

HS-MASS

High School Math and Science Success



Michigan
Mathematics and
Science Centers Network

STATEWIDE PROJECT

HS-MASS was a statewide collaborative effort of the Michigan Mathematics and Science Centers Network during the 2006-07 school year to provide high school teachers with professional development opportunities for help in understanding the new science and mathematics components of the High School Merit Curriculum and associated testing and implications for teaching and learning in their classrooms. Below is a summary of results based on an analysis of data collected as part of the external evaluation. Reports based on other evaluation data, as well as detailed information supporting this report, are available.

At the direction of the Michigan Department of Education, during a brief 3-month period from December 2006 through February 2007, the Network prepared professional development materials, planned and implemented workshops, and conducted a results-oriented external evaluation at Centers across Michigan. The program was designed to provide teachers with assistance in implementing the Michigan Merit Curriculum statewide for the first time in March 2007.

- The Network conducted over 90 workshops, serving 832 high school mathematics teachers and 848 high school science teachers.
- Results of a pre/post test of students of participating teachers that focused on data interpretation shows a statistically significant increase in scores pre to post for both mathematics and science across the Network. Approximately 25,000 students completed math and/or science tests.
- Center Director interview data indicate there was significant interest from schools and teachers in learning about how they could effectively prepare their students for the new Michigan Merit Curriculum. This is reflected in the more than 1,600 teachers who were recruited and participated in the workshops conducted by the Network in the brief three-month period.

Results of a pre/post survey of participating teachers show a significant increase in mean ratings pre to post on all items related to workshop topics and activities.

- Most teachers indicated very little familiarity with the new High School Content Expectations or the new ACT test at the beginning of HS-MASS. By the end of the workshop series, they indicated significantly improved familiarity and understanding.
- Likewise in the post survey, they said they were much more familiar with what students need to know to demonstrate understanding of the High School Content Expectations and strategies needed by students to be successful on the new Michigan Merit Exam.
- At the end of the workshops, teachers indicated they were much better prepared to develop action plans and design lessons/units consistent with the new content expectations.

Results of HS-MASS confirm that the Network is an effective statewide infrastructure for improving mathematics and science education. With adequate funding, it is able to respond to changing needs of schools and teachers at the grassroots level, providing effective, high quality-programs and services.