

Meeting: 1003, Atlanta, Georgia, MAA CP X1,

1003-X1-950 **Susie M. Lanier*** (slanier@georgiasouthern.edu), P. O. Box 8093, Statesboro, GA 30460, and
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Modeling, Technology, and Mathematical Understanding.

The presenters will share results from a study examining "mathematics oriented" students using technology to do mathematics. Our purpose was to determine if these students with an interest in mathematics would use technology in a cooperative learning environment to increase their understanding of mathematical concepts or if they would merely manipulate data and "come up with" an answer without complete understanding of the mathematics. The students were not taught how to manipulate the given data on a given modeling spreadsheet, and an initial survey showed that they knew very little about mathematical modeling. We wanted the students to manipulate the data, think about changes that occurred, and strategize until they understood from the spreadsheet what they needed to do to obtain an equation that best fit their data. Results showed that neither the use of technology nor the cooperative learning environment seemed to enhance the students' desire to work for understanding. The students were very dependent on being taught, and only when prompted with prepared questions in interview situations did the students demonstrate their thought processes and understanding of the modeling situation. The guidance of a teacher was essential for motivating the students to strategize. (Received October 01, 2004)