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John C. Mayer* (mayer@math.uab.edu), Dept. of Mathematics, University of Alabama at Birmingham, Birmingham, AL 35294-1170. *Comparison of Inquiry-Based Class Sessions and Lecture in the Context of Computer Assisted Algebra Instruction*. Preliminary report.

In an experiment conducted at a major state university in Fall Semester, 2009, we compare the effect of incorporating inquiry-based group work sessions versus traditional lecture sessions in a Basic Algebra course in which the primary pedagogy is computer-assisted instruction. Our research hypothesis is that inquiry-based group work sessions differentially benefit students in terms of mathematical self-efficacy, content knowledge, problem-solving, and communications. All students receive the same computer-assisted instruction component. Students are randomly assigned to a treatment (group work or lecture). Measures, including pre- and post-tests, are described. Statistically significant differences have previously been observed in a similar study of multiple sections of a Finite Mathematics course in Fall, 2008. Many pre-service elementary school teachers take this Basic Algebra course, thus making this course a significant component of preparing K-6 teachers. (Received September 22, 2009)