SREE Fall Conference – 2011
Symposium Proposal

Submitted to the Section for At-Risk or Underserved Learners in Mathematics and Science

Title: Findings from Three Federally Funded Mathematics Intervention Studies Focusing on Students At-Risk for Math Failure and Students with Learning Disabilities

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Presenters:

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Discussant: Scott Baker, University of Oregon

Overview and Justification:
Studies (Badian, 1983; Barbaresi, Katusic, Colligan, Weaver, & Jacobsen, 2005; Fuchs et al., 2005; Gross-Tsur, Manor, & Shalev, 1996; Mazzocco & Myers, 2003) have estimated that approximately 5% to 10% of school-age students have some form of mathematics disabilities that often go undetected until students attempt higher order thinking mathematics concepts and skills, such as algebra. The three federally funded intervention studies that will be presented focused on improving students’ mathematics performance with both a preventive and a remedial purpose. All three studies included low performing students who were at risk for math failure. Bryant et al.’s study aimed to develop early numeracy and problem-solving skills in primary school students through a specially designed curriculum and small-group tutoring. Jitendra’s study also incorporated tutoring to provide instruction in schema-based problem solving to improve performance of third graders on various problem types. Montague’s study also targeted math problem solving by providing instruction using a validated program embedded in the general education math curriculum for students in grades seven and eight. All studies measured performance with both proximal (e.g., curriculum-based measures) and distal measures (e.g., the state assessment test). Across the studies, the findings were generally positive indicating that targeted instruction in mathematics, particularly in math problem solving, may prevent and remedy many of the difficulties that youngsters encounter in acquiring and applying math concepts and skills.