IMPROVING INDIVIDUALIZED EDUCATIONAL PROGRAM (IEP) MATHEMATICS LEARNING GOALS FOR CONCEPTUAL UNDERSTANDING OF ORDER AND EQUIVALENCE OF FRACTIONS

by

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ABSTRACT

The purpose of this Executive Position Paper project was to develop resources for improving Individual Educational Program (IEP) mathematics learning goals for conceptual understanding of fractions for middle school special education students. The investigation surveyed how IEP mathematics learning goals are currently determined and proposed a new approach. It demonstrated how the approach would work through a pilot project in which two tools were developed: (1) a list of learning goals for goal writers to use as a reference when writing mathematics learning goals for middle school special needs students and (2) an assessment linked to the goals that would determine whether or not a student has achieved the goals. A description is given of the process that combines knowledge from research literature with information from instructional practice and that continually refines the products.

For this pilot project the learning goals were focused on order and equivalence of fractions. The goals were identified through a review of educational literature and examination of several sources related to practice for teaching fractions. Assessment items were then developed for the goals. Four experts reviewed the learning goals and assessments for content and clarity and the assessments for validity. Based on their feedback, edits were made to both the learning goals and the assessment items. Four middle school teachers field tested the assessment with their students. Analysis of student work confirmed that the assessment revealed detailed information on individual students'

strengths and weaknesses in conceptual understanding of order and equivalence of fractions and that appropriate learning goals could be selected as a result of the assessment.

Final recommendations include expanding the project to additional math content and other grades and developing instructional lessons and resources linked to the learning goals that teachers could use to help students achieve the learning goals. Additionally, it is recommended that a system of continual improvement be incorporated into the process of further development.