

1067-Z1-1649

Jana R. Talley* (jana.r.talley@jsums.edu), Just Science Hall, 242, 1400 J. R. Lynch St., Jackson, MS 39217. *Calculus Instructors' Responses to Prior Knowledge Errors.*

The ease with which a student learns a mathematical concept often depends on that student's knowledge base. Nevertheless, students often find themselves in classes for which their understandings of prerequisite skills are insufficient. Particularly in calculus, it is imperative that these prior knowledge deficiencies which hinder understanding be identified and examined. Who better to characterize these prerequisite errors that calculus students make than calculus instructors? This study investigates the views that Calculus instructors hold concerning prior knowledge. The term prior knowledge is operationalized as any skill or understanding that a student needs to successfully navigate through a Calculus I course. This study also attempts to begin clarifying the types of prerequisite skills that instructors deem critical in the rigorous study of calculus. A two part qualitative study consisting of student exams and instructor interviews was employed to examine how instructors approach prior knowledge mistakes when they are evaluating students. Analysis of these interviews revealed that calculus instructors agree that algebra and trigonometry are essential components of prior knowledge within a calculus course. (Received September 21, 2010)