Using an Instructional/Explorations Laboratory
to Improve Introductory Level Mathematics

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This model for improving instruction of introductory-level courses (College Algebra, Statistics, through Calculus I) includes three components: (1) enhanced classroom instruction, (2) laboratory exploration modules, and (3) writing activities focused on the lab experiences. Traditionally, at this rural Appalachian university, performance has been poor and attrition rates high. The goals are to improve understanding of mathematics and interest in mathematics; thus, increasing retention rates, performance, and attitudes of beginning students in mathematics.

The presenter will share the progress of this project, i.e., how instruction has changed, data analysis of project to date, laboratory modules developed to use with Derive, Minitab, and Matlab, and evaluation instruments designed and being used.

The presenter encourages discussion and exchange of ideas on the use of technology and group/independent explorations to improve instruction at this introductory level. Similar programs and the research into their effectiveness is of great interest to me.