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VITAL: Virtual Interpreting Training and Learning

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Abstract

This paper describes a distance learning solution for the training of medical interpreters: the Virtual Interpreting Training and Learning (VITAL) Program. VITAL was developed to offer an effective, efficient, and scalable learning alternative to conventional models. The main objective of VITAL is to increase the pool of trained medical interpreters, while providing the same quality of training as in-person programs. Currently, VITAL is used in training bilingual (i.e., English and Spanish) individuals to perform as medical interpreters. An expanded pool of trained medical interpreters will ultimately lead to enhanced communication between providers and their patients and reduce the occurrence of medical errors.

Keywords: distance learning; interpreting; linguistic access; immigrant health

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VIRTUAL interpreter training

1. Background

There are over 33 million foreign-born residents in the United States—nearly three times the number of immigrants present in the country three decades ago (Larsen, 2004). Twenty-one million US residents are considered to be limited English proficient (LEP), which represents a 50 percent increase in the number of LEP residents reported in the US in 1990 (Shin & Bruno, 2003). Among the immigrant population, the five most widely spoken languages are Spanish, Chinese, Tagalog, French, and Vietnamese (MLA Language Map, 2010). About 30% of the Spanish language group speak English "not well" or "not at all," as do 27% of Chinese speakers, 8% of Tagalog speakers, 8% of French speakers, and 33% of Vietnamese speakers (MLA Language Map).

The inability to communicate in English often prevents immigrants from obtaining adequate medical attention (Lai & Chau, 2007; Mui, Kang, Kang & Domanski, 2007). The lack of trained interpreters in health care facilities puts these individuals at risk for significantly poorer outcomes than their US-born counterparts (Gany, Leng, Shapiro, Abramson, Motola, Shield & Changrani, 2007). While some states have hospital regulations that require access to interpreters for all patients with limited English proficiency (LEP), the pool of qualified interpreters is alarmingly small. The shortage of qualified interpreters often pushes hospital administrators and providers to use untrained staff or visitors as interpreters (Gany, Kapelusznik, Prakash, Gonzalez, Orta, Tsen & Changrani, 2007). At best, the usage of untrained bystanders as medical interpreters can have a minor negative impact on the patient's overall experience; at worst, it can have a potentially detrimental effect on the medical care received by the patient (Gany, Gonzalez, Basu, Hasan, Mukherjee, Datta & Changrani, in press). One study found that the errors made by untrained interpreters were more likely to have clinical implications than errors made by hospital interpreter staff (Flores, Laws, Mayo, Zuckerman, Abreu, Medina & Hardt, 2003). As the nation's foreign-born population continues to increase, so too does the need for training in medical interpreting.

With the Internet's rise as a popular and growing educational platform, the possibility of training interpreters through this forum has been explored (Draves, 1999). The format of educational delivery itself, whether via a Web-based learning module or through live instruction, has little effect on student achievement, as long as the delivery method is appropriate to the content (Chumley-Jones, Dobbie & Alford, 2002). In fact, studies comparing multimedia and traditional educational approaches suggest an improvement in students' performances using multimedia (Kaelber, Bierer & Carter, 2001). Web-based instruction has the advantages of allowing students to work at their own pace, view engaging video clips, and participate in interactive learning with immediate feedback and self-assessment. There is also an advantage of being able to deliver stimulating interactive learning material to large groups, even when the availability of appropriately trained faculty and time in the curriculum is limited.

The Virtual Interpreting Training and Learning (VITAL) program, an online distance learning course developed by the Center for Immigrant Health, is designed to provide a level of quality instruction that is at least equivalent in its effectiveness to comparable conventional training provided in person. The mission of VITAL is: (a) to increase the student's interpreting skill practice time through its virtual lab (VITAL enables the student to spend significantly more time on his/her interpreting skill practice, in contrast to the group size and time limits found in conventional classroom settings); (b) to augment the ability of geographically dispersed adults to access training at their convenience and from their setting of choice; (c) to improve efficiency by reducing scheduling and other logistical tasks that are costly and often a burden for busy health care systems or other interested target populations; and finally, (d) to offer an advantage in terms of specialized training and continuing education instruction. Specialized modules in refugee health, mental health, simultaneous interpreting, and continuing education sessions can be added to the main backbone structure of the application through its dynamically engineered modular design. These modules may be accessed independently, according to the needs of the student. Whereas VITAL is designed to be delivered as a linear conceptual whole, an individual may participate only in language-specific practice through VITAL's virtual lab.

2. General course description

The training uses a combined asynchronous and synchronous model of instruction. The asynchronous segments (i.e., videos, language discordant medical encounters, readings, bulletin board) allow the students to learn the materials posted online at their convenience. The synchronous segments (i.e., chat sessions) simulate the environment of a classroom, thereby enabling a suitable learning exchange among the students and the instructor. Throughout the course, students study the role of the interpreter, the medical encounter, medical terminology and colloquial language, linguistic concepts (e.g., tense, register, and tone), and interpreting techniques, as well as engage in case study exercises that trigger their critical thinking and decision-making abilities that are necessary to use in addressing ethical challenges that are typical during the language discordant medical encounter. The course segments, including the videos, stimulate awareness of issues regarding the biomedical environment, linguistic and cultural diversity, and the limited English proficient population. The practice sessions in the virtual lab provide students with the opportunity to hone their interpreting skills and to learn medical and colloquial terminology. The course is designed to actively engage students. Students participate in discussions and in terminology-building sessions. The students learn to become adept at self-analysis. At the end of each lab module, students must complete a self-evaluation tool in which they evaluate their performance as interpreters. They submit their completed forms to their instructors and receive feedback. Instructors have access to the students' recorded interpreter exercises.

More specifically, the course consists of 10 instructional didactic modules and 10 lab or practice modules. All modules have a clearing test that must be completed before the student can move onto the next module. Clearing tests evaluate the students' progress by asking key questions that relate to the objectives of each specific module. The course is designed to be completed in its totality using a linear model. That is, a student must complete Module 2 in its entirety and clear its test to be able to advance to Lab 2, and so forth. As described later in the modularity section of this paper, accessing specific modules for specialized training is also a possibility.

The instruction for each VITAL course is provided by a live instructor, thus the feedback and instruction is not entirely computer generated. Instructors are able to see the students' progress on the instructor page. They are able to see the students' responses to all questions asked during the course, listen to their lab recordings, and monitor their scores on the clearing tests that have been generated by the application. They communicate with the students through the repository page, by e-mail, and through the bulletin board. These features are described in detail later in this paper. The course starts with a pre-test in Module 1 and ends with a post-test in Module 10. The tests are designed to evaluate three areas: (a) knowledge of role and ethics, (b) knowledge of medical terminology, and (c) interpreting skill level. Modules 2 through 9 consist of a set of clearly defined educational objectives followed by some instructional text/readings, videos, reflective questions, and expert responses. Each of these modules contains three sections.

In the didactic modules the student learns different aspects that pertain to role and ethical decision making. Most of the instruction in these modules is presented in video vignettes illustrative of the discordant language encounter in the American biomedical culture. They constitute a series of case studies that the student is then asked to analyze. After each video, the student has the opportunity to answer a series of questions related to each specific case and receives feedback from the instructor in the form of expert responses generated by the application.

Figure 1: Sample page illustrating a video case study vignette.

The oral practice labs are designed to teach the student medical terminology in English and Spanish; the student uses these terms to practice interpreting skills by acting as the interpreter for a patient/physician in a given clinical exchange. The student listens to the recording and records the interpretations using Audacity, a recording software that can be downloaded free of charge on the Internet. Through these exercises, the student learns useful interpreting techniques.

Each didactic and lab module ends with a clearing test that the student must pass in order to proceed to the next module. These tests use the multiple-choice method and evaluate the student's comprehension of role and ethical decision making discussed in the didactic modules and the use of medical terminology learned in the lab modules. Although these scores do not impact the final evaluation, they help the student understand his/her strengths and weaknesses.

2.1   Virtual Lab

VITAL's virtual lab modules give the student the opportunity to practice and learn interpreting skills at an individualized pace. In the traditional in-person classes, the student's practice is limited by the face-to-face time factor; VITAL's virtual lab allows the student to practice extensively at his/her own pace.

Figure 2. Sample Web page illustrating VITAL's virtual lab feature.

Each language lab is comprised of four sections:

2.1.1 Section 1: Linguistic tips and interpreting strategies

In this section, the student is provided with readings and video exercises. They address, for example, culturally-bound terminology in English that may not have equivalents in the target language, ethical challenges in interpreting, informed consent, managing the flow of communication, and linguistic register. Information provided in this section reinforces the knowledge gained in VITAL's didactic modules and prepares the students for practice and real-life interpreting.

2.1.2 Section 2: Medical terminology

In Section 2, the student is given a number of medical terms along with their definitions. The terms are presented by medical specialty (e.g., cardiac disease) in an order that coincides with the next recording exercise in Section 3, allowing the student to reinforce memorization and practice of the terms. The student is expected to search for these words in the online glossary and memorize the terms through context-based exercises.

2.1.3 Section 3: Oral practice

The student has the opportunity to practice his/her interpreting skills in Section 3. The student has three recording exercises per lab. These recordings simulate discordant language encounters between English-speaking providers and Spanish-speaking patients and last between 10 and 15 minutes. The student saves and uploads the recordings once they are completed. The recordings are uploaded to a collective repository where the instructor and all of the students can hear them. After each recording, the student also completes and submits to the repository a self-evaluation form of his/her performance. These exercises teach the student about evaluation and self-evaluation, vital aspects for professional growth.

2.1.4 Section 4: Journal entries

Finally, in this section the student has the opportunity to write about what has been learned. There are a series of questions that encourage reflection upon one's linguistic and cultural background and how they may impact one's role as an interpreter in health care. The student's responses are shared with all the students and with the instructor.

3. Course evaluation

To receive a passing score and the program certificate of course completion, the student must earn 80 of the possible 100 points. The students receive their grades by e-mail and all data (except the oral recording tests) are automatically calculated, aggregated, and archived by the application. Three areas are evaluated: (a) knowledge of the role of the interpreter in health care, including ethical decision-making; (b) knowledge of medical and colloquial terminology; and (c) interpreting skill. The first two are tested through multiple-choice tests. For the latter, instructors listen to the audio recording uploaded by the student and score them using scripted linguistic tools designed for this purpose and described in an earlier study (Gany, Kapelusnik, et al., 2007).

4. VITAL application features

4.1 *Repository: View your activity and communicate with your trainer*

This feature allows the student to communicate with his/her trainer through personal message boards. If the student has a question about VITAL, he/she may direct it to his/her trainer by using this messaging system.

Likewise, the trainer will provide feedback on each module the student has completed through the repository. The student is notified of new messages every time he/she logs into VITAL. Furthermore, he/she may view details on the modules that he/she has already completed by clicking on "My Previous Activity" under the repository tab.

Figure 3. Sample Web page illustrating VITAL trainee's repository's main page.

4.2   Virtual library: Bilingual medical glossary

VITAL comes equipped with a comprehensive medical English–Spanish glossary to be used for completing lab work and other didactic sections. The glossary has a search key to locate specific terms, facilitating usage. The student is given a list of medical terms and their definitions, all in English. These terms are embedded in the application. The student is then asked to find the terms in the glossary. These are the terms that are later used in the interpreting skill practice of the lab.

4.3 Bulletin board

The bulletin board is public and can be viewed by instructors, as well as students, and is an effective means of starting discussion about the various aspects of the interpreting profession or the training itself. Throughout the course, the student is prompted to post his/her thoughts and/or questions on the bulletin board.

4.4 Listen to other students

The student has the option of listening to his/her fellow students' lab practices submitted during the course of their training. By listening to fellow interpreter trainees, the student can practice his/her evaluation skills.

4.5 Help: Tips and troubleshooting

The help section has been created to alleviate any confusion or technical problems that may occur throughout the duration of the course. The student is able to find the answers to most of his/her questions in this section.

4.6 Change password

This feature has been added for privacy and convenience. When the student first registers for VITAL, he/she is e-mailed an automatically generated user ID and password. This feature allows the student to change his/her password to something that is easier to remember. The student may change it at any time during the training. Additional passwords are generated by the application for module specific usage by a student. These passwords are coded so that the student will only navigate through the modules for which he/she has been enrolled.

4.7 Back to learning

Every time the student visits a page with additional instruction, tips, or exercises, or every time the student is on the bulletin board or repository during the training, the "Back to Learning" link will return the student to the module where he/she left off.

5. Modularity

Since its inception, VITAL has evolved from a linear and conceptually whole model, in which the student would take all modules in numerical order, to a modular alternative, in which a student may only take the didactic section or the lab section. In addition, a module on simultaneous interpreting with a didactic section and a lab section was added. This section can be taken independently of the rest of VITAL program or in conjunction with its other parts. Similarly, a module on refugee health, which will function in the same manner, is being developed.

6. Evaluation

The evaluation of VITAL consists of key informant interviews; focus groups with pilot users; and pre- and post-testing for documenting changes in knowledge, attitudes, and interpreting practice. The evaluation uses the same instrument that is used in the face-to-face interpreting program at the Center for Immigrant Health. Results have been used to modify the training program. Initial data suggested that there is a learning curve for developing

familiarity with the recording tool; after that, the program is very accessible technologically. Some students find the labs to be long but noted, at the same time, that they valued the educational opportunity to practice. Many students commented upon the notable depth of information they obtained from the training. The videos were viewed as important teaching tools. The glossary search key was helpful, as was the capacity to print all didactic materials. The interactivity provided through the bulletin board and the repository was an important adjunct. The capacity to supervise all the students individually and the computer-generated scoring were noted by the instructors.

We also conducted a pre- and a post-training evaluation to test the students' knowledge of role and ethical decision making in health care interpreting. There was an average of a 25% increase in scores from the pre- to the post-test (range 5%–67%, with 29% achieving a score of 100%).

7. Conclusion

VITAL has the potential to reach large numbers of bilingual individuals in disparate geographic settings. Furthermore, VITAL's scalability should increase the numbers of individuals trained, while lowering training costs for the system in comparison with in-person trainings. We believe that VITAL will be equally successful in other commonly spoken languages. To that purpose, we will be developing the program in Chinese, followed by other commonly spoken languages. VITAL will ultimately help to ensure equitable access to quality health care for underserved populations and impact health outcomes for millions of limited English proficient individuals nationwide, while contributing to the growth of a qualified pool of professional interpreters at lower costs.

8. Acknowledgements

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