

2008 NCTI *Technology in the Works* Abstract: Developing Fraction Sense

Can the use of software that integrates the use of virtual manipulatives with cognitive strategies using an explicit instructional format increase student development of fraction sense?

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Spotlight on Learning LLC, in collaboration with researcher Dr. Dave Edyburn, Professor in the Department of Exceptional Education at the University of Wisconsin-Milwaukee, designed the quasiexperimental research study to demonstrate the effectiveness of *Developing Fraction Sense* with two of four inclusive fifth grade classrooms with a wide range of students. The make up of these classes will not be determined until June but historically are inclusive of students with a range of abilities and disabilities including, but not limited to, English language learners and students with attentional and other learning problems. The two experimental classrooms taught by one of the fifth grade teachers and support professionals will use the SOL: Developing Fraction Sense activities and technology to enhance teaching and learning.

Developing Fraction Sense is a beta version of a product that incorporates best practice for mathematics instruction by providing the use of modeling through the use of videos and manipulatives to develop conceptual understanding and strategic feedback that guides the learner in concept development. Although the software will address skills identified in the NCTM focal points this project will focus on the acquisition of both conceptual and procedural understanding of fractions as covered up to the fifth grade. This targeted research effort is intended to analyze whether the software can be used to bring students with learning difficulties up to grade level.