Title of Project: MeTRC: Mathematics eText Research Center

Directors:

- Mark Horney, Ph.D., Principal Investigator
- Lynne Anderson-Inman, Co-Principal Investigator

Funding agency:

Office of Special Education Programs (OSEP at the U.S. Department of Education under the Technology and Media Services for Individuals with Disabilities: Center on Accessible and Supported Electronic Text to Improve Mathematics Achievement for Students with Disabilities (CFDA No. 84.327H)

Beginning – Ending Dates: October 1, 2009 – September 30, 2014

Description:

The Mathematics eText Research Center is a newly funded project at University of Oregon's Center for Advanced Technology in Education (CATE) under the leadership of Dr. Mark Horney and Dr. Lynne Anderson-Inman. The Center is conducting a systematic program of research over five years investigating four research questions related to students with print disabilities in grades 4-9 in rural, suburban, and urban settings across the United States:

- Which etext supports will increase access to mathematics content for students with disabilities?
- Which etext supports will promote academic achievement in mathematics for students with disabilities?
- What student characteristics influence the effectiveness of etext supports for learning mathematics by students with disabilities?
- What contextual factors influence the effectiveness of etext supports for learning mathematics by students with disabilities?

MeTRC is conducting this research in collaboration with research teams across the country, each focusing on a specific student population, curriculum, or resource type. These strands of research include:

1. Curriculum Conversion and Implementation, investigating questions related to a full-scale conversion and implementation of an accessible general math curriculum at the middle school level (Preston Lewis, University of Kentucky)
2. Accessible Curriculum Online, designing and developing a curriculum with accessible and supportive etext features that meet the needs of 6th grade students with documented math learning disabilities (Dr. Lindy Crawford, University of Colorado at Colorado Springs)
3. Accessible Classroom Learning and Assessment, investigation into the effects of specific accessibility tools within an electronic assessment environment on students’ math performance in relationship to the key constructs (Dr. Michael Russell, Boston College)
4. Accessible Algebra, developing and evaluating Instructional, Explanatory, Illustrative, and Presentational eText supports to assist students with disabilities in reading and learning from mathematical texts (Dr. Mark Horney, University of Oregon). The research at each site will proceed through a series of phases, Exploration and Development, Pilot Studies, and Efficacy Studies, designed to enable causal inferences to be drawn with respect to the impact of etext on students’ reading and learning from Mathematical texts.

Work of the Mathematics eText Research Center is supported by a 15 member Technical Work Group comprising experts in the areas of:

- Mathematics Instruction and Technology
- Instructional Needs of Students with Disabilities
- Research Design and Statistical Analysis
- Technology Implementation in Schools
- Individuals with Disabilities and their Parents
- Accessibility Tools and Products.

The collaborating research teams and members of the Technical Work Group will work together as a nationwide research community taking advantage of multiple communication vehicles supported by the Internet and other forms of advanced technology. In addition, the Center will construct and maintain an accessible website for online communication and
dissemination of Center findings. It will design and house an online searchable database of tagged and annotated research publications related to the Center's mission.

Key people:

- Mark Horney, Ph.D – Principal Investigator
- Lynne Anderson-Inman – Co-Principal Investigator
- Pat Almond, Ph.D. – SPED Coordinator
- Judith Blair – Information Manager
- Mindy Frisbee – Reseach Assistant

Collaborators/partners:

- Preston Lewis, University of Kentucky
- Dr. Lindy Crawford, University of Colorado at Colorado Springs
- Dr. Michael Russell, Boston College

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