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Rediscovering the Power and Joy of Calculus with First Year College Students.

The challenges posed by first year calculus students stem from a variety of complex issues. One such issue relates to students' difficulties in coping with the expectations of college level calculus courses as they hold legitimate differences from their high school calculus experience. The goal of college calculus curriculum, the methods of instruction, the emphasis on problem solving procedures, the means used to assess student knowledge, the placement methods through which students gain access to these courses are all contributing factors to students' stressful calculus experience. Consequently many of these students for the first time feel that they are not good enough to succeed in their chosen major since they are unable to function well in the calculus courses that their program requires. Additionally, many students are concerned about the monetary waste if they become unsuccessful in calculus courses. These fears along with their self-efficacy and self-concept issues, these students can pose dire desolation for themselves and the instructors of calculus courses. During this presentation, I will highlight steps that could be taken at all levels of the college community if they view students' long term success as the ultimate goal of higher education. (Received September 16, 2014)