

Meeting: 1003, Atlanta, Georgia, MAA CP V1, MAA Session on Research on the Teaching and Learning of Undergraduate Mathematics

1003-V1-391 **Andrew J Incognito*** (aincogni@coastal.edu), Coastal Carolina University, Wall 124A, Conway, SC 29526, and **Sophia Tan.** *The Effects of a Web-based Application on Teaching and Learning Calculus I.* Preliminary report.

The purpose of this study is to investigate the implementation of an interactive web-based application on student learning in freshman calculus. Specifically, this study looks at how technology may affect student performance, perception of learning, course satisfaction, and the relationship between performance and satisfaction. In addition, it will examine the impact of technology on mathematics teaching in a calculus course. In this experiment the students will use an interactive internet application developed at Temple Universtiy called Calculus on the Web (COW). COW provides instant feedback, visual representation, and step-by-step guidance on a full range of topics in a Calculus I course. Performance assessment will be based on students' exam results and satisfaction assessment and general student reaction will be based on student responses to pre and post questionnaires. (Received September 13, 2004)