Exploration of the Structures of ASL Used by Interpreters and Deaf Teachers When Referring to a Visual Aid

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In this dissertation, the author explores the types of American Sign Language (ASL) structures that interpreters use to relay information that is both verbal and visual. This research aims to identify how the structure of *deixis* (an indication or reference made in context) in interpreted ASL discourse differs that of deixis in direct ASL discourse. College lectures presented via an interpreter to students who are deaf are inherently different than those presented via a signing teacher who is deaf to students who are deaf. References made to visual aids in interpreted lectures are compared with references made to visual aids in lectures presented directly from fluent ASL users in the postsecondary setting. This study includes an analysis on how the ASL interpreter handles information that is being produced via two modalities: auditory and visual. The hearing speaker may lecture while simultaneously producing a deictic gesture, pointing to different referents on a visual aid such as a chart, map, or overhead projector. Although concurrently receiving information auditorily and visually is not a problem—and is often helpful for students with typical hearing—in an interpreted situation, it presents a challenge for students who are deaf. Given that the student who is deaf may receive information only via the visual modality, the interpreter must use strategies and linguistic structures of ASL to properly relay all information being presented by the teacher. In this study, the researcher compares the structures used in the interpreted lecture with those used in signed lectures given by teachers who are deaf and who use ASL as their primary language. In classrooms where the teacher's lecture is conveyed directly through ASL—and all information is being transmitted via only the visual modality within one line of vision—the students who are deaf do not miss important gestural information. In this study, the researcher explores the linguistic differences between the two types of classroom settings and, specifically, investigates the use of deictic indices.

Experiences and Training Needs of Deaf–Hearing Interpreter Teams

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Deaf–hearing interpreter teams are new to the field of interpreting, and little research exists as to the issues that arise for such teams. The purposes of this qualitative phenomenological study were threefold: (a) exploring the experiences of deaf interpreters and the hearing interpreters with whom they work, (b) understanding whether deaf and hearing interpreters felt satisfied with the training that they received in regard to working as a team, and (c) discovering gaps that could be addressed through training that would lead to the establishment of more qualified teams. The three research questions were designed to address interpreters' experiences within teams, to encourage reflection upon preparation and upon training for teamwork, and to elicit recommendations to enhance training and practice. Experiential learning theory and the demand–control schema made up the framework for this study. Interviews were held with 12 interpreters in groups of two. Six deaf interpreters were interviewed by a deaf interpreter, and six hearing interpreters were interviewed by a hearing interpreter. Deaf interviews were translated from ASL into English for a written transcription. A combination of open and a priori coding supported interpretive analysis of the data. Findings included the need for curriculum development for deaf interpreters and deaf–hearing interpreter teams, understanding the roles of the team members, and the need for training on how to work effectively as a team. Salient themes included ethics, the effectiveness of the interpretation, and mentoring. This study contributes to positive social change by increasing the understanding of deaf–hearing interpreter team members' needs. Enhanced preparation and training opportunities can lead to improved interpretations and effective services to clients of these teams.

Negotiating the American Sign Language Maze: Examining the Status of ASL in Virginia

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During the last 20 years, American Sign Language (ASL) has grown in academic offering and acceptance as both a foreign language and as an academic elective. In this mixed-method study, the researcher analyzes the academic acceptance of ASL in two parts. The first part of the study consists of a survey administered to determine the academic acceptance of ASL at all 39 Virginia public postsecondary institutions. This survey replicated a survey conducted by the State Council on Higher Education in Virginia (SCHEV) in 2000, expanding the inquiry in two ways: (a) delineating between ASL and other sign courses and (b) including the 24 two-year institutions in the data. The results show that advances have been made in the following ways: (a) a majority of 4-year institutions accept ASL to satisfy the foreign-language requirement; (b) all 15 public higher education institutions have an ASL policy; and (c) a majority of 2-year Virginia postsecondary institutions both offer ASL courses and accept ASL to satisfy the foreign-language requirement. The second part of this study compared the outcomes of five semesters of ASL study by 36 students in secondary and postsecondary environments in Virginia. The results indicate that there is no significant difference in outcomes after five semesters of ASL study between students in the high school and community college settings. However, statistically significant differences were identified during comparisons between student outcomes after five semesters of ASL study in the university setting and the previous two settings. Specifically, on the sign vocabulary portion of the SLPI—ASL assessment—students who study ASL for five semesters in the university setting typically outperform high school students; likewise, the same university students scored higher in the area of sign vocabulary than did their 2-year counterparts.

The Relationship Among Beginning and Advanced American Sign Language (ASL) Students and Credentialed Interpreters Across Two Domains of Visual Imagery: Vividness and Manipulation Complexities of K–12 Interpreting

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Given the visual–gestural nature of American Sign Language (ASL), visualization abilities may be one predictor of aptitude for learning ASL. In this study, the researcher tested a hypothesis that visualization abilities are a foundational aptitude for learning a signed language and that measurements of these skills will increase as students progress from beginning ASL students to advanced language learners and, ultimately, to credentialed interpreters.

Participants in this study consisted of 90 beginning and 66 advanced ASL students in five interpreter education programs in four southern states along with 68 credentialed interpreters. Students and interpreters were administered the *Vividness of Visual Imagery Questionnaire (VVIQ)*, which is a self-report questionnaire and the objective *Mental Rotations Test, Version A* (MRT-A). All ASL students and their instructors were asked to rate students' sign language competency on the *Sign Communication Proficiency Interview Rating Scale* (SCPI). All participants completed demographic questions regarding their age, gender, ethnicity, parental hearing status, number of years using ASL, number of years working with professionals who are deaf and who use ASL, and their interpreting credential(s).

Students and their instructors rated students' sign communication proficiency similarly. Beginning ASL students were rated significantly lower than were the advanced ASL students by both instructors' rating and students' self-rating.

No significant relationships were reported (a) among beginning and advanced students and credentialed interpreters with respect to either the VVIQ or the MRT-A or (b) among the students' VVIQ and MRT-A scores and instructors' ratings on the SCPI. Suggestive evidence showed an increase in mean VVIQ scores from beginning ASL students to advanced ASL students to credentialed interpreters, but not to a significant level. When advanced ASL students and lower level state-credentialed interpreters were removed from analyses, a significant difference in visual vividness was reported. Nationally certified interpreters scored significantly higher than did beginning ASL students on the VVIQ but not on the MRT-A.

For this research, three interpreters working in fifth and sixth grade classrooms at three school sites were videotaped and interviewed to explore what interpreters do in the course of their work, and to illuminate the factors that inform their decisions.

This study reveals not only five primary tasks that interpreters perform, but describes in detail what interpreters do as they strive to optimize visual access, to facilitate the learning of language and content, and to cultivate opportunities for participation. Data indicate that even qualified interpreters are not always well-equipped to meet the essential needs of Deaf and hard of hearing students in K-12 settings. Results of this study contribute to our understanding of the complexities of interpreters' decisions in light of multiple and competing demands. Findings highlight the need for further research and serve as a call to action to improve the educational experiences of mainstreamed students.

Identifying Depiction in American Sign Language (ASL) Presentation

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The impetus for this study—in which the author examines what she refers to as *depiction* in American Sign Language (ASL)—came from the author's work as an instructor in an interpreter education program. The majority of ASL/English interpreters are second-language learners of ASL, many of whom find some features of ASL challenging to learn. These features are linked to what has been referred to as *role shifting, constructed dialogue or constructed action, classifiers,* and *referential use of space.* Following Dudis (2007), the author refers to these features as *depiction.*

This dissertation takes a first step in the analysis of depiction, focusing on the identifying information just prior to and at the onset of instances of depiction. Using a text analysis approach in conjunction with ELAN transcription software, the author analyzed four presentations from the *About Teaching ASL* series produced by the American Sign Language Teachers' Association. The author identifies changes in the signers' head position, eye gaze, facial expression, and body position. The author also reports on (a) the occurrence and co-occurrence of these nonmanual changes that aid in identifying depiction and (b) information that aids in distinguishing between switches in depiction and recurring depiction. In addition, the author proposes a method of text analysis, using ELAN, as a means of drawing students' attention to the linguistic features of depiction. With an enhanced understanding of depiction, second-language learners may be better able to comprehend ASL and to incorporate depiction into their own language use.

The proposed approach of using ELAN for text analysis provides a strategy to guide second-language learners as they practice identifying depiction. In this study, the author provides a starting point for working with second-language learners to help them recognize, understand, and produce depiction in discourse. This study also provides interpreter educators and teachers of ASL a better understanding of depiction and offers an important framework for training interpreters to analyze and understand ASL texts.

Audience Effects in American Sign Language (ASL) Interpreting

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There is a system of English mouthing during interpretation that appears to be the result of language contact between spoken language and signed language. *English mouthing* is a voiceless visual representation of words on a signer's lips produced concurrently with manual signs. It is a type of borrowing prevalent among English-dominant bilingual–bimodal sign language interpreters who use American Sign Language (ASL) and spoken English when interpreting for consumers who are deaf (Davis, 1989; Weisenberg, 2003). It is distinct from other systems of grammatical mouthing observed in native deaf signers. Bilingual–bimodal interpreters have the advantage of simultaneity: The two channels of expression are distinctly different—one being a visual–gestural channel, the other being an oral–aural channel. When sign language interpreters organize abstract oral English discourse into a concrete visual–spatial form, they borrow from their dominant language, English. This study tested audience effects during interpretation from spoken English to ASL. Interpreters shifted their style to accommodate their addressees. A style shift was measured by the rate of English mouthing. Based on an analysis of variance (ANOVA), $F(1, 3) = 6.25$, $p = .08$, the study demonstrates that the perceived cultural identity of the audience has more of an effect on English mouthing than the topic, $F(1, 3) = 0.046$, $p = .84$. A pattern of mouthing reduction was also discovered. At least two experimental contexts contained technical terminology that was repeated. When there were no manual equivalents in ASL, interpreters interpreted these terms by overlapping mouthing with a manual sign of approximate meaning. Once they had expressed the combination, the mouthing was reduced or removed completely. In this study, the author confirms what is a commonly held notion in audience design—that speakers adjust their language in reaction to their addressees—and also opens an inquiry to the use of the sign language interpreting context as a means of examining neologisms and language variability.