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**H. Smith Risser\*** ([hrisser@mttech.edu](mailto:hrisser@mttech.edu)). *An Examination of the Effect of Formative Feedback on Student Errors in a Calculus Course.*

The purpose of this study was to examine the impact of formative feedback on student errors. The study followed 50 students in a Calculus course. Each student turned in worked practice problems that they were either unable to solve or had solved incorrectly. The instructor for the course then provided written feedback on each individual student's work. In addition, the instructor gave whole group feedback for some common types of errors during class meetings. Student work from both formative and evaluative tasks was examined. Each error was assigned a code that indicated the type of error. These errors were broadly classified as attentional (e.g. dropping a constant from one step to the next), misunderstandings of prerequisite material (e.g. thinking functions can be distributed  $\sin(2x) = \sin(2)\sin(x)$ ), or misunderstandings of the calculus content addressed in the course (e.g. not understanding how to apply a reduction formula). The study used Qualitative Comparative Analysis (QCA) to evaluate the effectiveness of the feedback in addressing student misunderstandings/misconceptions and preventing later errors. The results of the study indicate that for some groups of students the formative feedback did prevent future errors. (Received September 12, 2013)