

# Math Teaching Seminar : You say potato, I hear tomato

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## Abstract

If you are a foreign-born instructor teaching in the US, chances are you would love to see that dreaded line from your teaching evaluations ‘their accent is horrible’ miraculously transformed into ‘has the cutest accent ever’. We will discuss various ways to break language and cultural barriers. Even if you are a native English speaker, please come to help us fight our demons!

## 1 Challenges faced by international graduate students

In addition to possible language (especially speaking and listening skills) and cultural differences, there are also often differences in the educational systems, non-verbal communication systems, teaching methods and conduct for students and teachers in various countries. Thus, it is important to be accustomed to classroom behavior, expectations and traditions of our department. The good news is that this could and should be a joyful experience. By being here, you are adding a new delightful ingredient to the great American melting pot and it can take a lifetime to learn and savor all the flavors.

Ignoring these issues can create serious problems further down the career path. From *A Mathematician’s Survival Guide: Graduate School and Early Career Development* by Steven Krantz: “American undergraduates these days are rather parochial. They react negatively to a teacher with a heavy foreign accent – especially one who is marginally incomprehensible. If the teacher is really extraordinary and has a charming (yet comprehensible) foreign lilt, then students will learn to recognize the quality of the instruction and also to enjoy the value added by an infusion of foreign culture; but if the instructor is really difficult to understand, then the prospective mathematician will be a failure as a teacher and his/her promising mathematical career will die on the vine. I cannot over-emphasize this last point, even though I may appear to be getting tiresome. More and more, in the past decade, I have seen superb graduate students from top universities forced to abandon an academic career just because they could not teach; in many case, this was because of their English. These people had tremendously promising mathematical career (measured by the yardstick of research ability), but they could not effectively perform that special function by which Deans and administration measure our worth: they could not teach. End or story. Most universities have considerable resources to help you bring your English up to speed. There are also resources to help you with your teaching. But, as usual, the onus is on you to expend the effort to make it happen. Make a point of hanging out with American students and speaking English. If you are from China (just as in instance), then it is easy and natural to spend your leisure time hanging out with other Chinese – we all feel most comfortable speaking our native language with people like ourselves. But you are not going to learn any English that way. You must take special pains to expose yourself to American English and to the American way of life in order to acclimate yourself to the language and cultural modes of this country. If you are going to function effectively as a mathematics graduate student and professor here, then you must take responsibility for fitting in.”

## 2 Improving your English

Learning English is a life-long commitment. Whether you just passed your TOEFL or spent years teaching in America, there is always something new and exciting you can learn about this beautiful language. Make every effort you can to improve your English.

- 1) READ novels, poetry, magazines, newspapers, blogs.
- 2) WATCH movies, TV shows.
- 3) LISTEN to the radio (for example NPR), audiobooks, podcasts.

- 4) CHECK the dictionary for the pronunciation of key words, and practice them.
- 5) TALK to other people (yes, we know it's a hard thing to do for a math geek...)
- 6) WRITE a diary, lecture notes, handouts.

If you feel really insecure about your English, don't be afraid to ask for help. There are all sorts of resources available to UMass graduate students, including English as a Second Language classes. Jones Library in Amherst has a fantastic ESL program run by volunteer tutors, see <http://joneslibrary.org/274/Learn-English>

### 3 Tips for international TAs and instructors

- Good preparation and practice are the best and most important confidence builders. Have a thorough knowledge of your subject matter and how to explain it in a clear, coherent and well-organized way.
  - 1) KNOW what material is to be covered. Have a detailed plan of every class.
  - 2) REHEARSE your presentations aloud. Know roughly how long the material will take to cover.
  - 3) COMMUNICATE with your students.
- Be particularly careful about your pronunciation, enunciation and rapidity of speech.
  - 1) SLOW DOWN - Especially when you are introducing a technical term or complex concept.
  - 2) SPEAK loudly and clearly.
  - 3) RECORD yourself once in a while.
  - 4) ASK your American friends for help with improving your accent.
- Take full advantage of the blackboard (or use PowerPoint).
  - 1) WRITE all key words, technical or complex terms, definitions, statements.
  - 2) DRAW a simple picture, map, or diagram of what you are talking about.
  - 3) USE handouts.
- Become an actor!
  - Be aware of your posture and body movements, make eye contact, smile, and gesture.
  - Be creative. Students prefer teachers who make their classes interesting by using relevant and thought-provoking examples, along with visual aids.
  - Don't be afraid to make jokes and references to your culture or American pop culture.
- Be patient. It is important to show how a formula or an equation work. If the students don't understand the first time, show them again, and again, and AGAIN.
- Be the kind of teacher you enjoyed as a student
  - friendly, helpful, honest and understanding;
  - consistent, confident and compassionate.
  - Treat your students with respect.
  - Admit when you are uncertain and demonstrate an openness and willingness to learn from others.
  - Ask your students for feedback. Stop regularly to ask the students if they need another example or have further questions. Give them ample time to think your question over.
  - Learn your students' names and how to pronounce them as quickly as possible

## 4 Cultural differences

- Learn how simple algebraic manipulations (FOIL, long division, etc.) are taught in American schools.
- Respect that your students have goals and commitments outside of your class.
- Take the time to get to know why students are taking your class, and how it will be useful to them in the future. Connect abstract concepts to real world applications.
- American students are used to a more interactive class environment than you might have experienced. Engage students by asking them for questions or to summarize a key concept.
- There is a law called FERPA which strictly regulates students' privacy and access to their academic records. In the nutshell, you cannot discuss students' performance or show their grades to anybody (including their classmates) with some exceptions.
- Students appreciate TAs and professors who are easily accessible outside of class. Make sure to reply promptly to emails and try to be friendly and helpful in office hours.
- Students appreciate encouragement and positive feedback.
- Although you are your students' teacher, there is a lot you can learn from their questions or experiences outside of your class. Stay humble.
- Don't take yourself too seriously in class - students will appreciate it if you occasionally make a joke at your own expense, tell a relevant personal anecdote, or reference a television show instead of a Dostoevsky novel or a Buñuel movie.
- In recent years, discrimination in college settings has been an extremely sensitive issue. Many students feel that their identities outside of class (race, religion, appearance, gender, disability, etc.) affect their academic performance and how their professors will interact with them or grade them. This is also a hot button issue because of historical discrimination against women and minorities in STEM fields. Don't joke or comment about how a student's gender/race/disability/appearance will affect their work. Be understanding and compassionate if they choose to discuss with you how their personal identity impacts their work in class.