

1081-97-382

**Douglas B Meade\*** (meade@math.sc.edu), Department of Mathematics, University of South Carolina, Columbia, SC 29208, and **Philip B Yasskin** (yasskin@math.tamu.edu), Department of Mathematics, Texas A&M University, 3368 TAMU, College Station, 77843-3368. *On the Role of Assessment in the Design of Online Resources for Learning Mathematics.*

As more online materials become available for mathematics it is important to understand how these resources impact student learning, and how these impacts are affected by factors such as the learning environment and the type of hardware.

The authors have assembled a team of evaluators and mathematics educators to assess the NSF-funded Maplets for Calculus (M4C) project. The M4C is a collection of computer applets designed to help students learn more than 100 topics in precalculus and calculus.

In addition to summative evaluations based on attitudinal surveys completed by students and faculty in pre- and post-course surveys, the assessment team is developing protocols for more formative studies. Two questions at the heart of this work are:

- To what degree do the maplets, individually or collectively, impact student understanding of associated math concepts?
- Is there a relationship between cognitive measures (e.g. achievement and conceptual understanding) and the learning environment (e.g. course content system, handheld device)?

This talk includes the discussion of the assessment methodologies and initial results currently being used for the M4C project as well as those that are being developed. (Received February 14, 2012)