Bringing Math Concepts to Life at Robert Morris College

by Dawn Henwood

It’s just another Wednesday morning in a small applied math class in Chicago’s Robert Morris College, but instructor Ed Clark is conscious that he’s at the epicenter of an educational revolution. Clustered in small groups, Clark’s students are engaged in a hands-on analysis of two competitive cell phone plans. Because all of the students have in hand a Dell Axim with MRI Graphing Calculator software, they’re able to tackle the problem at their own pace and in their own way. With this powerful combination of hardware and software, Clark has transformed his classroom into an active mathematics “laboratory.”

Clark and his colleagues have been working with MathResources’ MRI Graphing Calculator and Pocket PCs for more than two years now. Before the MathResources (www.mathresources.com) product came on the market in 2001, Clark, like many math instructors, struggled for years to integrate the TI-83 graphing calculator into his classes. “At the time it was the best tool available, but it is not a computer,” he says. For his students, a computer is a ready-to-use tool, and the MRI Graphing Calculator’s Windows-based interface makes it easy for students to transition from their familiar desktop or laptop PC to the Pocket PC. The learning curve, in Clark’s experience, is “very, very short.” Students can begin using the software almost immediately to explore and solve problems.

The effect of the new technology on Clark’s teaching style has been dramatic. Previously he used up to a third of his class time just explaining how to work the calculator and guiding students step by step through complicated keystrokes. Now he focuses entirely on how to work the problems: he’s free to engage students in what he calls “discovery learning.” In some cases, he’s able to cover a concept twice as quickly as it would have taken in the past.

Clark says that MRI Graphing Calculator and Pocket PCs have sharpened the focus of his teaching. “Just the fact that a handheld computer displays colors is huge,” he notes, “especially when you are working with a problem that involves plotting and comparing multiple equations. With MRI Graphing Calculator, every equation or curve you graph can be given a different color. This makes it so much easier to work through problems with my class. With the TI-83 I would constantly have to keep pointing to the different curves over and over again and telling my students which was which.”

Currently, incoming Allied Health students are required to purchase MRI Graphing Calculator and a Pocket PC along with their textbooks. Within the next year, the college will extend the use of MRI Graphing Calculator to all first-year students.

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