

State Improvement Grant Mathematics Project

The Office of Special Education and Early Intervention Services (OSE/EIS) has been providing much needed professional development through a State Improvement Grant (SIG). The mathematics portion of the SIG project has resulted in the development of materials and resources focused primarily on special education populations, but employs principles that apply in important ways to all teachers. In 2004 and 2005, special education and mathematics experts conducted a pair of week-long in-services, follow-up consultations, and regional conferences to train staff, support teachers during implementation, and provide additional materials based on feedback from the initial presentations.

A particular focus of the mathematics group has been on developing assessments to answer questions about where, in a realistic scope and sequence, students are performing. The group wrestled with the idea that the state's grade level content expectations (GLCEs) have never claimed to be a comprehensive sequence of mathematics skill acquisition, but many teachers believe their instruction must follow them since statewide assessment is based on the GLCEs.

SIG staff members maintain that by looking at a valid sequence and using assessment to identify where students are, two goals can be accomplished. First, the GLCEs can be brought into instruction in an orderly, logical fashion after they are matched to where the student is performing on the instructional sequence. Second, having a clearly defined sequence allows for more accurate measurement of such things as a "year's worth of growth," something that many IEP teams struggle with in setting and monitoring their student's goals and objectives.

Based on these goals, the SIG mathematics group has developed pilot assessments and administered them to a variety of students who attend districts served by Wayne County RESA. The assessments are not considered achievement tests, but inventories to help teachers determine where students are on the sequence and what types of error patterns are made. Analysis of these errors is intended to inform teachers about where instructional resources should be spent to move students along the sequence. Through this process and the time invested on professional development, SIG staff members hope to

- build capacity at the Intermediate School District (ISD), local district, and classroom levels for teachers to become more adept at blending of general and special education, and promote understanding of conceptual and instructional processes involved with teaching mathematics;
- provide districts and teachers guidance about what they should be trying to accomplish with mathematics instruction;

- encourage the building of teams to support each other in order to sustain the learning about sequence and instruction and encourage participants to act as colleagues in the SIG development process rather than passive recipients;
- align the SIG mathematics inventories with state-wide assessments, such as the MEAP and MI-Access, to promote more valid measurement and increased use of assessment results in the classroom; and
- close the achievement gap for at-risk and special education students in an effort to improve instruction and help districts in making Adequate Yearly Progress.

Feedback from in-service and regional conference participants has been highly positive and encouraging. For example, this year's Office of Educational Assessment and Accountability fall conferences featured presentations on the various activities with which the mathematics SIG staff have been involved and are developing, and how they might be applied to students with disabilities. Teachers and administrators expressed gratitude and excitement about learning new strategies to enhance student performance, improve relationships between general and special education staff, and promote greater understanding about how mathematics instruction theory can and should be applied. Materials used in this project can be found at the Michigan Council of Teachers of Mathematics Web site (www.mictm.org) Michigan Council of Teachers of Mathematics Web Site in the "Publications" section.