

Medical Spanish for U.S. Medical Students: A Pilot Case Study

Lauren Davidson

University of Massachusetts Medical School

Sheri Spaine Long

University of Alabama at Birmingham

Abstract

In an effort to expand the teaching of medical Spanish to medical students, a one-week pilot course was developed and implemented at The University of Alabama School of Medicine (UASOM) in January 2010. Objectives included offering a refresher course in Spanish for medical students before third-year clerkships and providing a model for medical schools interested in developing medical Spanish courses. The pilot course included the teaching of Spanish language and related cultural information to students at varying levels of Spanish proficiency by an experienced Spanish for Specific Purposes (SSP) instructor. Students completed an evaluation to suggest future directions for the course. The results suggest that a medical Spanish course for medical students can indeed be added to U.S. medical school curricula.

Introduction

We use language to communicate thoughts and information and to reveal our needs (Modern Language Association, 2007). In the medical field, language is a critical tool for delivering and receiving quality care.

In the U.S., many pre-medical students enroll in Spanish courses in secondary school and in college. Some medical students have taken Spanish for Specific Purposes (SSP) courses prior to medical school, but still lack the specialized vocabulary and specific Spanish language skills or proficiency level needed to interact with and care for their Spanish-speaking patients appropriately. Many medical students with some experience in the Spanish language seek out opportunities to maintain, practice, and expand these skills; however, these students find few options to do so during medical school, as specific courses in medical Spanish are typically absent from U.S. medical school curricula.

A review of the recent literature points to a deficit in high quality health care available to Spanish-speaking patients in the U.S. because of the inability of physicians and other health care providers to communicate effectively in languages other than English (Morales, Cunningham, Brown, & Hays, 1994). As of July 1, 2006, the Hispanic population in the U.S. totaled 44.8 million, which is 14.8% of the total population (U.S. Census Bureau, 2006), making Spanish-speaking patients a part of any physician's practice.

Medical students have limited curricular and extra-curricular time for formal and informal language acquisition and maintenance. Because of time-constraints, there are few options to add Spanish classes to medical school curricula. To begin to work toward a solution, we developed a brief pilot course in medical Spanish for medical students, which took place at The University of Alabama School of Medicine in January 2010.¹

A way to develop, fund, and pilot a medical Spanish course at UASOM became available through a program called the Scholarly Research Activity (SRA).² The only course length available for medical Spanish elective was a one-week intensive course. A course of this type has yet to be documented in the literature.

Literature Review

Although the literature pertaining to the success of teaching medical Spanish to medical students is limited, there are a few institutions that have provided models of such courses. No medical schools offered the same one-week format as the UASOM pilot. The following models illustrate the demand for medical Spanish as well as a variety of responses. They show that the Spanish and the medical professions have indeed begun to work together. Because of the scarcity of comparable courses, we include examples that describe Spanish language education targeting undergraduate pre-medical students, medical students, medical residents, and established physicians, although the pilot course at this institution was taught to medical students alone.

The need for improved communication between health care providers and Spanish-speaking patients has been well documented by Morales et al. (1994): “Unsatisfactory communication [...] may result in lower quality of health care and poorer treatment outcomes” (p. 414). Some suggestions for improving communication between physicians and Spanish-speaking patients include “teaching medical Spanish to health care providers, educating health care providers about the health beliefs and practices of their patients, and developing clinical practice guidelines that ensure cultural competence” (Morales et al., 1994, p. 415).

The practice of teaching Spanish to established physicians has proven to increase patient satisfaction as well as decrease physician reliance on professional interpreters (Mazor, Hampers, Chande, & Krug, 2002). As future physicians, medical students should understand the importance of relying on professional interpreters when necessary. “Ensuring adequate clinician-patient communication is the clinician’s responsibility, and time inefficiencies or other barriers should not become reasons to carry out inadequate communication” (Yawman et al., 2006, p. 472). At times, physicians may resort to using patients’ family members as interpreters. This can lead to a high rate of errors in translation/interpretation, which may or may not have an impact on the medical care received (Prince & Nelson, 1995).

Prince and Nelson (1995) also comment that

Although one possible solution to the lack of interpreters is to increase the number of bilingual health care providers [...] attempts to increase the number of ethnic minorities have not been successful. Another solution would be to train health care providers to speak a second language. Unfortunately, these researchers were unable to find

many programs that have implemented such an approach. (p. 35-36)

The researchers of this study faced similar difficulties when searching for programs that have implemented Spanish courses, which lead to a belief that additions to the current literature describing courses at such programs would be beneficial to both academic and medical communities.

The literature establishes a rationale to teach medical Spanish to future physicians. Next it became necessary to identify the best way to accomplish this additional instruction. There have been various medical Spanish courses offered in the U.S. during the past few decades. A groundbreaking course in this field is described by González-Lee and Simon (1987) at the University of California in San Diego, School of Medicine, which took place in 1984. The course targeted second-year medical students and consisted of twelve to fifteen hours per week for three elective courses over three consecutive quarters of the academic year. Native Spanish-speaking physician preceptors permitted students to interview four to five Spanish-speaking patients per week, offering opportunities to practice Spanish within a medical and cross-cultural context. They also employed dialogues designed to facilitate the process of obtaining a medical history. This course was beneficial for students with minimal Spanish-language experience as it encouraged the development of skills useful for establishing rapport and thereby improving physician-patient interaction.

Another possible course option includes a longitudinal format that spans the full four-year medical school curriculum. At the University of North Carolina-Chapel Hill, medical students with intermediate to advanced Spanish language skills took part in didactic sessions, clinical role-playing, service-learning activities, and simulated patient cases. These students felt that the program “helped them to maintain or improve their Spanish-speaking and listening skills and to acquire medically relevant vocabulary” (Reuland, Frasier, Slat, & Alemán, 2008, p. 1035).

At the undergraduate level, universities across the U.S. have expanded their SSP courses to include medical Spanish. These courses are provided for students with previous Spanish instruction who may need to use these skills at a specific professional level in the future. The institution associated with UASOM offers one of the few SSP certificate programs in the nation at the undergraduate level. SSP courses allow the integration of general Spanish language skills with specific, professionally related Spanish instruction (Sánchez-López, 2010).

There are also options for Spanish language acquisition and maintenance in the private sector that are marketed to the medical community. One example is Ríos Associates that has been offering Continuing Medical Education courses in medical Spanish since 1983. They offer both four-day weekend courses in the U.S., as well as eight-day courses in Mexico. They focus on immersion in the Spanish language and include medically relevant vocabulary and grammar taught through games, role-playing, and group activities. Such courses are unique because a third party provider, not an academic institution, offers them. Additionally, they have an enrollment fee associated with them (Ríos Associates, 2010).³ There are also a number of study abroad providers such as Spanishabroad.com and Amerispan.com that offer medical Spanish abroad to students and health care professionals at a cost to the individual.

Beyond the medical field, there are short courses in Spanish offered in the business field routinely. There are examples of short courses in business offered by a

variety of educational institutions including Phoenix College, Boise State and the Community College of Rhode Island and by employers such as Wachovia (Fajt, 2006; McCain, Ray, & Ellsworth, 2010; Phoenix College, 2008; Sign up for free preview, 2011). However, there is no evidence in the literature of a specific weeklong course in business Spanish for multi-level learners that can provide a curricular model or outcomes relevant to the present study. What studies in business and medical Spanish do have in common is that they document the need for these types of courses. The demand has been driven by societal needs over the last few decades. Because of the popularity of applied Spanish, there is pressure to simply be able to offer business and medical Spanish classes. Apparently the achievement of delivering these specific types of Spanish classes has overshadowed the necessity to document what they can provide to the learner and how best to deliver them.

Doyle points out the change from a traditional language-literature curriculum to the increasingly popular languages for specific purposes programs, and he traces the development of the business language curriculum during the last twenty years (Doyle, 2010). This shift and the establishment of language learning as a national priority by the Clinton administration have intensified the necessity of providing Spanish in a variety of formats (Coria-Sánchez, 2007). From the viewpoint of the traditional language educator, the unorthodox layout of a one-week language course that focuses on business or medicine is likely to be quickly discounted as an unviable set-up for language learning due to the short length. However, if language educators do not consider the need for non-traditional language learning and learners, the language education field may be missing a critical opportunity to expand (Doyle, 2010). There is a need to offer, develop, and conduct research on short courses in applied medical and business Spanish in order to improve to the future curricula, learning outcomes as well as to extend the limited existing body of research.

The Pilot Course

A pilot case study was proposed and formulated at UASOM and was made available to second-year medical students interested in improving their medical Spanish language skills. Students enrolled voluntarily and earned one Special Topics credit for participation in this pilot course.⁴ Special Topics courses include mini-courses (one, two, or three weeks each) in many medical specialties and subspecialties, as well as the arts and humanities. The option of a medical Spanish Special Topics course was proposed by the faculty at UASOM as the only way to add medical Spanish to the curriculum, although only a small number of students would be able to enroll in the course because of individual preferences for competing electives and scheduling restraints. A one-week course was the only format approved by UASOM at that time. The researchers acknowledge that a longer sequence of language instruction is optimal according to second language acquisition research (National Standards, 2006).

This one-week intensive course took place in four-hour instructional sessions over five consecutive days in January 2010. These sessions focused on grammar, medical vocabulary, oral and aural communication, and the integration of culture relevant to Spanish-speaking patients. On each of the five days, equal time (ninety minutes each) was given to teaching specific grammar and vocabulary. Following

the direct instruction, students separated into pairs or small groups to focus on specific grammar and vocabulary by practicing dialogues and simulating the physician-patient interaction through role-playing. Instructional tools included one medical Spanish textbook, *Complete Medical Spanish* (Ríos & Fernández Torres, 2004). Topics covered in the bilingual textbook include but are not limited to greetings, chief complaints, body parts, internal organs, food/nutrition, pain, pediatrics, the emergency room, general physical, neurological and gynecologic examination, dermatology, laboratory tests, imaging studies, pharmacy and medications. The instructor also added realia such as visual aids (i.e., body part diagrams) and depictions/descriptions of clinical scenarios as additional instructional materials.

The course took place in Spanish. The instructor reported offering only occasional clarifications in English. During three class segments that were observed by the researchers, the instructor used no English. Students were evaluated based on attendance and participation in sessions. In addition, a subjective course evaluation was provided to assess effectiveness of the course and to allow students to make suggestions for future course development. There was no summative assessment of Spanish-language skills following the conclusion of the pilot course, as a statistically significant improvement in language proficiency was not expected for a course of such brief length and given the small sample size.

The primary research questions, with the corollary questions were: (1) Can a one-week intensive course in medical Spanish be added to the curriculum at a U.S. medical school? (2) What types of activities would encourage enhanced communication skills of medical students with Spanish-speaking patients? (3) At what level of Spanish can the course be taught? ⁵

Because of the experimental nature of the SRA, a formal “needs analysis” was not performed in order to establish goals and objectives. This was the first year of SRA at UASOM as well as the first formal course in medical Spanish taught there. The need for this course was based on anecdotal evidence from experiences of the researchers and faculty at UASOM, as previously described.

Participants included eight second-year medical students at UASOM. The class of 2012 was polled in May 2009 (Appendix A) to determine potential student interest in the proposed course, the availability of dates when the course could be offered, and their self-reported Spanish proficiency level. The students were presented with written descriptions of the ACTFL proficiency levels for speaking. The researchers recognize that students are not the best judge of their own level of language ability. However, we did not have ample access to the medical students prior to the first day of the course to administer any other type of proficiency level assessment. The course took place in January 2010 as this was the best time period for the SSP instructor’s schedule. Specific student demographic information is not included in this discussion because of the small sample size and privacy restrictions. The majority of students who enrolled identified themselves at the Novice-mid to Novice-high level based on ACTFL Speaking Proficiency Guidelines (1999). Also, all students self-identified as native speakers of English.

The course was taught by a native Spanish-speaking language instructor experienced in both general and medical Spanish with four years of experience of teaching Spanish for Specific Purposes at the same institution as the researchers. There

were five main course goals and objectives proposed at the beginning of the SRA (Appendix B). These stated that the students will (1) learn how to conduct a medical interview in Spanish; (2) learn how to perform a physical examination in Spanish; (3) develop cultural competency working with Spanish-speaking patients by learning how to establish rapport with patients in their native language; (4) be able to discern the need for an interpreter; and (5) understand how to work with interpreters.

The researchers acknowledge that it is important to teach medical students and physicians to understand when it is appropriate and necessary to use an interpreter. With medical students at different levels of proficiency, it is essential not to instill a false sense of their ability to communicate and potentially jeopardize the health care of Spanish-speaking patients. Because of the different proficiency levels of the students, it was important to take into consideration the average level of Spanish in the student cohort.

The mini-course was developed with input from a variety of sources. Beginning with the literature review, the researchers isolated salient portions of similar courses that have been successful in the past. This included targeting second-year medical students, using dialogues for practice (González-Lee, & Simon, 1987); history-taking, integrating didactic sessions, clinical role-playing (Reuland, Frasier, Slat & Alemán, 2008); and utilization of a SSP instructor (Sánchez-López, 2010). Formal interviews were conducted with two experts in the field of teaching SSP and one expert in the field of teaching medical Spanish at the University of Alabama at Birmingham (UAB) in the Department of Foreign Languages and Literatures, as well as one expert in the field of minority health at UAB. These interviews helped determine key elements in the course design, including what areas should be focused on or eliminated during the short course. For example, the need for students to understand when and how to use professional interpreters was scaled back due to limited time. Decisions about course curriculum were influenced by the adoption of an accessible and concise textbook and available realia to be used during instructional sessions. Also, the scope and sequence of the pilot course were shaped by the general curriculum used when teaching medical students how to gather patient historical information and perform a physical examination in English in the first and second years at U.S. medical schools.

Each day, the instructor dedicated ninety minutes each of teaching time to specific vocabulary and grammar. This included basic grammar such as verb conjugation, interrogative words, adjectives, pronouns, as well as themed vocabulary (i.e., taking a history, performing a physical examination), and pronunciation. Students were then given specific activities to perform that focused on form such as vocabulary and grammar practice, as well as more open-ended role-playing in pairs and small groups. This basic structure was followed each day during the weeklong course to allow for repetition and recall of learned material.

Data Collection and Findings

Because of the short course length, the small number of participants, and their varied linguistic backgrounds, it was decided that measuring potential language gains would not give an accurate representation of the success of the course. For this reason, the measurement of Spanish proficiency was not a specific goal of this course.

It was required that each student have prior experience at the introductory level of Spanish before participating in the course, which was self-reported on a questionnaire (Appendix A). Additionally, basic Spanish language skills were assessed via the online Web-based Computer Adaptive Placement Exam (WebCAPE) Foreign Language Placement Exam (WebCAPE, 2010). This exam consists of multiple-choice items and does not contain an oral or aural component.⁶

Following course completion, review included direct observation of three instructional sessions by one of the researchers who took procedural notes on day three of the course, discussions with the course instructor, and written course evaluations completed by the students (Appendix C). By comparing written comments from students with formal interviews, the researchers were able to triangulate some data and analyze information for future directions of the course. The course evaluations focused on both general questions to assess students' comfort level with their Spanish language skills (both in the medical and non-medical settings), as well as course-specific questions to assess instructional content and procure suggestions for improvement of future courses. In developing this course evaluation, the researchers gathered information from published sources as well as from discussions with faculty in the UAB Department of Foreign Languages and Literatures and the Minority Health and Research Center at UAB.

Other than self-reporting, there were no formal measures of language proficiency levels or gains used in the evaluation of course data. The analysis of responses from formal interviews and student comments allowed the researchers to give more specific answers to the research questions.

Many medical students have studied Spanish language during their secondary and collegiate education. A course such as this pilot course helps serve as a bridge between these earlier experiences with Spanish and the experiences they will encounter during their third and fourth year clerkships. This course also helps fill a critical language-learning gap and allows students to add to their existing Spanish repertoire and basic understanding of the language by focusing on specific, medically-oriented vocabulary and grammar that can be used when interacting with Spanish-speaking patients. This course also has the potential to improve or, at the very least, help students maintain their Spanish language skills. One key outcome of this small study demonstrates that a medical Spanish course specifically targeting medical students can indeed be added to the curriculum at a U.S. medical school. This is significant because of the history of limited collaboration between faculty in U.S. medical schools and those who reside in language departments.

When comparing the research questions with data received, the researchers found that it was not possible to fully answer the second research question concerning what activities should be used to accomplish the proposed enhancement of communication abilities of medical students with Spanish-speaking patients, because of limitations of the pilot course. Given the information received from interviews with experts in the fields of SSP and teaching medical Spanish, it was clear that the classroom activities (i.e., role-playing, vocabulary practice) for teaching medical Spanish are similar to a general Spanish language course and the identification of new classroom activities for course delivery did not emerge from this study.

Since it was not feasible to split the course into different proficiency levels be-

cause of institutional limitations, it was necessary to offer a course that catered to multiple levels of Spanish-proficiency. Students were required to have prior Spanish language experience, were asked to communicate entirely in Spanish throughout the course, and were encouraged to integrate new vocabulary and grammar when simulating patient-physician interactions in the classroom with their peers. Although it was more complex to plan a course for students at multiple levels of Spanish proficiency, the instructor reported that students at higher levels of proficiency aided the students at lower levels of proficiency, which was an unforeseen benefit. The instructor also reported that it might be beneficial to split the course into two separate courses based on proficiency level. This was not possible due to the nature of this pilot course, but may be useful information for future courses. Some students enjoyed the intensity of a course that was taught primarily in Spanish, but also thought it may improve understanding if more explanations were given in English.

When the course was designed, it was decided that the course instructor would be an experienced SSP instructor who is familiar with SSP pedagogy. Another option that was considered for this course was a native-speaking physician. Although a physician would have a medically oriented perspective and would provide valuable insight for a course such as this, he/she would not be well versed in the specifics of how to teach language.

The instructor also reported that some medical students had difficulty pronouncing medical terms in Spanish, as many of these terms are cognates in English and may be spelled similarly but pronounced differently. These are terms that are easy for students to remember when conversing with their Spanish-speaking patients; however, if pronounced incorrectly, patients may not understand.

Each day the instructional session began with a unit of vocabulary, which was presented both directly and deductively, and a unit of grammar, both of which were related to taking a patient history and/or performing part of the physical examination. Students were then able to practice their communication by employing this specific vocabulary and grammar. This provided direct feedback to students regarding their understanding of the material presented. During this time, students were able to role-play and mimic the physician-patient relationship and practice both asking and answering questions, which allowed them to improve upon their oral and aural communication simultaneously.

The instructor reported that some medical students had to shift their focus away from grammar to communication. A course such as this is different from the traditional Spanish for General Purposes courses that are concerned more with grammar, reading, and writing. In the SSP course for medical students, the focus is shifted to a primary emphasis on specialized oral communication.

Integrating culture into daily sessions is beneficial to understanding the lifestyle and health beliefs of Spanish-speaking patients. In this course, specific time was not set aside to solely discuss cultural information. This information was integrated as students asked questions and as issues arose throughout the course. It is important for students to understand the manner in which their Spanish-speaking patients view society, as well as how they understand the health system in the U.S. The strategy of integrating cultural explanations into vocabulary and grammar lessons allowed for a contextualized and an efficient use of limited class session time.

Limitations and Future Directions

This course has clear limitations regarding outcomes because it was a pilot course and there was only one small class of students who were eligible and available to enroll. With certain changes being implemented in the curriculum at UASOM, in future years there could be from one to four classes available to enroll in this course.⁷ This may allow for the course to be split into various levels to customize the learning process. It would be beneficial for both the instructor and the students to split the course into multiple levels, as this would allow the instructor to better organize the course to target specific areas of need at each level.

With the time constraints of a one-week course it is difficult to balance time between presenting material and practicing implementation of newly acquired communication skills. Students were able to use class time (one hour per day for five days) to simulate patient-physician interactions. In the future it may be beneficial to add native-speaking physicians and native-speaking patients to this activity to allow students an opportunity for enhanced aural practice and to establish a more authentic context. Along these same lines, students specifically expressed a desire to have native Spanish-speakers available to assist in patient-simulation and physician-patient interaction through role-playing scenarios. It may also be beneficial to include experiential learning opportunities for the students at the conclusion of their one-week course. This may take the form of volunteering at a free clinic for Spanish-speaking patients in the metropolitan area or at one of the local hospitals or health clinics.

Although one of the course objectives was to include a discussion of when and how to use interpreters, this subject was not presented in the actual course because of time-constraints. The researchers understand the importance of such a topic and encourage the implementation of such a discussion in future courses.

Conclusions

Even with considerable interest, it did not prove easy to add a mini-course to the medical school curriculum at UASOM. To illustrate that there was a history and a desire to enhance medical Spanish on campus, a variety of medical Spanish courses had been informally proposed to the chairperson at the UAB Department of Foreign Languages and Literatures at this institution between 2002 and 2009. In 2004, the undergraduate course “Spanish for Health Professionals” organized an informal, bi-monthly medical Spanish table for medical students at UASOM. This table was popular with medical students but was not sustainable over time. The one-week pilot course taught to the students at UASOM does provide one example of how medical Spanish can be taught to medical students. As mentioned previously, examples of medical Spanish courses specifically targeting medical students are rarely found in the medical language learning literature. The case study of a pilot course describing a one-week mini-course in medical Spanish offered to medical students that is embedded in a U.S. medical school curriculum has not been described previously.

Although the conclusions from a brief, pilot course are limited, this pilot course is a pioneering effort in a U.S. medical school with a curriculum that is steeped in tradition and known for excellence. The researchers anticipate that this course will be continued and refined at UASOM. This case study is an example of a starting

point for this specific type of instruction embedded in medical school education. The pilot course received positive reviews from the medical students that enrolled. Principally, the students pointed out the benefit that the course had on potentially easing their interactions with Spanish-speaking patients and boosting their willingness to communicate as they look towards beginning their clinical rotations. By enriching medical education with Spanish instruction, we support the overarching goal of enriching the medical community and improving health care in the U.S. for Spanish-speaking populations.

Acknowledgments

The researchers thank SSP instructor María Jesús Centeno for sharing her expertise while working many hours to develop the course and Lourdes Sánchez-López, Ph.D., for sharing her insight and knowledge of SSP and consulting on this project. We also want to acknowledge Peter Smith, Ph.D., and April Boyd of UASOM for their guidance and assistance and UASOM for funding this project. Thanks to Isabel Scarinci, Ph.D., of the Minority Health and Research Center for discussing core concepts. All individuals listed here are affiliated with the University of Alabama at Birmingham.

Endnotes

- 1 In 2005, as an undergraduate Spanish major at UAB, I taught a bi-monthly medical Spanish course for medical students as a volunteer and service-learning component of the “Spanish for Health Professionals” course. Some medical students and faculty expressed a desire for additional formal Spanish language instruction as part of the curriculum at UASOM.
- 2 The SRA is a required component of the third-year curriculum at UASOM, in which each student devotes twelve weeks to research. Goals of the SRA include providing students with an opportunity to employ their unique skills and talents to pursue a project of their choosing under the mentorship of an expert in the field; providing mentorship and guidance for students interested in careers that integrate research, teaching, and clinical service (academic medicine); fostering development of analytical thinking skills, rational decision-making, and attention to the scientific method; enhancing communication skills and self-directed learning (UASOM, 2010). The first author of this article, Davidson, worked with her mentor, Long, to produce this study for Davidson’s SRA.
- 3 Ríos Associates is a private, outsourced option for Spanish language learning used by some U.S. medical schools, residency programs, and physicians.
- 4 Students at UASOM are required to earn five Special Topics credits during their four years of medical school. Time available for these courses occurs in six different months during their second, third, and fourth years.
- 5 As this research involved the planning of a pilot course, it was difficult to know whether these questions could be answered specifically because specific parameters such as course length, class size, and students’ language

levels were not apparent at the project's outset. The researchers were intentionally vague when designing research questions at the beginning of the study and for this reason, some questions are not thoroughly answered at the study's conclusion.

- 6 The WebCAPE was used for screening because of its availability on the UAB campus. Instructors at the UAB Department of Foreign Languages and Literatures administer the WebCAPE foreign language placement test (2010) for placement of undergraduate Spanish students (WebCAPE, 2010). The majority of students who enrolled in the pilot course placed themselves at the Novice-mid to Novice-high speaking proficiency level, with one student at the Intermediate level, based on ACTFL proficiency guidelines (1999).
- 7 At the time this course was developed, only second-year medical students were eligible to register. UASOM has changed its policy on Special Topics courses and now allows students in all four years to register for the same courses.

References

- American Council on the Teaching of Foreign Languages (1999). *ACTFL proficiency guidelines - Speaking revised 1999*. Available from, <http://www.actfl.org/i4a/pages/index.cfm?pageid=332>
- Coria-Sánchez, C. M. (2007). Wanted: Literature in the language for international business programs. *Global Business Languages*, 9(1), 78-86.
- Doyle, M. S. (2010). A responsive, integrative Spanish curriculum at UNC Charlotte. *Hispania* 93(1), 80-84.
- Fajt, M. (2006). Wachovia branch expansion in Texas: A Spanish course. *American Banker*, 171(207).
- González-Lee, T., & Simon, H. (1987). Teaching Spanish and cross-cultural sensitivity to medical students. *The Western Journal of Medicine*, 146(4), 502-504.
- Mazor, S., Hampers, L., Chande, V., & Krug, S. (2002). Teaching Spanish to pediatric emergency physicians: Effects on patient satisfaction. *Archive of Pediatric Adolescent Medicine*, 156(7), 693-695.
- McCain, G., Ray, N. M., & Ellsworth, T. J. (1996). Design and implementation of an interdisciplinary business language foreign study tour. *Global Business Languages*, 1(1), 1-20, Available from, <http://docs.lib.purdue.edu/gbl/vol1/iss1/4>
- Modern Language Association of America Ad Hoc Committee on Foreign Languages (2007). *Foreign languages and higher education: New structures for a changed world*. Available from, <http://www.mla.org/flreport>
- Morales, L., Cunningham, W., Brown, J., & Hays, R. (1994). Are Latinos less satisfied with communication by health care providers? *Journal of General Internal Medicine*, 14(7), 409-417.
- National Standards in Foreign Language Education Project (2006). *Standards for foreign language learning in the 21st century*. Lawrence, KS: Allen Press, Incorporated.

- Phoenix College custom training and education offers Spanish program to fit your industry. (2008, June 23). *US Federal News Service*. Available from, <http://search.proquest.com/docview/471465392?accountid=11496>
- Prince, D., & Nelson, M. (1995). Teaching Spanish to emergency medicine residents. *Academic Emergency Medicine*, 2(1), 32-37.
- Reuland, D., Frasier, P., Slat, L., & Alemán, M. (2008). A longitudinal medical Spanish program at one U.S. medical school. *Journal of General Internal Medicine*, 23(7), 1033-1037.
- Ríos Associates, LLC. Home page. Available from <http://www.medspanish.org/>
- Ríos, J., & Fernández Torres, J. (2004). *McGraw-Hill's complete medical Spanish*. New York, NY: McGraw-Hill.
- Sánchez-López, L. (2010). El español para fines específicos: La proliferación de programas creados para satisfacer las necesidades del siglo XXI. *Hispania*, 93(1), 85-89.
- Sign up for free preview of Workplace Spanish. (2001, March 16). *Targeted News Service*. Available from, <http://search.proquest.com/docview/857469340?accountid=11496>
- UASOM (2010). Undergraduate Medical Education. Scholarly activity - Introduction. Available from, <http://main.uab.edu/uasom/2/show.asp?durki=113483>
- U. S. Census Bureau (2006). Hispanic population of the U.S.. PowerPoint presentation – Hispanics in the U.S. Available from, http://www.census.gov/population/www/socdemo/hispanic/hispanic_pop_presentation.html
- WebCAPE Foreign Language Placement Exam (1998, 2004). Humanities Technology & Research Support Center. Brigham Young University. Available from, <http://webcape.byuhttrsc.org/>
- Yawman, D., McIntosh, S., Fernández, D., Auinger, P., Allan, M., & Weitz, M. (2006). The use of Spanish by medical students and residents at one university hospital. *Academic Medicine*, 81(5), 468-473.

Appendix A: Initial Interest Poll

1. Would you be interested in taking a Special Topics course in medical Spanish?
 - a. Yes
 - b. No
 - c. Maybe
2. How much Spanish experience do you have?
 - a. None
 - b. High school - # years _____
 - c. College - # semesters _____
 - d. Travel abroad – Where? _____ For how long? _____
 - e. Other _____
3. Which week of Special Topics would you prefer?
 - a. July 27 – Aug. 2, 2009
 - b. Aug. 3 – Aug. 9, 2009
 - c. Jan. 4 – Jan. 10, 2010
 - d. Jan. 11 – Jan. 17, 2010

4. How would you rate your Spanish level?
- a. **Novice-low:** no real functional ability, pronunciation may be unintelligible; may be able to exchange greetings, give identity and name familiar objects
 - b. **Novice-high:** conversation is restricted to predictable topics necessary for survival; rely heavily on learned phrases and what they hear from others; mostly short or incomplete sentences in the present; can sometimes respond in intelligible sentences but will not be able to sustain discourse
 - c. **Intermediate-low:** conversation is restricted to some of the concrete exchanges and predictable topics necessary for survival; speech is primarily reactive and struggles to answer direct questions or requests for information, but are able to ask a few appropriate questions; utterances are often hesitant and inaccurate; speech is characterized by frequent pauses and self-correction; can generally be understood by sympathetic listeners, particularly those used to non-natives
 - d. **Intermediate-high:** able to exchange basic information, though hesitation and errors may occur; able to narrate and describe in major time frames using connected discourse; may exhibit some features of breakdown; may include a reduction in vocabulary or a significant amount of hesitation; can generally be understood by native speakers unaccustomed to dealing with non-natives, although the dominant language is still evident and gaps in communication may occur
 - e. **Advanced-low:** able to handle a variety of communicative tasks, although haltingly at times, able to narrate and describe in all major time frames (past, present, future) but control of aspect may be lacking at times; utterances are typically not longer than a single paragraph; structure of the dominant language is still evident in the use of false cognates, literal translations, or the oral paragraph structure of the speaker's own language rather than that of the target language.
 - f. **Advanced-high:** able to perform tasks with linguistic ease, confidence and competence, able to explain in detail and narrate fully and accurately in all time frames, able to provide a structured argument but patterns of error appear, language will at times break down or prove inadequate, may resort to description or narration in place of argument or hypothesis
 - g. **Superior:** able to communicate with accuracy and fluency, able to converse about a variety of topics in informal and formal settings, discuss their interests, explain complex matters with ease, fluency and accuracy

(Spanish levels adapted from the American Council on the Teaching of Foreign Languages [ACTFL] Proficiency Guidelines for Speaking, 1999)

Appendix B: Course Objectives

The student will:

1. Learn how to conduct a medical interview in Spanish.
 - Chief Complaint
 - History of Present Illness
 - Past Medical History
 - Family History
 - Social History
 - Review of Systems
2. Learn how to conduct a physical examination in Spanish.
 - Naming (body parts)
 - General
 - Vital Signs
 - Skin
 - Head, Eyes, Ears, Nose, Throat
 - Neck
 - Breasts
 - Heart
 - Lungs
 - Abdomen
 - Genitourinary
 - Musculoskeletal
 - Vascular
 - Neurologic
3. Develop cultural competence working with Hispanic/Latino patients.
4. Learn how to establish rapport with patients in their native language.
 - Greetings
 - Introductions
5. Be able to discern when to use an interpreter.
6. Understand how to work with interpreters.