The University of Georgia
2015 Academic Affairs Faculty Symposium
Unicoi Conference Center
March 27-28, 2015

Panel II - Graduate Student Experience

If you had to do it all again how would you improve your graduate experience at the University of Georgia?

presentation by
Timothy J. Godfrey
Ph.D. Candidate and Head Teaching Assistant, Physics
Franklin College of Arts and Sciences

My name is T. J. Godfrey, and I am currently a Ph.D. candidate conducting research in the Department of Physics and Astronomy. I attained a Bachelor of Science degree in physics from the University of North Georgia (previously North Georgia College and State University) in August 2012 and initiated my graduate studies at the University of Georgia (UGA) immediately following graduation. My decision to matriculate at UGA was based on several factors; however, it was the myriad of research opportunities available through the UGA Department of Physics and Astronomy that influenced my selection process the most. Not knowing what field in which to establish my doctoral research, this afforded the opportunity to "test the waters" in several different areas before developing a research plan.

Prior to the symposium, Dr. Russell Mumper posed the following question to the graduate student panel: "If you had to do it all again, how would you improve your graduate experience at UGA?" Having completed the core curriculum for my department's Ph.D. program and two additional physics electives, I regard my formal classroom experience as the most appropriate response to this question. Every class that I have taken in the Department of Physics and Astronomy employed traditional lecture as the sole method of instruction. As an aspiring educator myself, this was somewhat surprising considering the abundance of physics education research that suggests traditional lecture alone is the least effective strategy to teach physics, albeit the majority of the available research is specific to undergraduate-level courses.

If I had to do it all again, I would prefer that my required graduate-level courses incorporate innovative teaching strategies and that the course curricula be established on physics education research. Although a few points listed below are somewhat specific to physics education, I offer five simple suggestions to achieve this goal.[1]

1. Instructors should focus on phenomena and conceptual ideas rather than mathematics or other abstractions (specific to physics).
2. Instructors should incorporate research-based teaching methods that promote student engagement in class material, while also providing opportunities for students to receive immediate feedback on work and progress.

3. Instructors should explicitly and consistently address students' conceptions about the subject that may be wrong or slightly skewed.

4. Instructors should teach and use the associated problem-solving skills students are expected to possess after completing a course.

5. Instructors should formally assess student progress and course effectiveness via carefully designed homework, quiz, and test questions.

---

[1]These suggestions were adapted from Randall D. Knight's book Five Easy Lessons: Strategies for Successful Physics Teaching. (See Knight, Randall Dewey. Five Easy Lessons: Strategies for Successful Physics Teaching. San Francisco, Calif.: Addison Wesley, 2004. Print.)