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INSTRUCTIONAL DESIGN AND ASSESSMENT

A Communication Course for a Linguistically Diverse Student Population

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Objectives. To establish an elective course designed to improve oral communication skills of students whose first or best language or dialect is not North American English.
Design. A course that combined English as a Second Language pedagogy with pharmacy applications and content was created. Class exercises on language skills in pharmacy-specific content areas were conducted. Course evaluations were administered at the end of each course offering.
Assessment. The majority of students in the 11 sections who completed *Oral Communication in Health Care* improved their oral skills sufficiently to pass the exit examination and clinical courses requiring oral proficiency. Course evaluation forms show that students found this course useful, including the 15 students who took the course in fall 2005, described here.
Conclusion. An oral communication course targeted to students enrolled in a doctor of pharmacy or pharmaceutical sciences degree program whose first or best language was not English resulted in improved mastery of course outcomes and thus improved oral communication skills. As with any language acquisition process, continued practice is required to maintain proficiency.

The pharmacy student population is growing more diverse, reflecting the growing diversity of US society.[1] As Maine states, " Pharmacy has much to gain from continuing to diversify its student body and practitioner population... We approach a day in the United States when there will be no single majority population."[2] This increasing diversity means that the number of pharmacy students whose first or best language or dialect is not North American English is also growing; these students will be referred to here as non-native speaking (NNS) students. Most NNS pharmacy students are "Generation 1.5" students who were not born in the United States, but arrived here when they were still young[1] and were therefore moved from English as a second language or bilingual education classes to mainstream classes early. For example, in 2005, of 38 first-year NNS students at our institution who were placed in an oral communication course based on their scores on an English proficiency examination, 36 reported having started mainstream class work in the United States before high school, which means they had no formal instruction in English grammar and pronunciation for non-native speakers in high school, resulting in habitual errors.

The oral communication skills of NNS pharmacy students range from excellent, to adequate for everyday communication but inadequate for their needs as health professionals.[3,4] Serving a linguistically diverse student population requires effective pedagogy to assess, improve, and support students' oral and written communication skills.[5,6] Collaborative teaching using an English for Specific Purposes approach has been shown to be successful.[7,8] For example, Diaz-Gilbert has established a program to improve NNS pharmacy majors' writing proficiency.[7]

This paper will describe *Oral Communication in Health Care*, a course designed to help NNS pharmacy students improve their oral communication skills. The course began over 20 years ago as an English as a second language elective course focused on speaking and listening. Since 2002, it has been offered 11 times as an English for specific purposes course in which oral skills are developed in a health care context; this article will describe it as taught in fall 2005. The course is based on the premise that contextualizing oral language skills in a pharmacy discourse domain will help students understand and correctly use language skills and higher-level communication skills. Knowing what outcomes and assessment criteria pharmacy faculty will require also motivates students to move beyond their current proficiency level. A detailed description of pedagogy in each skill area is beyond the scope of this article. This paper provides an overview of the course design, assessment criteria, and outcomes.

DESIGN

Students were placed in *Oral Communication in Health Care* based on whether they passed the oral

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proficiency examination described below. There were 4 possible placement results:

(1) Transfer students who scored below 70% on the Michigan Test of English Proficiency or failed the oral summary examination were placed in the *Oral Communication in Health Care* course.

(2) First-year students who scored below 70% on the Michigan Test of English Proficiency or failed the oral summary examination were placed in the *Applied Linguistics for Oral Proficiency* course, which is similar to the *Oral Communication in Health Care* course, but has more introductory health care content.

(3) Students who reported high levels of communication apprehension or demonstrated it while completing the oral summary portion of the proficiency examination were placed in the *Introduction to Speech* course, which focused on reducing communication apprehension.

(4) Students who scored above 80% on the Michigan Examination or passed the oral summary examination had passed the oral proficiency examination and did not have to complete supplementary course work to improve their oral communication proficiency.

Ongoing interviews with pharmacy faculty and students, plus observations of "target situations" in which the students had to function in class, internship and work settings, as well as outside class, were used to do needs assessment and develop corresponding course outcomes and assessment criteria.[9]

Observations done for needs assessment produced a grading rubric of competencies that pharmacy and physician assistant faculty described and discussed when doing holistic assessments of student communication. Outcomes from the rubric were used for formative assessment in the class by subset depending on the topic (Appendix 1). This needs assessment led to 6 course outcomes, described below:

(1) Students will consistently speak with consonant and vowel phonemes, and stress and intonation patterns, that are comfortably clear for speakers of North American English.

(2) Students will convey messages accurately through correct use of tempo, stress and intonation patterns, and kinesics (body language,) and they will correctly interpret the kinesics and intonation messages (discourse intonation) of other speakers.

(3) Students will select correct and appropriate formal and informal, technical and non-technical linguistic registers (speech styles,) know what the features of these speech styles are, and observe and imitate appropriate use of speech styles of health professionals.

(4) Students will use grammar and vocabulary correctly enough to convey meaning accurately and to sound appropriately professional.

(5) Students will comprehend and respond appropriately to technical and non-technical biomedical spoken English in class and in health care settings.

(6) Students will use appropriate strategies for preventing and repairing communication breakdown. They will use a speech style and body language that conveys self-confidence and inspires confidence in them as health care professionals, so that others will feel free to let them know when communication has broken down, thus facilitating repair.

Course Content

Course content is based on the outcomes listed above. The following skill areas were covered by speaking and listening exercises: pronunciation, stress and intonation, use and interpretation of kinesics (body language), register use (speech styles appropriate for context/audience), sentence-level grammar, medical terminology, presentation skills, higher-level communication skills (cross-cultural communication), and listening comprehension (biomedical topics). These exercises correlated language skills with pharmacy-related exercises that required those skills. Specific explanations of skill areas are available upon request. Students practiced these skills by applying them to exercises based on health-related topics: pronouncing top 200 medications, patient counseling role plays, patient education role plays, intervention phone call role plays, patient case presentation with questions and answers, audience-switch presentation role plays (same topic is presented to a technical professional audience and then to a general/patient audience), listening comprehension on biomedical topics, and practice listening to phoned-in prescriptions.

Pedagogy

Because *Oral Communication in Health Care* was an oral skills course, it was learner-centered. Classes started with a brief explanation of content. Students then practiced pronunciation of medication names, with choral repetition, and a completed a grammar lesson in which they provided the answers and then discussed them, with the instructor making corrections as needed. The class also did listening comprehension on technical biomedical

topics. The rest of the class consisted of pair work or small group practice of role plays or presentations with peer and teacher coaching, and individual or group oral presentations or role plays with peer feedback. Each student did at least one oral presentation in front of the class per week, with a summary of peer feedback and feedback from the professor. The class was designed to maximize opportunities for students to practice a careful, accurate, and professional speech style, with immediate feedback from peers and professor on how accurate, intelligible, and appropriate their speech is. The class became a learning community; students were encouraged by peers to improve. Frequent practice and a supportive classroom atmosphere improved students' confidence in their ability to complete oral assignments.

Formative Assessment and Grading

Since this course is a 3-credit elective course, class work, homework and examinations were graded A through F. Written assignments were preparations for oral assignments. The standards used for grading oral work were based on holistic criteria reported by pharmacy and physician assistant faculty (see Appendix 1.) Students were encouraged to see levels of oral communication proficiency as steps on a continuum. Students could usually identify their current level and the level they could reasonably hope to attain in 1 semester. By improving in problem areas, students progressed over the course of the semester. This helped reinforce the message that improving and maintaining oral communication proficiency was an ongoing process that required continuous practice and support.

When students exited the course, they were asked to respond anonymously in writing to 4 questions so that the course could be improved for the next students who took it. The questions were "What part of this course was most useful? What was least useful? What part of the course should be dropped or what part should we do more of? What other changes can you suggest to improve this course?"

ASSESSMENT

During the 2005-2006 academic year, 25 (5.9%) first-year students in the 6-year pharmacy program were placed in the *Applied Linguistics for Oral Proficiency* course and 23 (5.4%) of students who transferred into the first-professional year of the doctor of pharmacy program (third year of the 6-year program) were placed in the *Oral Communication in Health Care* course. In comparison, 8% of first-year students in all majors at the Massachusetts College of Pharmacy and Health Sciences were placed in the *Applied Linguistics for Oral Proficiency* course, and 13.7% of all transfer students in all majors were placed in the *Oral Communication in Health Care* course.

An exit examination was added to *Oral Communication in Health Care* to assess whether students' oral proficiency was at a high enough level to exit the course. This examination, in which students did a role play with patient counseling and an intervention phone call, was piloted using 2 pharmacy faculty members as independent outside raters. In 2005-2006, 25 students took the oral proficiency exit examination, either to exit the current *Oral Communication in Health Care* class or because they had been tutored after failing the class previously. The 25 students were rated by 2 pharmacy faculty members using the four-level holistic assessment rubric (Appendix 2). Eight percent received ratings of 4 and 4; 8% received ratings of 4 and 3; 24% received ratings of 3 and 3; 28% received ratings of 3 and 2; and 16% received ratings of 2 and 2 and were referred for further one-on-one tutoring; and 12% received ratings of 1 and 1 and were failed by both raters. None of the students were failed by one faculty member and passed by the other. In some intensive short-term English programs which students come to the United States to take, gains shown by pretests and posttests must be partly attributed to immersion in an English-speaking environment. Here, the pretest was a class oral presentation at the start of the semester which allowed students who demonstrated sufficient proficiency to drop the course. Since none of the 25 students had just arrived in the United States, gains in proficiency could not be attributed to immersion in an English-speaking environment.

In addition, results of student course assessments, administered using anonymous computerized course evaluation forms, were positive. Fifty percent of students completed the forms, which was similar to the College's overall rate of computerized evaluation completion for the 2005-2006 academic year. On the course evaluation forms for 2005-2006, the mean level of agreement was 4.8 out of 5 (where 5 = "strongly agree") on positive statements about the course such as: "This course was structured in ways that helped me to learn," (mean rating = 4.8) and "Overall, I learned a great deal from this course," (mean rating = 4.9). The mean level of agreement was 4.5 on positive statements about the instructor/instruction such as, "The instructor exhibited genuine concern for student learning," (mean rating = 4.6), and "Overall, the instructor did an excellent job in helping me learn" (mean rating = 4.8). Student comments were also positive and focused on what they learned (Appendix 3).

DISCUSSION

Our institution's student population reflects the national trend toward linguistic diversity, requiring new pedagogy to meet the needs of the changing student population. Of the students who entered our institution's Boston campus in 2005, 18% of first-year students and 13% of transfer students did not identify English as their "native language" on the answer sheet used for the placement examination. Among first-year pharmacy majors, 4% identified Vietnamese as their "native" language, 3.4% identified one of the Chinese languages, 2% identified Russian, and 2% identified Gujarati. The following 14 languages were spoken by 1 or 2 students: Albanian, Arabic, Bosnian, "Filipino," French, Greek, Hmong, Khmer, Korean, Macedonian, Portuguese, Romanian, Serbo-Croatian and Urdu. Five percent of the students identified English as well as another language as their "native" language.

The *Oral Communication in Health Care* course was originally offered as an elective course, but it changed to a required course in 1998 in response to faculty concerns about students with weak oral skills who elected not to take it. The advantage of offering such a course as an elective is that students who take it are more motivated to improve. Some students who are placed into the course may be initially resistant because they see it as an unexpected failure, but most then "buy into" it.

Students' responses to the exit questions used to solicit their suggestions when they exit the course were positive and focused on increased self-confidence and the benefits of regular practice. Their suggestions for changes in emphasis have been implemented, eg, there is less work on transcription of the International Phonetic Alphabet and more emphasis on specific applications, such as intervention phone call role plays, that they have trouble with in other classes or at their work sites.

Indirect evidence of the course's efficacy may also be seen in retention and graduation rates. Most students who successfully completed *Oral Communication in Health Care* are able to remain in school, complete clinical courses that require oral communication proficiency, and graduate. The retention/graduation rate among students who took this course from 2001-2005 was 96.4%, based on graduation and enrollment data as of fall 2006. Meeting a threshold level of oral proficiency is necessary in order to pass required upper-level courses and clinical rotations that require proficient performance on oral components such as patient counseling or formal class presentations. Students' other academic skills may compensate to some extent for weak oral skills, so retention/graduation rates only demonstrate that the majority of students are able to meet a minimum threshold of oral proficiency required to succeed in upper-level classes.

However, some students whose grammar and vocabulary skills are much better than their pronunciation may have problems with intelligibility yet not be flagged by the Michigan Test of English Proficiency. In theory, these students can be referred by faculty members who notice their lack of intelligibility and be placed into *Oral Communication in Health Care*. In reality, professors with large classes and/or quiet students may not notice and refer students. Students who are aware of having weak oral skills may avoid participating in class discussions in order to stay "under the radar."

There are limitations to the validity of the course assessment used. First, because all students whose oral communication skills were identified as substandard took *Oral Communication in Health Care*, there was no control group of students of equal level who did not take the course. Also, the problem of agreement on a threshold level of proficiency limited attempts to assess the course.

A course like *Oral Communication in Health Care* that is specifically focused on oral health communication can help NNS pharmacy students improve health communication skills. The majority of students who take the course go on to succeed in their pharmacy courses and clinical rotations. Furthermore, the "learning community" created in the course helps students to develop a new identity as health care professionals. In other words, the need for a new "health professional" speech style helps students overcome conflicts they may feel about changing the way they have spoken for years. However, a one-semester course alone may not be sufficient. Austin and Rocchi's Ontario program included systematic individual mentoring and peer networking as well as coursework to help international pharmacy graduates improve their communication skills.[8] Beardsley points out that "effective communication skills building programs" have communication "integrated and reinforced throughout the curriculum including experiential learning."[3] Just as students studying a second language make progress during a semester abroad but lose proficiency when they return home if they do not continue to practice their new skills, NNS pharmacy students who make progress over the course of one semester are less likely to continue to progress without regular opportunities to practice "speaking like a pharmacist." Even if students speak English with family and friends, the informal style used for everyday speech may reinforce bad habits and does not provide good practice for the formal, professional style pharmacy students need to reinforce. Students who work in retail

settings with pharmacists and colleagues who mentor them, or work on oral course assignments with peers who are proficient in English, are most likely to continue to progress. Some students voluntarily make weekly appointments for continued tutoring practice after exiting the course and some make appointments for coaching when they have specific oral assignments in later courses. Some pharmacy faculty members also coach students on oral assignments such as patient counseling. However, many students do no further formal communication practice.

A final issue is one that the pharmacy community is beginning to address: the need for valid oral communication assessment techniques. Beardsley states that "enhanced [oral communication] assessment techniques must also be developed. . .[t]he type and frequency of assessment needs to be improved in schools of pharmacy."[8] Boyce, Lawson, Conners, Spinler and Teitze call for "standardization of students [communication] assessment methods and more objective documentation of student progression."[10] The assessment techniques described for this course are not as useful as pharmacy-wide communication proficiency outcomes for NNS and NS students would be. As Kimberlin points out, other fields of health care such as medicine and nursing have already started to develop tools to assess communication skills systematically.[11] In Canada, OSCE examinations are already being used for pharmacy licensure.[8]

The difficulty of valid oral communication testing is well known in the field of English as a second language. Valid oral communication testing is known to be difficult and expensive.[12] To be valid, assessment must include criteria related to "sociolinguistic appropriateness" (ie, correct tone of voice for the audience and context) as well as language skills.[13] This means tests would have "tasks and content that are integrated in a given domain of discourse,"[13] which in pharmacy might be a task like patient counseling rather than a general reading comprehension or grammar test. Tests should be based on a task that is "as authentic as possible,"[14] meaning that students should be tested on their ability to do something they will actually have to do in the real world as professionals (eg, the principle behind OSCE examinations). Since oral communication assessment has been an area of research in English as a second language for years, heeding the outcome of these observations might avoid missteps in developing oral assessment techniques in pharmacy.

Despite these difficulties, students and faculty members would benefit from a common definition of a threshold level of oral language proficiency for NNS pharmacy students, with clearly defined outcomes and assessment criteria. If specific criteria for intelligibility, grammatical accuracy, and appropriateness of vocabulary/style were in place, they could be added to scoring rubrics for "behaviors required in professional care practice."[15] Evaluation would be more valid and reliable, and students and faculty members would have a clearer idea of what outcomes and level are required. Faculty assessment would be more consistent and less likely to be seen as arbitrary or even discriminatory by students.

Chisholm has pointed out "the necessity for increasing ethnic diversity within colleges of pharmacy."[15] However, an ethnically and linguistically diverse student population must be coached and supported. The advantages of having a diverse population of students and eventually pharmacists make it worthwhile to address the needs of this student population.

CONCLUSION

Oral Communication in Health Care is a credit-bearing course focused on improving NNS students' oral communication skills. Class exercises such as patient-counseling role plays combined English as a second language pedagogy with pharmacy content. This English for specific purposes approach helped students who took the course improve the intelligibility of their speech, the grammatical correctness of their speech, and/or their use of appropriate style for their audience (appropriate stress and intonation, body language, and vocabulary), as well as their listening comprehension of biomedical information. The oral proficiency of the majority of students who exited the course was rated as sufficiently proficient by outside pharmacy raters. Courses to help NNS students improve their oral proficiency, combined with continued practice after completing the course, can help these students attain and maintain a sufficiently high level of oral proficiency to succeed in their classes and eventually as professionals.

REFERENCES

1. Patton JM. The pharmacy student population: applications received 2004-05, Degrees Conferred 2004-05, Fall 2005 Enrollments. *Am J Pharm Educ.* 2006;70: article S04.
2. Maine LL. Diversity, value, and communications. *Am J Pharm Educ.* 2003;67:126.
3. Beardsley R. Communication skills development in colleges of pharmacy. *Am J Pharm Educ.* 2001;65:307-14.
4. Jones J, Krass I, Holder GM, Robinson RA. Selecting pharmacy students with appropriate communication skills. *Am J Pharm Educ.* 2000;64:68-73.
5. Wu-Pong S, Windridge G, Osborne D. Evaluation of pharmacy school applicants whose first language is not English. *Am J Pharm Educ.* 1997;61:61-6.

6. Capomacchia AC, Garner S. Challenges of recruiting american minority graduate students: The Coach Model. *Am J Pharm Educ.* 2004;68:article 89.
7. Diaz-Gilbert M. Writing skills of advanced pharmacy practice experience students whose first or best language is not English. *Am J Pharm Educ.* 2005;69:101.
8. Austin Z, Rocchi M. Bridging education in pharmacy: the International Pharmacy Graduate Program In Ontario, Canada. *Am J Pharm Educ.* 2004;68:108.
9. Parkhurst C. Assessing and improving students' verbal communication abilities in pharmacy courses. *Am J Pharm Educ.* 1994;58:50-5.
10. Boyce E, Lawson L, Conners J, Spinler S, Tietze K. Development, integration and assessment of oral communication skills in an entry-level and a non-traditional doctor of pharmacy program. *Am J Pharm Educ.* 2001;65:114S.
11. Kimberlin C. Communicating with patients: skills assessment in US colleges of pharmacy. *Am J Pharm Educ.* 2006;70:67.
12. Larsen-Freeman D, Long M. *An Introduction to Second Language Acquisition Research,* Longman, London and New York: Longman; 1991.
13. Brown D. *Teaching by Principles: An Interactive Approach to Language Pedagogy.* London and New York: Longman; 2001.
14. O'Malley J, Pierce LV. *Authentic Assessment for English Language Learners.* Reading, Mass.: Addison-Wesley; 1996.
15. Chisolm M. Diversity: a missing link to professionalism. *Am J Pharm Educ.* 2004;68:120.

Appendix 1. Rubric for evaluating counseling.

Rubric for Evaluating Counseling 1 = strongly agree 5 = strongly disagree						
Communication never breaks down completely (If there's any miscommunication, students are aware of it and repair it through restatements/verification)	1	2	3	4	5	NA
Speech is intelligible and audible (Pronunciation and grammar are accurate- frequent repetitions aren't required; student speaks up)	1	2	3	4	5	NA
Technical terms are pronounced and used correctly (Students sound professional, are able to use and say technical terms and drug names correctly)	1	2	3	4	5	NA
Appropriate style is used for the audience/context (Students use correct level of technical or formal speech, changing vocabulary, grammar, style conventions as needed)	1	2	3	4	5	NA
Information is accurate, paraphrased, organized (Students' information is paraphrased, accurate, doesn't Sound memorized; background information provided as needed)	1	2	3	4	5	NA
Listeners understand without great effort (Listeners make only normal effort to understand, feel comfortable asking for clarification/ student responds)	1	2	3	4	5	NA
Confident demeanor inspires confidence (Students' self-confidence and professional behavior shown by good eye contact, intonation, body language: attitude would inspire confidence in patients, colleagues	1	2	3	4	5	NA
Students understand others completely (Students understand verbal meaning, "read between the lines")	1	2	3	4	5	NA
Students understand nonverbal messages (Students correctly interpret and respond appropriately to intonation and body language)	1	2	3	4	5	NA
Students interact and respond to questions and comments (Students correctly interpret and respond appropriately to questions and comments from patients, colleagues)	1	2	3	4	5	NA
	Total _____					

This student's oral proficiency is acceptable: Yes__ No__
Explain:

Appendix 2. Holistic evaluation rubric.

Proficiency Levels

4: Speaker's English sounds native or near-native; communication:
- is always clear, correct and appropriate for the context and audience
- requires no conscious effort to understand

3: Speaker's English is obviously not North American English; however, communication:
- is consistently clear, almost always correct
- never remains unclear or ambiguous; speaker repairs any problems immediately
- is generally appropriate for the context and audience
- requires no more than normal effort to understand

2: Speaker's English is generally clear; however, communication:
- is not consistently clear
- shows minor problems with some or all of the following: pronunciation, stress and
- intonation, vocabulary, grammar, tempo, volume
- conscious effort to understand is sometimes required

1: Speaker's English is often unclear; communication:
- shows frequent problems with some or all of the following: pronunciation, stress and
- intonation, vocabulary, grammar, tempo, volume
- major effort is required to understand
- meaning remains unclear

Appendix 3. Students Evaluation Comments

Comments about the course (LIB 253 *Oral Communication in Health Care*, 2005-2006)

1	Helped fix my grammar and pronunciation.
2	This is a very helpful course. It helped me recognize my weakness, improved my english skill, and made me feel more confident when I communicate. However, I don't know how the grading system works.
3	She is nice, helpful, understandable and she is willing to listen to students.

Comments about the instructor:

1	Professor Parkhurst helps me a lot in this class. She corrects me whatever I've done something incorrectly. Before I came into this class, I was struggling in my writing and grammar. Right now, I feel very confident about my speech, grammar and writing. Lot of students thought this class is wasting time, but this is not true if you put an effort into it. I recommend this class to any student who is struggling in writing, especially foreign students.
2	The teacher is very good.
3	The teacher is so great and helpful. I would like to say "Thanks!" to Dr. Parkhurst. I appreciate your help.
4	She is a nice and understandable and willing to listen to students.