Using Cumulative Assessment to Enhance the Mathematics Experience of College Students at the Entry Level

This on-going research project began in 2005 with four entry-level Math Modeling classes. The purpose was to determine if the use of cumulative assessment techniques would effect a positive change in student attitudes, student learning, and class retention. The researchers define cumulative assessment as the practice of including on tests all material that has been taught up to that point. Each subsequent test has a greater weight because it includes more material. Three questions are addressed in this research. What are the entry-level college mathematics students’ attitudes toward cumulative assessment? Do cumulative assessment techniques bring about a positive change in student learning and achievement? Does increasing the opportunities for a student to earn a better grade improve class retention? The data collected over a period of three semesters include attitudinal surveys, grade analysis, student enrollment/withdrawal data, and student interviews. The results suggest a strong connection between cumulative assessment and improved attitudes and performance. Additional implications involve effects on pedagogy and student/teacher relations. (Received August 02, 2006)