Design & Implementation of an Accent Reduction Program for Pharmacy Students Who Speak English as a Non-Native Language

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Learning Objectives

• Describe how Pacific University School of Pharmacy created and implemented an accent reduction program for non-native speaking students.

• Identify common accent issues encountered in the program, particularly related to professional communications.

• List the pros and cons of the program that could be used as a guide to design an accent reduction program elsewhere
Communication Barriers

- How to support non-native English speaking students find their voice:
  - Successful application and interview
  - Successful didactic performance
  - Challenges = Expectations of clinical communication = Stress
- Sheer repetition or practice doesn’t solve the problem
- Medical terminology = another new language
- Transition to “lay terminology” = additional translation

“Is English your primary language?”

<table>
<thead>
<tr>
<th>Class</th>
<th>Responded “No”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class of 2015</td>
<td>n = 25</td>
</tr>
<tr>
<td></td>
<td>(26% of class)</td>
</tr>
<tr>
<td>Class of 2014</td>
<td>n = 21</td>
</tr>
<tr>
<td></td>
<td>(21% of class)</td>
</tr>
</tbody>
</table>

Native Languages

General breakdown of native languages:

- Three primary language backgrounds: Mandarin, Cantonese and Vietnamese
- Some other less common first languages, including Spanish, Japanese, and Tagalog
English as a Second Language (ESL): Considerations

- ESL ≠ international students
- ESL includes students US-born, often English not primary language spoken at home (parents may not speak English)
- Students who demonstrated no apparent accents during an admissions interview may have significant accents while performing professional interactions, such as patient interviews

Perspective on health professions students from our Speech Pathologist

- Students with minimal difficulty during structured admissions interviews may demonstrate significant difficulty communicating during professional interactions (e.g., patient interviews).
- Students are familiar with how to participate in an admissions interview.
- They likely have spent a significant amount of time preparing and practicing their answers to interview questions.
- They also practice their nonverbal communication (e.g., eye contact, hand movements, body posture) and questions to ask the interviewer.

Perspective on health professions students from our Speech Pathologist

- Patient interviews and professional interactions are likely new situations for non-native speaking students.
- There is a higher level of cognitive overload as the students need to (1) manage a patient, (2) ask questions they are not quite sure of, (3) determine appropriate responses, (4) draw upon knowledge they may be trying to recall as they speak, (5) ignore distractions, (5) talk about subjects and use words that they are not completely familiar with, all with a possible underlying higher level of concomitant anxiety and stress as they are being observed by preceptors, physicians, patients, and ancillary medical staff.
- A student’s communication skills, thought to be adequate during the admissions interview, may suddenly result an increased difficulty for the listener to comprehending them.
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Meetup: http://www.meetup.com/Pronunciation-Portland-Accent-Reduction-Group

Alliance of Global Student Health Professionals (AGSHP)
AGSHP first offered in Fall 2011
- Presented to students as a Club
- Participation optional
- 6 x 90-minute sessions every 2 weeks
- External adjunct faculty (Speech Language Pathologist specializing in accent reduction)
- Attendance: 5-12 students per class

Alliance of Global Student Health Professionals
- Do you sometimes have difficulty delivering medical care to patients from various cultures?
- Are you afraid your patients can't understand you?
- Are you hesitant to ask questions?
- Do you feel you can't ask questions?
- Do you feel you can't ask questions?
- Do you feel you can't ask questions?
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- Do you feel you can't ask questions?
Pre-Program Survey 2011

6. How SEVERE are your difficulties being understood in person?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very severe</td>
<td>0.7%</td>
<td>0</td>
</tr>
<tr>
<td>Severe</td>
<td>0.3%</td>
<td>0</td>
</tr>
<tr>
<td>Some</td>
<td>46.1%</td>
<td>6</td>
</tr>
<tr>
<td>Little</td>
<td>22.2%</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>15.1%</td>
<td>2</td>
</tr>
<tr>
<td>Not answered</td>
<td>2.1%</td>
<td>0</td>
</tr>
<tr>
<td>Skipped</td>
<td>1%</td>
<td>1</td>
</tr>
</tbody>
</table>

Pre-Program Survey 2011

5. How CONFIDENT do you feel explaining complicated information to others in English?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very confident</td>
<td>32.9%</td>
<td>2</td>
</tr>
<tr>
<td>Confident</td>
<td>38.8%</td>
<td>3</td>
</tr>
<tr>
<td>Somewhat</td>
<td>22.2%</td>
<td>2</td>
</tr>
<tr>
<td>A bit</td>
<td>22.2%</td>
<td>2</td>
</tr>
<tr>
<td>Not</td>
<td>0.3%</td>
<td>0</td>
</tr>
<tr>
<td>Not answered</td>
<td>0.3%</td>
<td>0</td>
</tr>
<tr>
<td>Skipped</td>
<td>1%</td>
<td>1</td>
</tr>
</tbody>
</table>

Pre-Program Survey 2011

Q7. What are your goals in joining A/SHP?

1. Improve my English (accent, intonation)
2. Work on certain letters
3. Feel more confident, get rid of accent.
4. To have no more accent and become a better speaker.
5. Learning
6. Be able to speak fluently in public and be able to make correct pronunciations of some words.

Pre-Program Survey 2011
Typical Class Structure

• The 4 major areas affecting accents and communication were addressed during most classes:
  1. Speech rate
  2. Speech volume
  3. Pronunciation (vowels and consonants)
  4. Intonation (“melody of American English”)

• For example, if working on pronunciation:
  – Discussed how the sound is represented by the letter
  – Practiced sound in isolation, then in words (e.g. medical terminology), then sentences
  – Depending on class size, broke into smaller groups and did clinical role playing

Typical Class Structure

• Class encounters often video and audio taped, reviewed with student and instructor
• Students practiced areas of improvement (e.g. slowing speech pace, linking words, making sure the correct word was emphasized in a sentence, appropriate volume and nonverbals)
• Students received individualized “homework” for the next meeting, which included practice materials (e.g. CD)
• No group homework assignments

Program Costs: Fall 2011

• Adjunct faculty: $125/hour x 9 hours class time = $1125
• Orientation session for students and faculty = $250
• Total Cost: $1375

Financial contributors:
✓ $700 – School of Pharmacy
✓ $375 – Office of Student Life
✓ $300 – Office of International Programs
   (plus snacks!)
AGSHP: Spring 2012
Two offerings
1. “General” class (identical to Fall 2011)
   • 4 classes offered
   • Attendance 2-8 students
2. “Intensive” class (invitation-only)
   • Focused on students in need
   • Identified by adjunct faculty during Fall 2011
   • Identified by faculty based on class/lab interactions
   • 5 classes offered
   • Attendance 2-5 students

AGSHP Summer 2012: Individual Outreach
• One frequent AGSHP participant identified with “significant accent issues”: School concerned with upcoming APPE rotations
• Student offered 1:1 instruction with adjunct faculty (14-16 hours) during Summer 2012
  - Video of pharmacy practice activity performance used as a guide
  - Formal Communication Assessment conducted: may include all students with accent reduction needs
• Paid for by the School of Pharmacy

AGSHP: Fall 2012
• Continued as a Club, open to all
• Participation optional
• 6 sessions x 90 minutes
• Same adjunct faculty instructor
• NEW: Interprofessional!
  PA, PT, OT, Dental Hygiene, Audiology, MHA, Professional Psychology students invited
Fall 2012

- Attendance: 2-14 students
- Students: included Audiology and Masters of Healthcare Administration programs (MHA student required attendance by the MHA program)
- Activities: writing examples of things to say on rotation or as a pharmacist, and practicing those statements
- Variable attendance: unclear reasons
  - Students forgetting? (email reminders initiated)
  - Students busy with other commitments?

Common Accent Issues Addressed

1. Melody: If a student/pharmacist has rising pitch within or at the end of sentences it indicates uncertainty, something you don't want to project when educating a patient about medications

2. Speech Volume: Determining the appropriate volume level for the clinical encounter. For example, the need to raise volume if it is a noisy background or if the patient has hearing loss.

3. Speech Rate: For each student, we individually determined the best speed for their speech (too fast and you can't understand the student, too slow and it is distracting).

4. Pronunciation of Sounds: r, l, vowels followed by r, th's, core vowel sounds, voiced vs. unvoiced consonant sounds, and the length of vowels rule all addressed. We discussed how sounds can be represented by letters, so as students acquire this new medical vocabulary they will have a better understanding of how to pronounce these words.
Student Feedback

I feel I have improved my ability to interact with people as a pharmacist.

<table>
<thead>
<tr>
<th></th>
<th>Fall 2011 (n=12)</th>
<th>Fall 2012 (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Agree</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Student Feedback

I feel I have improved my professional communication skills.

<table>
<thead>
<tr>
<th></th>
<th>Fall 2011 (n=12)</th>
<th>Fall 2012 (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Agree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Student Feedback

I am more aware of how I speak.

<table>
<thead>
<tr>
<th></th>
<th>Fall 2011 (n=12)</th>
<th>Fall 2012 (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Agree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
**Student Feedback**

I feel AGSHP is useful professional development for me.

<table>
<thead>
<tr>
<th></th>
<th>Fall 2011 (n=12)</th>
<th>Fall 2012 (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Agree</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Student Feedback**

Would it be beneficial to continue offering this program to Pharmacy students?

<table>
<thead>
<tr>
<th></th>
<th>Fall 2011 (n=12)</th>
<th>Fall 2012 (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Student Feedback**

What training formats would be most valuable?

<table>
<thead>
<tr>
<th>Training Format</th>
<th>Fall 2011 (n=12)</th>
<th>Fall 2012 (n=14)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small group (3-6 students)</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Large group (&gt;7 students)</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>One-on-one</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Small groups with 1:1 breakout sessions</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Video conference 1:1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Integrating into regular pharmacy curriculum when applicable</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>
Program Evaluations: Comments

**What did you find most helpful about the group?**

<table>
<thead>
<tr>
<th>Year</th>
<th>Feedback</th>
<th>Suggestions</th>
<th>How to Improve</th>
<th>Conversations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Immediate, precise</td>
<td>Feedback with suggestions on</td>
<td>Small group interactions</td>
<td>Improving my accent, pronunciation</td>
</tr>
<tr>
<td>2012</td>
<td>Communication &amp; interaction</td>
<td>The session was very helpful for me because the professor helped me to identify my speaking problem and worked on it with me one on one. I also felt very comfortable with the professor and the group I was with, so it was a good environment to improve my English. This also helped me to improve the way I pronounced the drug names.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**What did you find least helpful about the group?**

<table>
<thead>
<tr>
<th>Year</th>
<th>Large group interactions</th>
<th>It was too short</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Discussion</td>
<td>I did not find anything that was not helpful. The group was very motivating and fun to attend.</td>
<td>When only 1 person shows up</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Any other comments or feedback?**

I would love to participate in the class again with the same professor, since we all know each other from last year, we could be more comfortable and learn faster this year.

I wish that the school would offer this class twice a year instead of just one semester. Although sometimes attendance was low, but we found it helpful when the professor had time to work with us one on one.

This class definitely help and I do not mind spending 2 hours of every other Monday to attend this class.

I like the way we were taught in that class. We were given a one on one attention to learn how to pronounce the words.
Next Steps: Elective!

- Accent Reduction Elective in the College of Health Professionals (Fall 2013)
- Open to all CHP students
- 7 sessions x 2 hours
- Pacific University Masters Speech Language Pathology (new program) experiential learning site
  - Allow communication screenings on all students
- Elective course: possibility to require participation if communication issues impacting professional effectiveness

AGSHP Progression

<table>
<thead>
<tr>
<th>Semester</th>
<th>AGSHP Program Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2011</td>
<td>First class, open to all Pharmacy students</td>
</tr>
<tr>
<td>Spring 2012</td>
<td>Two classes: General and Intensive (invite only)</td>
</tr>
<tr>
<td>Summer 2012</td>
<td>Individual 1:1 sessions offered (to one student)</td>
</tr>
<tr>
<td>Fall 2012</td>
<td>General Class. Opened up to all Health Professions students</td>
</tr>
<tr>
<td>Spring 2013</td>
<td>Did not offer</td>
</tr>
<tr>
<td>Fall 2013</td>
<td>Offer elective (1 credit hr) to all health professions students</td>
</tr>
</tbody>
</table>

Lessons Learned

- Smaller group sizes preferred by students and instructor, especially if accent is severe: More practice and evaluation
- Ability to require participation, especially for students with accents that affect their academic performance, is optimal
- Financial resources are necessary
- Creating elective = improved student commitment?
- Understand the science behind accents = understand how to help. May apply to admissions process
  - Rainbow or Grandfather passages
Resources Recommended by American Speech-Language and Hearing Association

1. Carol Samuels’ Pronunciation Strategies
   www.individual.utoronto.ca/English/SGSPronunciation.html
   Includes listening for stress patterns

2. The Listen and Repeat Machine
   www.manythings.org/lar
   A different exercise each day to improve intonation, rhythm, and pronunciation

3. The Sounds of Spoken Language
   www.uiowa.edu/~acadtech/phonetics/#
   Choose American English animates production of each sound in isolation and in all word positions

4. FunEasyEnglish
   funeasyenglish.com/english-video-lessons.html
   Visualizes pronouncing English sounds, with practice words for each sound

5. The Merriam-Webster online dictionary
   www.merriam-webster.com
   Defines and pronounces words

6. Jennifer’s Free Language Tutorials
   www.telanguages.com/lessonplan.htmlEnglishmp3s
   Include 35 pages of English vocabulary words in print (PDF) and audio (mp3)

7. Eva Easton’s “Authentic American Pronunciation”
   www.evaeaston.com
   Clearly pronounces words with all the sounds of American English, with many practice lessons.
Resources Recommended by American Speech-Language and Hearing Association

8. My “Vowel Practice”
   www.mnsu.edu/comdis/phonetics/phonetics.html
   Pronounces words and sentences loaded with all American English vowel sounds

9. LanguageGuide.org
   www.languageguide.org/english
   Teaches vocabulary, spelling, and pronunciation of English and other languages through pictures and clear pronunciation

10. American Clear Speech Sounds
    Good illustrations and exercises

11. Videos of English sounds and functional phrases
    www.ugoigo.com

Articles & Resources of Interest

• Parkhurst, C. A communication course for a linguistically diverse student population. Am J Pharm Educ. 2007;71(2): article 36.
• Diaz-Gilbert, M. Vocabulary knowledge of pharmacy students whose first or best language is not English. Am J Pharm Educ. 2004;68(4): article 91.

Thank You!