

**Surveys of Enacted Curriculum Collaborative Members Meeting
St. Louis, MO – Fall 2007
Report from Mississippi**

The Mississippi Department of Education requires all Mathematics and Science Partnership (MSP) grantees to administer the *Surveys of Enacted Curriculum* (SEC), *Surveys of Instructional Practices, Grades K-8*. In Mississippi, the MSP program targets the areas of middle grades mathematics and science in high-need school districts. Partnerships between high-need school districts and the Science, Technology, Engineering, and Mathematics (STEM) faculty in Institutions of Higher Learning (IHL) are at the core of these improvement efforts. A brief description of each MSP project and an explanation of its utilization of the SEC are provided below.

**Advancing Teachers of Middle School Science² (ATOMS²)
Mississippi State University
Project Director – Betty Latimer**

Advancing Teachers of Middle School Science² (ATOMS²) combines the content expertise of distinguished professors of Biological Sciences, Geosciences, and Physics, the instructional skills of exemplary secondary teachers, and the technology skills of the Center for Education and Training Technology (CETT) in a program that deepens the knowledge, pedagogical skills, and technology-integration skills of 130 5th-8th grade science teachers from across Mississippi. The goal of ATOMS² is to increase the number of highly qualified teachers in the state and increase the academic achievement levels among the students of those teachers.

ATOMS² developers based project components on a national needs assessment of middle school science teachers, a similar needs assessment among Mississippi 8th grade science teachers, and a thorough review of the current literature. Developers also considered data from SEC results of the 2005-06 and 2006-07 award year participants' content-area pre- and post-surveys. The greatest application of SEC data for ATOMS² is in comparing MSP participants' responses to those of the larger group of MSP participants in all of the Mississippi Science projects to determine if the ATOMS² participants' instructional practices, professional development opportunities, and classroom situations are representative of the larger targeted science teacher population in Mississippi.

**Creating High Achievement in Mathematics and Problem Solving (CHAMPS)
Mississippi University for Women
Project Director – Kate Brown
Project Manager – Sarah Summers**

Creating High Achievement in Mathematics and Problem Solving (CHAMPS) is a project dedicated to improving teacher quality by providing a comprehensive program of sustained professional development. The project targets seventeen Mississippi districts demonstrating high levels of poverty and low student achievement. Middle grade (5th-8th) teachers of mathematics are specifically targeted to receive services under the program. Each component offered by CHAMPS is grounded in empirical research that demonstrates the importance of sustained professional development and the positive correlation between teacher quality and student achievement.

The SEC is used to measure content of instruction, instructional practices, teacher preparation, and school and class characteristics for the purpose of evaluating the program. Each CHAMPS participant and their mentor analyze the data generated from their responses in an effort to improve their overall classroom practices. The SEC is administered prior to each summer institute and after the conclusion of the last Saturday mini-conference.

**Developing Effective Leadership and Teaching Alternatives² (Project DELTA²)
The University of Mississippi
Project Director – Barbara J. Dougherty**

Developing Effective Leadership and Teaching Alternatives² (Project DELTA²) is a mathematics project focused on enhancing grades 5-8 mathematics teacher content knowledge. The project includes multiple activities aligned with the National Council of Teachers of Mathematics *Principles and Standards for School Mathematics* (2000),

Mississippi Mathematics Curriculum Framework Revised (2007), and *National Staff Development Council Standards for Staff Development (2001)*. Teachers and students actively engage and communicate about challenging problems and important mathematics in an inviting classroom environment.

Project DELTA² utilizes multiple data sources in order to determine the effectiveness of the project's activities, processes, and services. In particular, Project DELTA² has its primary focus the improvement of teacher content knowledge which will positively impact student achievement. The improvement of teacher content knowledge is determined by the changes in teacher responses to the SEC from a pre- and post-survey administration. Participants complete the SEC during the first day of the summer institute. Each year of the three-year project, the teachers complete the SEC again and their responses are compared to the baseline data collected in their first year of participation. The content analysis is particularly helpful in that changes in the amount of time spent on topics related to the activities of the project as well as to the curriculum framework can be tracked. To support the SEC results, classroom observations are conducted to substantiate the data.

Improving Middle School Students' Learning of Science
University of Southern Mississippi
Project Director – Angela O. Bedenbaugh

Improving Middle School Students' Learning of Science is a project designed to improve science teaching in Mississippi on a statewide basis. The project utilizes teaching teams to instruct 6th-8th grade science teacher participants in teacher enhancement institutes located in different areas of Mississippi. Selected science teachers from high need school districts commute daily to a nearby summer institute site to participate in a four-week workshop. Integrated science, including biology, physical science, and earth and space science, is taught in middle grades in Mississippi. Typically the most poorly taught component of this offering is physical science. Improving Middle School Students' Learning of Science seeks to enhance the knowledge of chemistry and physics and the related pedagogical skills of those who teach integrated science in the middle grades.

The measurable goals of the project are to increase the number of participants who meet the requirements of the designation "highly qualified" in science, to increase the participants' knowledge of specific science subject matter, to improve instruction in middle school science by changing teachers instructional style and their attitudes and beliefs about changing classroom practices, and to increase by at least 5% the number of participants' students who score "proficient" on the statewide science test. All participants complete the SEC during the summer workshop and again at the last Saturday follow-up session during the academic year.

Mississippi Academy for Science Teaching (Project MAST 4U)
Jackson State University
Project Director – Mehri Fadavi

The Mississippi Academy for Science Teaching (Project MAST 4U) builds on the successes and lessons learned from previous years and provides changes to broaden its scope and experiences for teachers. Four needs assessments have been investigated in order to establish a foundation on which to continue improving the project: the need for content based instruction in science; the need to use technology as a tool of instruction and professional development; the need to be responsive to the data gained through the implementation of previous MAST programs; and the needs of selected Mississippi School districts. The project maintains the vision of improving the learning and teaching of middle school science in Mississippi by moving from conceptually understanding the content knowledge to exemplary practice in the classroom when teaching.

All participants complete the SEC during the summer institute. Participants are allotted time on a certain day at the beginning of the summer institute to begin taking the survey. The computer lab is made available to them each early morning and late afternoon of the summer institute so that they have the time and flexibility needed to complete the survey. Because of the length of the survey, having the opportunity to complete it in one or more follow-up sessions has proven to be favorable to the teachers enrolled in the project.