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Carla A Romney* (romney@bu.edu), **Juan Pedro Paniagua** (jpp@bu.edu) and **Fabian Torres-Ardila** (fatorres@bu.edu). *Increasing Student Engagement in Undergraduate Mathematics with Tablet PCs.*

Tablet PCs have unique characteristics that make them effective tools to bolster student participation in math classes. A tablet PC uses a stylus so an instructor can write directly on slides during a class session. This real-time writing allows students to participate in the mathematical concept development process since they can watch the lecture unfold before their eyes. Lecture notes and practice problems can be projected on a screen and students can work on their own tablet PCs if the classroom is networked. Student work can be shared via projection to stimulate class discussion. Students' active participation in problem-solving promotes collaboration and moves them away from their roles as passive receptors of information. Further, tablet PC-facilitated participation gives the instructor real-time feedback about students' understanding of the material and provides opportunities to address any difficulties or misconceptions that may impede progress.

We have assessed the impact of using networked tablet PCs to teach introductory mathematics to freshmen who are prospective STEM majors. Students in the tablet PC courses demonstrated increased class engagement, as measured by attendance and website use. STEM retention also improved for students in the tablet PC classes. (Received August 04, 2011)