

1046-U1-1414 **Jessica M Deshler*** (deshler@math.wvu.edu), Department of Mathematics, 320 Armstrong Hall, PO Box 6310, Morgantown, WV 26506-6310. *A Two Semester Study of Interactions In Multi-Section Undergraduate Mathematics Classes*. Preliminary report.

This is both a qualitative and a quantitative study of multi-section undergraduate mathematics courses at a research university in the southwest United States. The researcher employed systematic classroom observation over a period of two semesters to determine teaching practices that predict student success. Classes were categorized qualitatively after each semester based on the overall amount of interactions observed during the class. Detailed data was also gathered during the study, once by the researcher, once by course coordinators, also by systematic classroom observation using a trial observation protocol. Instructor and student behaviors were monitored, as well as several different types of instructor-student interactions. Logistic regression analysis was used to measure the influence of student background data, course taken, instructor, observed teaching practices and interactions on student performance and the significance of the researcher's qualitative classifications. Classes categorized as 'highly' or 'minimally' interactive were statistically significant predictors of student performance for at least one semester, as were student-initiated logistic interactions and both instructor- and student-initiated interactions requiring an academic explanation. (Received September 15, 2008)