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Tasha Thrower* (tthrower@jsu.edu), JSU MCIS Department, 700 Pelham Road North, Jacksonville, AL 36265, and **Jan Case, Audria White** and **Fred Kelley**. *An Experimental Study on the Implementation of Online Resources in Pre-Calculus Algebra*.

Jacksonville State University is conducting a controlled experiment to determine the effects of an integrated teaching and learning system on six identical sections of MS112 Pre-Calculus Algebra. Three instructors each have a control group using traditional methods and an experimental group using the Thompson iLrn system for homework sets, quizzes, practice tests, and online tutoring. This platform will allow students to have self-paced study, monitor their own progress, take quizzes, and submit homework online. Student performance will be analyzed in terms of mastery of concepts, and student retention rates will be compared. This study will result in a cost/benefit analysis of incorporating significant change into a traditional university mathematics course. The integrated teaching and learning system will contain its own learning curve, but will possibly yield benefits that are worth the extra initiative. This presentation will present a statistical analysis of the comparison data generated by the experiment. Anecdotal experiences of the instructors and students will also be included. Discussion will include how the results from this study might benefit other programs when attempting to transition from traditional instruction to technology based instruction. (Received September 14, 2006)