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"Interpreting skills acquired at a distance: Results of a data-driven study"

Leilani Johnson, Ed.D., Director
Anna Witter-Merithew, B.P.S, Assistant Director
Distance Opportunities for Interpreting Training Center
Front Range Community College
Denver, Colorado

Abstract

The use of distance technologies to deliver academic programs related to Sign Language Interpreting is a relatively new phenomenon. Questions exist as to whether or not interpreting skills coursework can effectively be delivered through distance technologies and whether improvement in interpreting skills acquired at a distance are quantifiable. The purpose of this paper is to offer a description of skills development coursework offered at a distance, followed by an analysis and discussion of pre/post performance assessment data collected from a cohort of students completing the Educational Interpreting Certificate Program in July 2003. The performance assessment data collected represents the results achieved by 50 students participating in a 10-state and Bureau of Indian Affairs supported regional cohort (Cohort 2). The pre/post assessment tool used was the Educational Interpreter Performance Assessment. Analysis of the performance assessment data from this cohort indicates an increase in interpreting competence. The ultimate goal of this paper is to demonstrate that the use of technology offers promise for expanding access to quality interpreter education, particularly for individuals living in rural areas of the United States, or individuals desiring the convenience and accessibility offered by distance education opportunities.

Introduction

The Educational Interpreting Certificate Program (EICP) is one of the programs offered through the Distance Opportunities for Interpreter Training Center housed at Front Range Community College in Denver, Colorado. (See website: http://frcc.cccoes.edu/~doit.) It is a customized training program offered at a distance for Sign Language interpreters who support students who are deaf and hard of hearing in K-12 classrooms. EICP is a 30-credit hour

vocational certificate designed for distance delivery to individuals already working as interpreters in a K-12 setting. The program is delivered over nine semesters (3 calendar years) to selected cohort members in partnership states. Approximately half of the EICP curriculum focuses on skills development related to proficiencies in American Sign Language (ASL) and interpreting competencies, and the rest emphasizes the requisite knowledge sets needed to apply these skills effectively in a K-12 classroom. EICP is designed as a cohort model, meaning that all interpreter-students begin at the same time, take all the same classes simultaneously, thus completing the program together. This is the most cost-effective, logistically and pedagogically sound arrangement for this distance learning effort (Witter-Merithew, Taylor & Johnson, 2001).

Applicants are required to demonstrate their level of interpreting competency during an entrance screening to ensure appropriate placement in the program. They must achieve a minimum entry score of 2.0 on the Educational Interpreter Performance Assessment (EIPA) and achieve a minimum exit score of 3.5 on the EIPA to obtain the vocational certificate. Applicants achieving a score of a 2.0-3.4, and who meet all other admissions requirements, are accepted into the program at Step 2. Step 2 students take both the knowledge and skills courses associated with the EICP, completing the entire 30 credit hours of study. Applicants achieving an entry score of 3.5 or above, and meeting all other admissions requirements, are accepted into the program at Step 3. Step 3 students take only the EICP knowledge courses, completing 14 credit hours of study. They are exempted from the skills courses (unless they opt to participate for personal and professional growth) because they have already demonstrated the minimum program exit competence.

Step 1 students are those students whose EIPA score is below a 2.0. The program offers a variety of American Sign Language remedial support to help these individuals advance to the requisite entry-level competence.

During the fall and spring semesters, knowledge-based courses are delivered to the educational interpreters' home communities utilizing a variety of support material, staff and a number of technologies. In addition, during each of the three summers, there is a mandatory three-week onsite Summer Institute for all Step 2 students that focuses on interpreting competencies, including the upgrading of American Sign Language proficiency. The intense skill-building component of EICP is sustained during the academic school year by means of

distance mentorship experiences. Mentorships involve deaf individuals who function as language mentors and both deaf and hearing practitioners who function as interpreting mentors.

Since 1996, EICP has served approximately 200 educational interpreters in ten states: Alaska, Arizona, Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah and Wyoming and the Bureau of Indian Affairs (BIA). EICP participants have represented various age groups, socioeconomic and cultural backgrounds. They have substantiated a significant range of experiences and backgrounds related to interpreting in the classroom—from a few months to eighteen years. Approximately 25% of cohort members have indicated previous participation in an Interpreter Preparation Program, but none have specified a program with scope and sequence related specifically to educational interpreting. More than 95% of EICP participants have been women with dependents and additional responsibilities. Most live in rural communities and have no access to a traditional Interpreter Preparation Program.

School districts, cooperatives, and other arrangements (e.g., private contracts), employ the educational interpreters. The interpreters work at all levels of education, with diverse job descriptions, responsibilities and compensation packages. They demonstrate differing levels of competency in both interpreting skills and knowledge sets to apply those skills effectively in K-12 classrooms. What is more, they typically do not demonstrate computer/technology literacy when applying to the Educational Interpreting Certificate Program.

Cohort 2 students, whose performance is the subject of this paper, began their studies in January 2001 and completed the program in July 2003. Currently, 70 interpreters are being served in a regional cohort (Cohort 3) and a national cohort (Cohort 4) that includes students from California, Hawaii, Maine, Minnesota, New Mexico, and Nevada, bringing the total number of states currently served to sixteen.

Cohort 2 Demographics

The cohort reported on in this paper was comprised of 96% females—two male interpreters were in the 50-member cohort—with an average age of 41 years. The ethnic composition was:

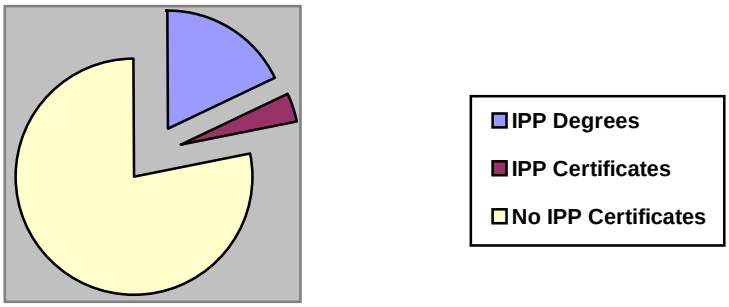
- 1 American Indian or Alaskan Native
- 2 Black Non-Hispanic

- 3 Hispanic
- 43 White Non-Hispanic
- 1 Didn't Indicate

It was interesting to consider the academic background of the 50 Cohort 2 students. On the application forms, 14 of the interpreters indicated they had already completed a two-year degree, five noted a bachelor's degree, and one specified a master's degree in deaf education.

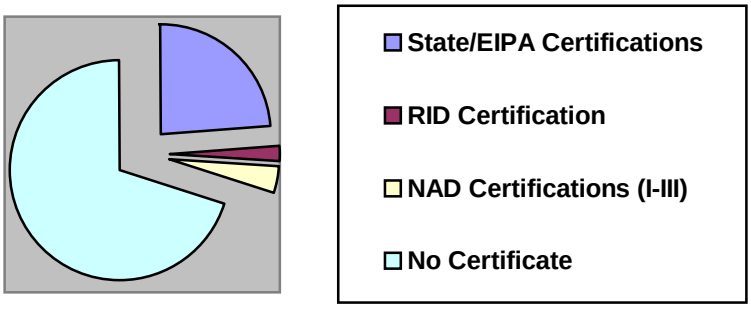
Nine of the associate degrees and two certificates were from Interpreter Preparation Programs (IPP). Eight of the eleven interpreters with IPP degrees—or about three quarters of them—were admitted to Step 3 of the program. The other 25% held IPP degrees, but were unable to demonstrate the interpreting performance score of 3.5 or better on the Educational Interpreter Performance Assessment and therefore, were required to take the EICP interpreting skill coursework.

Figure 1: Interpreter Preparation Prior to EICP Entry



This means that 22% of the Cohort 2 completers had already completed an Interpreter Preparation Program before entering the Educational Interpreting Certificate Program. Fifteen Cohort 2 members (30%) held some type of interpreter certification at entry. These included state quality assurance screenings—Arizona, Kansas, and Utah—and three national evaluations—EIPA, NAD and RID.

Figure 2: Interpreter Certification Prior to EICP Entry



Delivering Coursework through Distance Education

As distance learners, EICP participants were not actually in the presence of a teacher for most of their learning, making it necessary to empower them with tools and strategies to create new learning independently. Blended technologies—ranging from videotape exchange, to online discussion and WebCT coursework (the online course management software used to deliver EICP courses), to videoconferencing, to print materials, to face-to-face instruction—were used to deliver the Educational Interpreting Certificate Program. This approach was not deemed as 'better' than traditional Interpreter Preparation Programs, but rather a necessary and promising alternative for delivering coursework to learners who lived in rural communities, did not have access to a traditional IPP, or who preferred the benefits and options provided by a distance learning program. Given that the program was implemented through the use of blended technologies, it was imperative that the 'building' of a learning community be given high priority.

For the purpose of this paper, a learning community is defined as a group of learners with experience, expertise and challenges engaged in the discussion of common issues for the purpose of discovering what they know, sharing their knowledge with each other, and participating in the process to create new knowledge. Since the students of the EICP were working practitioners—although they typically had insufficient knowledge or skills to support the work required of them—this learning community allowed for inquiry and exploration of best practices for educational interpreters. The learners were a group with a shared purpose, good communication, and a climate with justice, discipline, caring, and occasions for celebration (Rourke, et.al., 1999).

Since these adult learners were already employed interpreters, their connection through a tele-community thrived when it fostered learning that was centered around the work they actually did and the sharing of learning tasks that promoted professional and personal development. These learners participated in asynchronous distance coursework at computers miles apart at varying times of the day and night. The process of forming a community of distance learners was an important issue because it affected student satisfaction, retention of information, and overall learning. The feeling of 'being alone' can be overcome only when learners join together in a community of learning where they support one another (Brown, 2001).

As well, the process of forming a community of learners was an important part of equipping EICP graduates with the ability to overcome the isolation many interpreter practitioners experience in their day-to-day work. Learning to self-analyze and discuss their interpreting work enabled them to collaborate more effectively, related to linguistic issues, with members of the educational teams in which they function, and to self-monitor for the purpose of continuing their professional development after EICP completion. So, guiding students to effectively self-assess was central to the success of their overall learning experience, both during EICP and after completion.

EICP Skills Development Coursework

It is important to note that a major EICP program review and subsequent program and curriculum revision occurred during the fall of 2000, just as recruitment for Cohort 2 students was wrapping up. Several upgrades to the EICP curriculum and overall instructional approach were accomplished as a result of that process and directly benefited Cohort 2 students. Those that are applicable to the discussion of interpreting skills performance assessment include:

1. The coursework was re-sequenced to provide more appropriate developmental scaffolding so that learning and application of learning more consistently built on prior knowledge and supported students' movement from one cognitive phase to another in a logical sequence.
2. The first year mentorship courses were restructured as language mentorships, with the goal of increasing American Sign Language proficiency prior to focusing on interpreting competence.
3. A shift to an "immersion" approach for the skills-based, onsite sessions was implemented. During Summer Institutes, all instruction was in American Sign

Language, and at least half of the instructional team was highly qualified Deaf ASL instructors.

4. Deaf language mentors were recruited and trained to support students at a distance during the Sign Language Remediation program and the language mentorship courses. Deaf staff members were also recruited for distance delivered knowledge-based coursework and interpreting mentorship.

During the first year of EICP, interpreter-students focused on improving language proficiencies. Students worked to enhance their interpretation skills for the remainder of the program. However, even the interpreting skills coursework involved the further development of American Sign Language proficiency, because it is foundational for visual access regardless of target language/system (ASL, Conceptually Accurate Signed English/Pidgin Signed English, or Signing Exact English).

As mentioned in the introduction and demographic section of this article, many of the Cohort 2 members had never participated in formal coursework related to American Sign Language or interpreting; they were, however, already working as educational interpreters in K-12 settings. And, as evidenced by the work of Taylor (1993), the majority of errors in interpreted performance are related to language features and insufficient mastery of ASL. Taylor states, "Throughout the research and validation process, ASL competency was identified as a key area of concern related to the consumers' ability to comprehend the interpretation" (p. 6). The body of data collected by Taylor demonstrated that regardless of the number of years of experience or the certification held by practitioners, the majority of errors observed appeared related to ASL competency rather than interpreting process competency. This observation was reinforced when reviewing entry EIPA performance data of EICP students.

Currently, most IPPs are housed in community college settings (http://www.rid.org/) with open-door policies. As a result, students frequently enter an IPP with less than fluent ASL skills. Thus, practitioners enter the workforce needing remediation and continued development of ASL proficiency. To this end, the EICP Cohort 2 program devoted the first year of skills development coursework to the further acquisition and mastery of ASL.

It should also be noted that Cohort 2 students used one of a number of signing systems in their school districts. For example, some students utilized Signing Exact English (SEE). The majority of SEE signs are based on ASL, and the authors of SEE (Gustason and Zawolkow,

1993) emphasize the incorporation of ASL principles into the use of the SEE system to achieve the most effective communication. Integrating ASL vocabulary and principles (e.g., the use of space) into the SEE interpretation is necessary in order for a K-12 student who is deaf to visually access the interpreted information. The EICP Cohort 2 students who used SEE did not possess mastery of ASL, and therefore, the attention given to the development of ASL principles enhanced the effective use of SEE. Thus, all EICP students regardless of language/system used were required to focus on developing their ASL proficiency. Interpreter educators fluent in SEE were employed as members of the EICP Cohort 2 instructional staff to assist students with the integration of the ASL principles into their SEE work.

Student Self-Assessment: The Process

As discussed in Witter-Merithew, Taylor, & Johnson (2001), Cohort 2 student self-assessment was defined within the EICP as a dynamic and ongoing reflective analysis and discussion process for the purpose of self-discovery, skill development, and professional growth. It was characterized as a process which; occurred at planned intervals, involved a structured approach to analysis, included interactive and collaborated elements, was goal-oriented, focused on both performance that was effective and less-than-effective, and was ongoing.

Students in Cohort 2 were introduced to the process of self-assessment during the first skills class they took in the program, although some of the foundation work (i.e., transcription and feature analysis) were taught prior to the interpreting skills coursework. The skills associated with the self-assessment process were introduced and practiced throughout the first skills class, and continued to evolve throughout the remainder of the EICP skills development coursework. In other words, once introduced, the skills associated with self-assessment were continually applied and refined throughout the remainder of the program.

Discourse Analysis

There were several steps associated with the process of self-assessment; analysis of source text, videotape production of performance, transcription and analysis of performance, and recommendations for self-improvement. EICP students were introduced to a systematic approach to text and discourse analysis based on the work of Isham (1985), Colonomos (1992),

Witter-Merithew (1997), and Winston & Monikowski (2000), that was detailed in an article by Witter-Merithew (2001). Essentially, this system engaged learners in a ten-step process designed to examine the meaning of an assigned text from different perspectives prior to the re-telling or interpreting of the text. Steps 1-5 of the discourse analysis process guided learners in determining the meaning of texts through prediction, mapping, and abstracting of the text. The 6th step involved the learner in a re-telling of the text. During the first year of EICP, the 6th step resulted in the student videotaping their signing performance. This re-telling became the foundation for engaging in self-analysis. Deaf individuals served as language mentors during this phase of skill development.

In the subsequent semesters of EICP, students completed the additional Steps 7-10, so that the videotape sample they produced was of their interpreting performance. Practitioners and educators served as interpreting mentors during this phase of skill development.

Whether the sample to be analyzed was of their signing performance or their interpreting performance, the preparation leading up to the production of the sample involved the prediction, evaluation and organization of information from the source language text. This preparation was essential for the effective delivery of an equivalent message in the target language. This process also helped to reinforce the requisite foundation skills needed to effectively interpret.

Transcription of Signed or Interpreted Performance

The process of transcription was an important step in developing self-analysis skills and furthering skill development. The act of recording each and every behavior associated with the interpreter-student's sample of performance revealed many of the successes and errors that occurred. Teaching transcription, however, was a very challenging process. To begin, students had to have ample experience in transcribing accurate and natural ASL samples before beginning to transcribe work that was less-than-accurate or less-than-natural—in this case, their own work.

The basic system of transcription used for EICP Cohort 2 students was the system detailed in the text, *American Sign Language: A Teacher's Resource Text on Grammar and Culture* by Baker-Shenk and Cokely (1980). This was not the only system of transcription available, but was the most widely used in North America by individuals seeking a common way

to record and discuss signed information. This shared system was critically important for the distance learners and their mentors.

A note should be added about spoken English transcription. The transcription of spoken English work was verbatim. That meant that each pause, false start, hedge, filler, or mispronunciation was documented. Although the process of creating a transcription of spoken English work was much easier than a transcription of signed work, the information it provided was equally valuable.

Transcription was a tedious process for both students and instructional staff. However, it was an extremely valuable tool in helping students learn to recognize and describe behavior in standardized terms that enabled them to begin identifying patterns related to their signing, speaking and/or interpreting performance. It was the first step in the self-analysis process.

Analysis of Performance

As was true with transcription, there were some pre-requisite skills necessary for students to effectively engage in the analysis of their signing and/or interpreting performance. The pre-requisite skills involved the ability to recognize and categorize specific linguistic behavior. Again, as with the transcription process, this skill was acquired through the analysis of natural ASL or naturally spoken English samples prior to the analysis of less-than-natural samples or samples potentially filled with linguistic error.

The analysis process used in EICP Cohort 2 was based on the work of Taylor (1993, 2001). The pre-requisite skill of recognizing and categorizing specific linguistic behavior was introduced by engaging students in the analysis of the Major Features discussed by Taylor. Students analyzed texts for the purpose of isolating skills and behaviors that related to each of the Major Features and then categorized these behaviors accordingly.

Written Self-Assessment

With the ability to engage in feature analysis, the students were ready to apply a similar analysis to their own work. Students produced a written analysis of their performance by relating behaviors they observed to the Major Features identified by Taylor and identifying the associated error type, describing the error and offering insight into how the error could be

corrected. Initially, the process was rather formulaic. The following is an example of how the formula was applied.

Major Feature: Numbers (Taylor, 1993, p. 23)

11. DEF: Numbers are precise elements of information. There is often a lack of context in which to remember the information. Therefore, often numbers can be either incorrect or deleted. Skill #11 addresses the accuracy of the number only.

Observed Behavior: The signer produced the numbers 37 for the number 376 indicated in the source text. This behavior is noted on line 43 of the transcript.

Associated Error Type: 11.B. Numbers are deleted.

Proposed Correction: This behavior could be corrected by adding the deleted number after the formation of the 7. The interpreter continues to be challenged in accurately conveying numbers (particularly a group of numbers) and will continue practicing with the *ASL Numbers* series from Sign Media to enhance overall fluency. As well, the interpreter will practice isolating numbers in a variety of texts, reproducing these numbers in isolation, and then integrating them into retellings and/or interpretations of the text as a whole.

As students increased their ability to discuss their work in written form, the more formulaic approach gave way to a more natural discussion of observations. The EICP instructional team determined that this system was the most effective 'at a distance'.

During onsite portions of EICP, students actively engaged in peer review and discussion of interpreted work. Self-assessment was an ongoing process that occurred both in face-to-face discussions, as well as formal written processes. Always, the goal was to enhance student self-awareness regarding the effectiveness of her work in relationship to established and recognized standards of effectiveness. A secondary goal was to help students discover strategies and resources for improving the accuracy and quality of their work. This secondary goal empowered students to function independently beyond completion of EICP and to participate in dynamic discussion with their interpreter colleagues. This ability fostered their commitment to be life-long learners.

Student Self-Assessment: Instructor Feedback

Engaging students in self-assessment was a process that required ongoing effort. The amount and type of instructor feedback provided to students related to their self-assessment varied depending on the goal of the self-assessment process, particularly when a grade was assigned for the quality and content of the self-assessment. Early in the program students required more instructor feedback than towards the end of the program.

One of the most effective approaches for distance interactions was the use of videotape. The use of WebCams and CDs could have also been effective—assuming the students had access to the requisite equipment and appropriate level of bandwidth for receiving transmitted images. Most of the EICP Cohort 2 students, however, lived in rural communities that relied primarily on dial-up connections; thus, video exchange proved the most reliable technology.

The instructional staff was videotaped viewing the student's taped performance and then the staff member provided signed or spoken feedback. This approach worked very well during the first year of EICP when deaf individuals were used as language mentors. The videotaped feedback also provided students with a record of the feedback that they used for ongoing reference and review. The use of videotape allowed for modeling of certain concepts being discussed. For students living in rural areas, this exposure to language modeling and/or modeling of interpreting had the added benefit of broadening their language experience.

Face-to-face interaction gave a more dynamic means of providing feedback. The ability to promote the active involvement of the learner in reflection and dialogue was accomplished during the face-to-face interactions. It allowed for interactive discussion of the work that was immediate and flexible, and was structured around both instructor/mentor-student and student-student activities. The instructor/mentor-facilitated activities promoted the students' self discovery by asking questions and encouraging students to look at elements of their work they might otherwise not have noticed. This approach also allowed for modeling of certain concepts being discussed. During the onsite summer portions of EICP Cohort 2 programming, the face-to-face approach with deaf/hearing teams of instructors in Sign Language was very effective.

The summer sessions impacted students so positively (as well as staff), that Cohort 2 members were provided an additional face-to-face component. During fall and spring semesters each year a videoconference for the knowledge-based courses was scheduled. It required Cohort

2 members to congregate at specified sites within the partnership states for a three-hour videoconference, which originated from Denver. To take full advantage of the time together, a skills mentor was sent to each site for a half-day face-to-face session. The EICP instructional team prepared materials specifically addressing language and/or interpreting features that were targeted for upcoming skills assignments. The skills mentors prepared with the materials before being deployed to the distance sites. The resulting improvements in language proficiencies and/or interpreting competencies were noticeable when mentors who were providing support for the distance skill-based work received and assessed the subsequent assignments.

So, it was this systematic foundation of discourse analysis, transcription, feature analysis, and self-analysis, supported by individual language and interpreting mentors, both deaf and hearing, distance and face-to-face, that guided students through the 16 semester hours of EICP skills coursework. It was the foundation and process that guided the learning experiences of the students in Cohort 2 and led to the performance outcomes that will be discussed in the remainder of this paper.

Cohort 2 Pre-screening of Interpreting Skills

The EIPA-EICP pre-screening was based on a modified version of the Educational Interpreter Performance Assessment. It was modified, with approval from the EIPA Diagnostic Center of Boys Town Research Hospital, in three primary ways:

1. The videotaped stimulus materials for the ASL to English interpreting and English to ASL interpreting tasks were secured by EICP and were not the EIPA stimulus materials; and
2. Cohort 2 members were asked to do an interpretation and a transliteration in their English-to-Sign sample. Therefore, individuals were not asked to declare their English-to-Sign product (ASL, PSE/CASE, SEE) on the pre-screening. Candidates were given a choice of elementary, middle or high school videotaped classrooms and the choice of an interview with a K-12 student using ASL, PSE or SEE; and
3. The rating teams were recruited from various states and contracted by EICP. These were Boys Town trained raters, but the EIPA Diagnostic Center did not have oversight responsibility for their work.

Cohort 2 Post-screening of Interpreting Skills

As part of the exit criteria, the 35 Step 2 students were required to do an EIPA post-screening. (Step 3 students had already satisfied minimum exit requirements on their pre-screening.) The Cohort 2, Step 2 students did a full EIPA post-assessment rather than the modified EIPA-EICP entry screening. This required a psychometric adjustment in order to accurately compare the post-screening data with the pre-assessment data. This adjustment was made due to the difference in the videotaped stimulus materials and rating forms, and resulted from consultation with Dr. Brenda Schick and Mr. Kevin Williams, the EIPA authors.

Schick spent approximately six hours of statistical analysis reviewing the pre/post-screenings results of the Cohort 2, Step 2 students. As a part of her work, she compared the 35 Step 2 students to 1,019 interpreters in the database of the EIPA Diagnostic Center. Based on the analysis, a psychometric adjustment was warranted in order to accurately compare the post-screening data with the pre-assessment information.

The psychometrically adjusted score was used *internally* for approval and award of the Vocational Certificate in Educational Interpreting. In addition, the Cohort 2 students received the full EIPA score and report from the EIPA Diagnostic Center at Boys Town Research Hospital. This provided *external* documentation and the current standardized rating for their employers and for their future professional development needs.

Data provided in this paper is reflective of the internal data used to denote the academic progress of the Cohort 2 students. The median, rather than average, scores are used for comparisons as this provided a more statistically accurate picture of this small group of students.

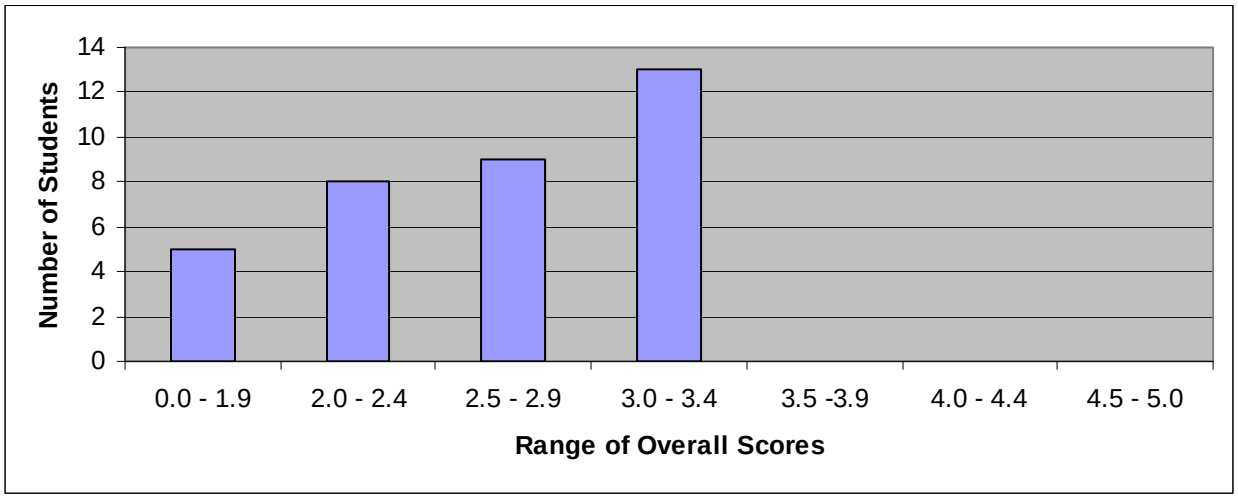
Step 2 EIPA Results

The EICP pre-screening profile of the 50-member Cohort 2 completers indicated that 30% (15 individuals) were at or above a 3.5 interpreting skill level upon entering the program; these interpreters were accepted into EICP Step 3. The Step 3 median score was 3.9 on the EIPA-EICP. These interpreters had no direct skills development support from the program to enhance their interpreting competencies, nor were they given the opportunity to take the EIPA post-assessment since this process was tied to the Step 2 skills-based work of the EICP

curriculum. The thirty five (70%) interpreters below 3.5 on the pre-screening were accepted into Step 2.

The Step 2 students' range of overall entry scores was 1.5 to 3.4, averaging 2.6 as they entered the program. Individuals in this track were to have demonstrated between a 2.0 and 3.4 on their pre-screening. However, at the request of the state partners, five individuals were accepted below this level (1.5-1.9). Figure 3 depicts the range of pre-assessment scores and the number of Step 2 interpreters in each range.

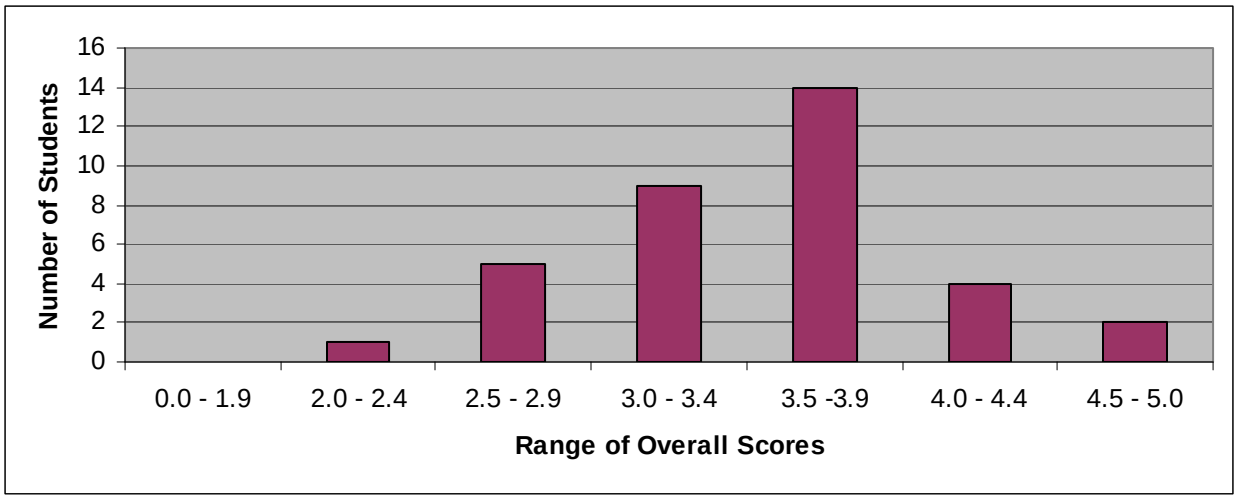
Figure 3: EICP Cohort 2 pre-screening for 35 Step 2 students



Step 2 students were provided 16 semester hours of skills-based coursework during the three years of the program. Ten of the credit hours were done during onsite, face-to-face summer sessions. The other credit hours were distance-delivered courses that involved small mentored group activities structured in WebCT, utilizing videotape exchanges of assignments.

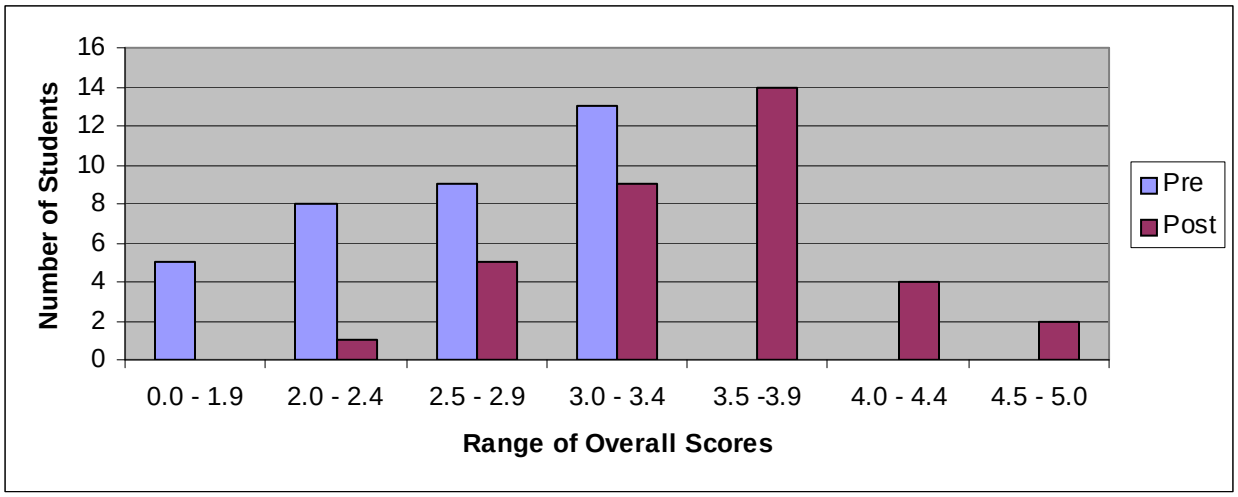
The picture was quite different when students completed the program: the range was 2.4 to 4.6, with a median of 3.5 on the post-screening. As a cohort, the Step 2 students exhibited a 0.9 growth pattern; individually the range of growth was from –0.8 to +1.9 scales on the five-point EIPA form using the adjusted EIPA post-screening scores. The next graph, Figure 4, shows the interpreters' competency as demonstrated on the post-screening EIPA.

Figure 4: EICP Cohort 2 post-screening for 35 Step 2 students



As they exited EICP, there was only one interpreter from Cohort 2 below a 2.5. She entered at a 1.8 and did gain a 0.6 level during her work in the program. Five interpreters exited the program in the 2.5-2.9 range; two of them gained 1+ scale during their training, both having entered with pre-screening scores below 2.0. Since their growth patterns were similar to the average 0.9-growth pattern of other cohort members, it was to their credit to have moved into the 2.5-2.9 range. Although this accomplishment was equally commendable as colleagues' achievements, it did not meet EICP exit competencies, and thus, the vocational certificate could not be awarded. A couple of individuals simply had a disappointing post-screening due to unknown factors. The following bar graph portrays the growth of the cohort members.

Figure 5: EICP Cohort 2 pre/post-assessment comparison for 35 Step 2 students



In addition to the program pre/post-assessment comparison, Schick did an analysis of the EICP Step 2 students compared to the 1,019 interpreters across the nation who had taken the EIPA from the EIPA Diagnostic Center at Boys Town Research Hospital in Omaha, Nebraska. The EICP students were one standard deviation above the national mean when compared with that pool of interpreters, based on the selected educational level (elementary or secondary) and Sign Language or communication system (ASL, PSE or MCE).

In the final analysis, 94% of the Step 2 students demonstrated *either* a 3.5 or higher on the EIPA post-assessment, a growth of a one scale or greater on the psychometrically adjusted pre/post EIPA, *or* were above the national mean for their selected test materials. Using these measurements, students in Step 2 of Cohort 2 have established an enviable standard for improvement in their interpreting skills achieved in a distance-learning program.

In communication with Dr. Brenda Schick (personal communication, September, 2003), this growth is significant for the K-12 students who rely on interpreter services to access their own education. At an EIPA Level 2, there is such inconsistency in the interpreted message it is difficult to assign a percentage of accurate information available to the student who is deaf or hard of hearing. At a Level 3, approximately 75-80% of the information, though random due to errors and deletions, is being made available visually to deaf and hard of hearing students in the classrooms. Eight-three (83%) of the Step 2 members were able to demonstrate this level, or higher, of proficiency on their EICP post-screening.

Role of Deaf Instructional Staff Members

There was one additional comparison in the improvement of ASL to English interpreting that was noteworthy. During the program review and revisions, an emphasis was placed on recruiting and training deaf instructional staff members. A talented group of individuals was involved with Cohort 2 students, and the Step 2 students benefited most directly. A number of students stated upon entry that they had limited or no contact with deaf adults. The majority expressed an interest in focusing on their ASL to English interpreting skills.

The interpreters who were cognizant of this need are to be commended. As second language learners, the ability to acquire a strong language foundation is pivotal to their success as an educational interpreter. The summer immersion programming and deaf mentors at a

distance seems to have had a significant influence on their interpreting skills. Two categories, EIPA Roman Numerals II and III, specifically assess the interpreter's abilities to interpret into spoken English for a signing student and the vocabulary and other language aspects she uses while interpreting. These were the two categories, of the four EIPA Roman Numerals, that showed the most growth in the students' overall gains. Both Roman Numeral II and III averaged a full scale of improvement noted when the pre/post-screening medians were compared.

A logical question would be: why wasn't the same growth demonstrated on Roman Numerals I and IV? These two categories respectively assess the interpreter's abilities to sign interpret for a speaking teacher and the overall effectiveness of the signed message. It is the belief of the EICP staff that the difference in demonstrated strengths between the Roman Numeral categories can be accounted for in two ways:

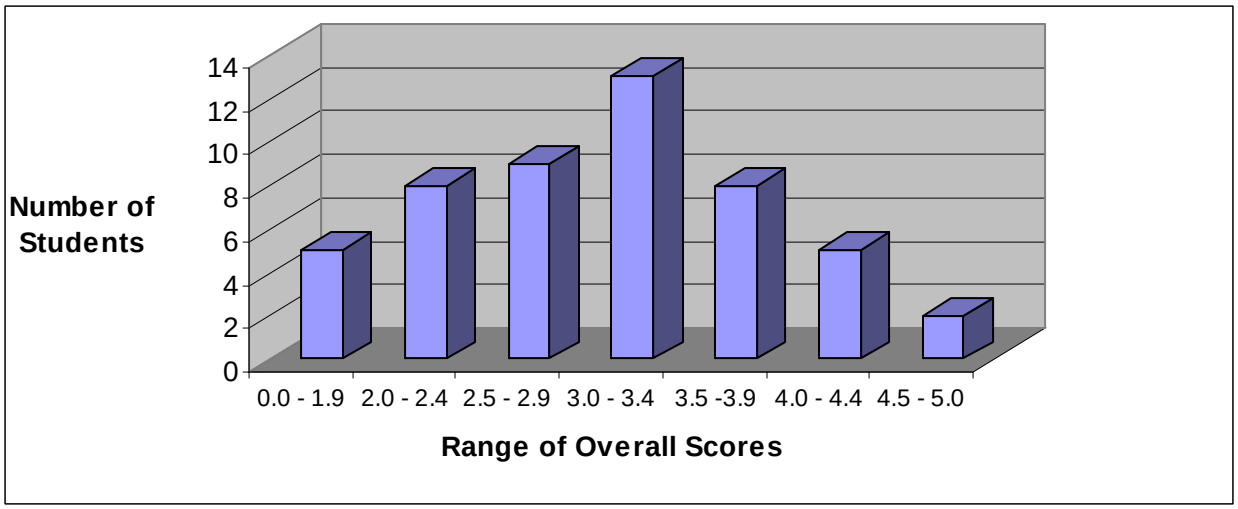
1. The interpreter-student was still in the process of mastering the language aspects and the interpreting process necessary to consistently demonstrate them in an English to Sign interpreted message.
2. Testing immediately after Summer Institute III training may not have allowed the interpreter-student needed time to internalize the new learning; consequently, creating a cognitive barrier during the EIPA post-screening.

Based on the EIPA post-assessment, the Step 2 interpreters in aggregate have shown that they can comprehend and more effectively facilitate communication for the students with whom they work. Further, it is understood from the field of interpreter education that with the stronger ASL foundation, as seen in both the vocabulary usage and increased abilities to comprehend and voice a signed message, the interpreters in Step 2 will be able to move quickly to improved levels of service for K-12 students as they gain confidence and experience in applying these skills to their English to Sign interpretations in the classroom. Increased scores on their future EIPA, RID or other assessment systems are expected.

Cohort 2, Step 2 & 3 Results

It was worthwhile to view the 50-member Cohort 2 in aggregate as well. When the Step 3 students were included with the Step 2 members of the cohort, the overall profile of the group was encouraging. At entry, the majority (70%) of demonstrated skills were below EIPA 3.5, as seen on the following bar graph. The median for the 50 interpreters was 3.0.

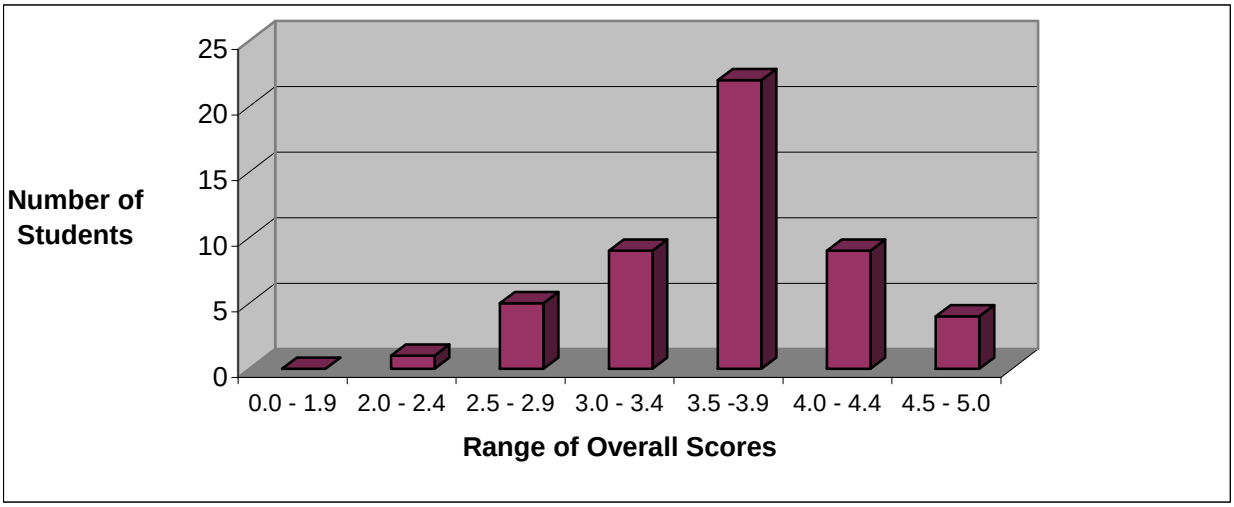
Figure 6: EICP Cohort 2 pre-screening profile of 50 completers



At the conclusion of their studies, the 50-member Cohort 2 exit profile looked very different. Thirty-five individuals (70%) were at or above 3.5. In addition, there were nine individuals (18%) who fell within the 3.0-3.4 range. These individuals still needed supervision and support from the educational team in the schools where they were employed to ensure that K-12 students receiving interpreter services had appropriate access to their academic environment. Nonetheless, these interpreters were more prepared to effectively support the students with whom they work, and they have acquired strategies and resources to continue developing and enhancing their interpreting skills.

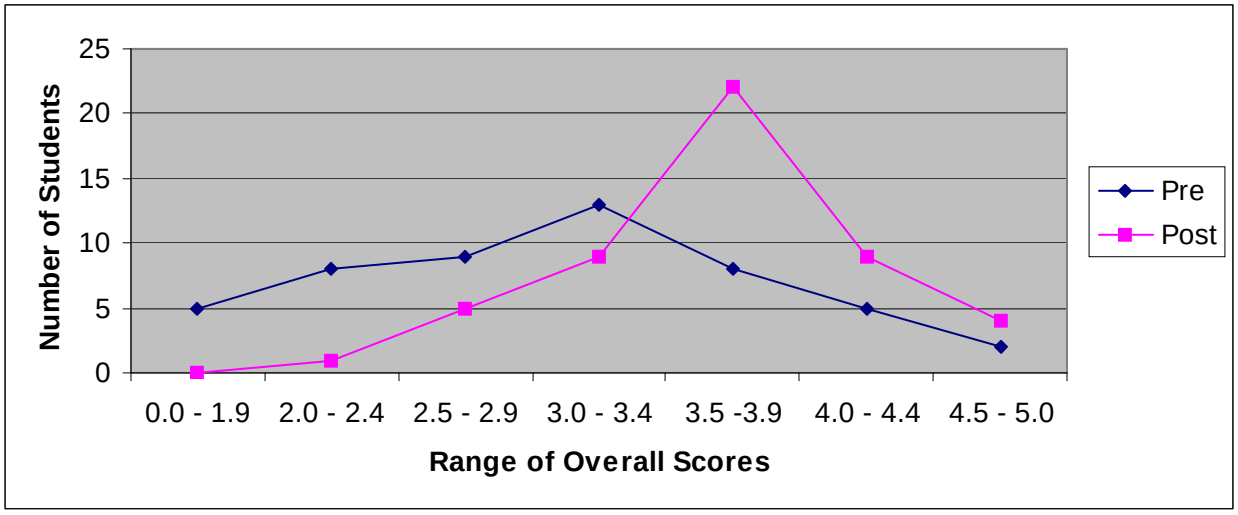
Figure 7 shows the exit profile of the Cohort 2 students, with ranges of overall scores and the number of interpreters in each range.

Figure 7: EICP Cohort 2 exit profile for 50 completers



By the end of the EICP experience, the interpreting services offered by the Cohort 2 members were considerably improved. The following bar graph shows the comparison of the aggregate entry and exit interpreting skills demonstrated.

Figure 8: EICP Cohort 2 pre/post assessment comparison for 50 completers



The shift of number of interpreters in each range was important to note. The shaded columns in the table below represent the number of students who began the program in that specified range. The second column of the range, that is not shaded, indicates the number of

students who exited in that range. As they completed their program, 44 of the 50 Cohort 2 interpreter-students (88%) demonstrated an EIPA level 3 or higher.

Table 1: EICP Cohort 2 entry and exit shifts of 50 completers

0.0 - 1.9		2.0 - 2.4		2.5 - 2.9		3.0 - 3.4		3.5 -3.9		4.0 – 4.4		4.5 - 5.0	
5	0	8	1	9	5	13	9	8	22	5	9	2	4

Note specifically the changes in the top EIPA ranges. Six Step 2 students moved from 3.4, or less, to beyond 4.0; two of them were above a 4.5 as they exited the program. This demonstrated substantial growth, especially as this upper end of the scale signifies that sophisticated aspects of the languages and the interpreting process were being mastered.

Implications for the Field: Questions that Remain

A variety of theorists—such as Colonomos (1992) and Cokely (1984)—have suggested that a logical sequence of skill acquisition would result in the majority of students of interpreting and interpreter practitioners evidencing a higher degree of competence in ASL to English interpreting performance versus English to ASL interpreting performance. This assumption is based on the recognition that an individual would always possess a higher degree of competence in her first language than in her second language. Therefore, students and practitioners should have a greater ability to discuss in English (assuming English is her first language) the information expressed in ASL, than they could express in ASL information that was generated in spoken English.

This theory is contrary to anecdotal experiences of students and practitioners who frequently indicate that they are 'much better at signing than at voicing' and it signals some of the inconsistencies that may exist in Interpreter Preparation Programs. If, in fact, students complete an IPP with greater competence in interpreting from English into Sign than from ASL into English, it may be the result of several factors—insufficient attention to the ASL to English interpreting task, lack of distinction between ASL and English-signing codes, lack of exposure to naturally occurring language use within the Deaf Community, or the absence of deaf individuals on the faculty team, among others.

The Cohort 2 students' performance in Roman Numeral II and III of the EIPA averaged a full scale of improvement when the pre/post-screening medians were compared. This gain may be attributed to the shifts in staffing patterns accomplished as a result of the EICP program evaluation in fall 2000 (e.g., addition of the one year deaf language mentorship program, use of deaf/hearing instructor teams for all three summer institutes, use of ASL as the language of instruction for all summer institutes, adjustment in course sequence to create more effective scaffolding), and lends support to the theory that students will likely demonstrate a higher degree of competence in ASL to English interpreting than English to ASL interpreting. This increase underscores the importance in distance delivery of providing students with frequent and ample exposure to naturally occurring ASL and to the value of qualified deaf individuals working as equal partners.

As well, the role of team teaching should be further explored. The impact of a competent teaching team comprised of an experienced practitioner and fluent deaf ASL user—both of whom are also master teachers—has yet to be fully examined as it relates to a distance delivery model. The unique perspective each individual brings is significant. The deaf team member brings to the learning process direct experience as the recipient of interpreted information—the experience of deaf children that EICP students serve. The deaf team member brings to the distance learning process immeasurable insight into how to use language in a visual-spatial manner so that it is coherent, fluid, and understandable—they bring the awareness of how a deaf person receives and processes visual-spatial information most effectively. This perspective is particularly important to those students who live in rural areas and have little or no access to competent ASL language models/Deaf adults. The interpreter practitioner brings to the distance learning process direct experience related to the day-to-day work of interpreters, the solutions that work, and tremendous insight into best practices. Again, this perspective is particularly important to those students living in rural areas who have little or no contact with competent practitioners.

Together, the teaching team can also model effective deaf-hearing interactions, how to demonstrate mutual respect and regard for one another, how to build on individual and collective strengths, how to problem-solve related to cultural and/or communication misunderstandings that arise naturally within the classroom. This was particularly important for the EICP Cohort 2

students—many having indicated that they had never interacted with deaf adults, were unfamiliar with solutions used within the Deaf Community, and were unsure how to appropriately support the socialization of the deaf children with whom they work.

The quantifiable benefits of team teaching need to be evaluated and assessed, as well as the costs—although the experiential benefits identified by EICP Cohort 2 students were significant. How can interpreter education delivered at a distance—and perhaps all interpreter education—create a more student-centered learning environment that maximizes the support and resources made available to students? Perhaps focusing on collaborative models of program delivery—where faculty, curriculum, delivery systems, student support, and program costs, are shared by multiple institutions using distance technologies—would enable the field to reduce the limitations created by many small programs with only one or two faculty and few resources, and result in the creation of exemplary programs at the regional or national level.

Another implication for teaching practices relates to the results of Cohort 2 EIPA exit scores in the Roman Numeral IV category, which relates to overall message coherence and spatial mapping during English to Sign interpretation. EICP students were weakest in "pulling it all together". The Cohort 2 students' results in this category were consistent with the results of the national pool of scores of over 1,000 practitioners that Schick conducted (personal communication, September, 2003). The Schick data indicates a possible weakness in interpreter education in general—whether there is sufficient time and attention given to the mastery of message coherence and spatial mapping. Further, the issue may be compounded by the fact that there has been only limited research into this area of ASL and consequently, teachers do not know how or what to teach (Winston & Monikowski, 2003).

One of the most significant implications of this data is that it provides a snapshot of what can be accomplished through a distance delivered, long-term strand of in-service training for interpreters working in K-12 settings. Essentially, after three years of study, culminating in 16 semester hours of interpreting skills coursework, in an academic environment that consistently strives to incorporate the best practices of the field (e.g., team teaching with master teachers drawn from a national pool, contemporary and cutting edge scope and sequence of instruction, progressive instructional materials and resources), interpreter-students were able to gain an average of one level improvement on the Educational Interpreter Performance

Assessment (EIPA). More research is needed to determine how this gain compares to gains attained via more traditional approaches to upgrading skills through face-to-face, short-term, in-service/weekend workshops.

Summary

In conclusion, the outcomes demonstrated by the 50 members of EICP Cohort 2 have included between 14-30 semester hours of college coursework specifically relevant to their work in the K-12 environment with students who are deaf and hard of hearing. They demonstrated overall interpreting competencies between a 2.4 and 4.8 on the EIPA five-point scale as they concluded their EICP experience. They were prepared to offer more reliable and accurate interpreting services to the schools that employed them. The states that participated had a more skilled workforce to support deaf and hard of hearing students placed in an inclusive educational setting. These results demonstrate that it is possible to deliver skills coursework via distance technologies and to quantify improvement of interpreting skills acquired at a distance.

Acknowledgements

More than 100 interpreter educators, language mentors, deaf education team members, and state administrators have influenced the Educational Interpreting Certificate Program since its inception in 1995. The authors gratefully acknowledge their contributions to the program, even though we cannot credit each person. Another 'lesson learned' from this project is that more is indeed better. No one person could have accomplished this task—working as a team, however, the current EICP is more than its original vision.

The authors extend a special thanks to Dr. Brenda Schick for her analysis of the Cohort 2 student outcomes. The consultation provided by Dr. Schick was instrumental in the reporting of the Cohort 2 results.

In addition, much of the material in this article is taken from other EICP materials. Some have been developed as instructional materials, while others were given in various reports to the State Education Agencies/BIA/Office of Special Education Programs Partnership. Articles and/or papers presented at various conferences, such as the Registry of Interpreters for the Deaf and the Conference of Interpreter Trainers, have been cited in the reference section.

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It is the intent of the authors to foster continued dialogue concerning interpreter education and delivered education for interpreters. Your comments are welcomed.

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