**Teaching Philosophy - Charlie O'Hara - November 12, 2021**

No two students come into the classroom with the same previous experience, skills, and levels of confidence. To help students achieve their best, I strive to create a learning environment where each student's strengths shine, where their weaknesses can be overcome, and where all students are treated with respect. I attempt to foster diversity and equity in my classroom and academia at large by fostering trust between students' and the instructor, and fostering students self-confidence in quantitative skills, and using innovative assessment strategies that foster student learning rather than student compliance. My approach to teaching has developed through seven semesters of teaching discussion sections as a teaching assistant at USC, and teaching four undergraduate courses as instructor of record as a Lecturer at University of Michigan.

**Instructor-Student Trust** I find that developing a mutual trust between myself and my students is an integral part of developing a productive classroom experience. I believe that there are three important aspects of showing students respect: being accessible to my students, getting to know my students, and incorporating feedback from my students.

It is important to me to be accessible to my students both inside and out of class. Developing a strong relationship with students during class time lowers the students' barriers to reaching out to me in office hours or otherwise whether they are having difficulties with the material, or are interested in pursuing any material beyond what we cover in class. I use group work in my classes to allow me to circulate the room and talk with students in a lower-stakes situation letting shyer students to feel comfortable asking questions. I also plan to continue to offer to meet with students digitally, to better accommodate commuter students, and students with busy schedules.

I make use of personalized assignments to get to know my students better. As an example, in my undergraduate phonetics and phonology course at the University of Michigan, one assignment involved students using speech analysis software Praat to analyze recordings of their own vowels, develop a vowel chart visualizing the acoustic qualities of their pronunciation, and discuss some ways that their vowel chart differs from that of a sample Michigan speaker. This assignment gives students experience recording and analyzing phonetic data, testing whether or not they understand the connection between formant frequencies and vowel height and backness, but it also gives students an opportunity to reflect upon how their personal linguistic experience has affected their ideolect. Students came up with a diverse range of causes for their pronunciations, from influence from their native language, to their time living outside of Michigan, to their training as a choral singer. Whether or not their hypotheses were feasible, this assignment offered an opportunity to get to know my students better, and upon receiving my feedback, several students reached out to continue discussions about their vowel charts.

In order to make sure students know that their feedback is welcome and taken into consideration, I make use of midsemester evaluations. In my midsemester evaulations, I ask my students a variety of questions ranging from general questions about how the course is going, or Zoom techniques they've seen in other courses, to specific questions asking students about how well they feel they learned particular topics, and to see whether particular techniques are working as intended. In the Winter 2021 semester, several students reported to me that breakout rooms tended to be a bit too long, and that they ended up sitting in silence for the last few minutes. In order to alleviate this issue, I have experimented with adding additional "challenge" questions that go a bit beyond what has currently been covered, previewing challenges that will be accounted for in upcoming classes. By adapting my class based on my students' evaluations, I let them know that they have a role in guiding the course, and hopefully foster more engagement.

**Students' Self-Confidence** While developing trust between the students and myself is vital in the short term, in the long term students need to trust their own abilities. When teaching computational methods, facilitating a student's confidence in themself can be as critical to their success, even at an advanced level. Students come into linguistics with different experience with computational methodologies. For those students with limited computational experience, one of the main hurdles tends not to be their quantitative competence,

but rather their quantitative confidence. Many students, particularly from underrepresented minorities, have internalized implicit and explicit societal biases about what it means to be a "math person," doubting their own ability to make use of quantitative methods, even when they are fully capable with such methods. In my experience teaching a language and technology class for undergraduates and developing and organizing a reading group on formal language theory phonology for graduate students, I have focused on several techniques to foster my students' quantitative competence. First, I find it useful to overtly acknowledge the societal biases that may lead to students having lower quantitative confidence, and be careful to call out and illuminate aspects in quantitative work that may reinforce these biases, such as the use of technical jargon and procedures. Secondly, I find it important to give students practice actually executing quantitative methods, whether practicing writing code in Python, performing statistical analysis in R, or creating a finite state transformer that models a particular phonological process. Finally, even after learning how to use a methodology, students can have difficulty figuring out ways to apply quantitative methodologies to their own work.

In my Human Language and Computers course at Michigan, I have introduced students to Python coding through several workshop sessions where students get practice programming a basic AutoCorrect algorithm themselves. In these workshops, I circulate the classroom making sure to visit with many students and guide them through challenging aspects of the code. With the collaborative setting, students end up helping each other as well, helping them solidify their understanding of the material and utilizing the inherent differences in coding experience present in a class with no coding prerequisite. I also have used the "challenge questions", I adopted after my Winter 2021 mid-semester evaluations to give students with more experience interesting problems to work through to practice their skills.

**Innovative Assessment Strategies** One way I work to promote equity in my classroom is by adopting and researching alternative forms of grading. As a member of the USC Linguistics Teaching Assistants Support Group and the USC Future Faculty Training course, I have become very interested in innovative forms of grading, such as skills-based grading (Zuraw *et al.* , 2019), which I have implemented in my undergraduate phonetics and phonology course and my Human Language and Computers course at the University of Michigan. Traditional grading has a number of well known pitfalls. If a student does poorly on an early assessment, the student can become discouraged and give up on the material, rather than adopting a growth mindset and taking the opportunity to learn from their mistakes. In the skills-based paradigm, students are presented with a list of skills tied to the course objectives. Examples of skills from my courses include "Differentiate between competing phonological hypotheses using data", and "Identify ways that common natural language processing procedures fail to work for sign languages."Throughout the semester, questions on exams and assignments test the students' proficiencies on these skills. Students are graded on how many of these skills they show proficiency on throughout the semester, rather than directly on how they perform on the assessments themselves. If a student misunderstands a skill during the first assignment, they can look back at their work, learn from their mistakes, and attempt to show their proficiency on that skill on a future assignment. I pair this skills-based grading with compassionate late work and attendance policies. Together, these course policies help students trust that I am here to challenge them and help them learn, in a safe environment without fear of failure.

In end of semester evaluations, students uniformly praised these aspects of my course design: "It motivated me to WANT to learn the content rather than just achieve a grade..." "He is understanding and compassionate but is still able to challenge his students (I felt like I was pushed to do more, better, and harder work as the semester went on but always felt comfortable, engaged, and excited to do so)."

I am currently incorporating skills based grading in my Human Language and Computers course, and plan to continue to develop it for other courses in the future.

**Courses** At Michigan, I have taught introductory phonetics and phonology for linguistics majors, intro-level courses focusing on language sounds, signs, and sociolinguistics, an introductory computational linguistics course, introducing students to Python, natural language processing, and ethical issues relevant to language technology. In Winter 2022, I will be teaching Introduction to Language, a large lecture intro course, supervising four graduate student instructors, and developing an undergraduate course focusing on automated speech recognition technology and phonetics/phonology. I would be excited to teach phonetics, phonological theory, phonological typology, computational phonology, computational linguistics, natural language processing, and introductory semantics courses at all levels. I would also be excited to teach advanced seminars focusing on topics in computational phonology such as phonological learning, agent-based learning simulations, and connectionist approaches to phonology.

## References

ZURAW, KIE, ALY, ANN M., LIN, ISABELLE, & ROYER, ADAM J. 2019. Gotta catch 'em all: skills grading in undergraduate linguistics. *Language: Teaching Linguistics*, **95**(4), e406–e427.