

Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Graduate-Student Teaching Assistants: A Crucial Element in Improving Undergraduate Physics¹ CASSANDRA PAUL, University of California, Davis, EMILY WEST, University of New Haven, WENDELL POTTER, DAVID WEBB, University of California, Davis — At large research universities, undergraduate students spend more time in a typical physics (or other science class) being taught by graduate teaching assistants (TAs) than by regular faculty. Student time with TAs occurs in lab or discussion sections, which by design are usually more interactive than lecture. Since physics education research has solidly established that interactive learning environments are more successful at fostering student learning than traditional lectures, it follows that graduate students could be in a better position to stimulate meaningful student learning than faculty. Yet there is little research on TAs and their contribution to improved learning. I characterize and discuss the classroom observations of 26 TAs leading interactive discussion/lab sections, describing the types of academic interactions these TAs have with their students and how commonly they occur. I also examine the degree to which these interactions affect undergraduate attitudes and achievement.

¹Funded in part by the Teaching Resources Center at UC Davis.

Cassandra Paul
University of California, Davis

Date submitted: 23 Oct 2009

Electronic form version 1.4