

The Center for Local, State, and Urban Policy

Gerald R. Ford School of Public Policy >> University of Michigan



Mandating Merit:

Assessing the Implementation of the Michigan Merit Curriculum

June 2010

Introduction

On April 20, 2006, Michigan governor Jennifer Granholm signed into law the Michigan Merit Curriculum (MMC) establishing some of the most ambitious core graduation requirements in the nation. The curriculum requires all students in the graduating class of 2011 and beyond to obtain sixteen credits in specific academic areas. While these requirements were designed to prepare Michigan high school graduates for college-level courses while positioning the state for a 21st century economy (Michigan Department of Education, 2006b), a number of problems have challenged schools implementing the MMC.

The MMC has made many substantive changes to local requirements, mandating that students take more challenging courses in order to graduate. As a result, Michigan schools must offer more classes in all core subject areas and ensure that students pass even the most rigorous courses in order to obtain their diplomas. One of the simplest ways to achieve this objective would be to hire additional teachers to staff these new courses, and tutors to help students succeed in them. However, with the state's recent budget crises, school funding levels have either remained stagnant or decreased, placing even greater pressure on schools and districts to find creative ways to meet the demands of the Michigan Merit Curriculum.

This policy brief identifies some of the chief challenges faced by districts as they push their students to achieve higher academic standards in a time of fiscal hardship. In addition, to share

best practices that can be replicated more broadly, this brief describes several of the strategies that districts have successfully undertaken to implement the MMC.

What is the Michigan Merit Curriculum?

Up until April 2006, the state of Michigan required only that students take a state government or civics credit in order to graduate. This policy gave local school districts broad latitude in setting graduation requirements. However, some legislators and educators felt the state's lenient mandate left many students ill-prepared for a college-level curriculum. To remedy this situation, a panel of state and local education officials, college deans, and representatives from industry analyzed scholarly research on curriculum reform and studied reforms in Singapore, Indiana, Oregon, and Arkansas (Steptoe, 2006). Following their analysis, they devised the Michigan Merit Curriculum, which was subsequently signed into law on April 20, 2006 (Education Commission of the States, 2007).

As a result of this legislation, Michigan students would now be required to take four English courses, four math courses, three science courses, three social studies courses, one visual/performing arts course, one physical education course, and an "online learning experience." Beginning with the class of 2016, at the request of the State Board of Education, students would also be required to complete two world languages courses. In all, the MMC would eventually require all students obtaining a high school diploma from the state of Michigan to complete eighteen courses in addition to the online learning experience. (See *Table 1*).

Nationally, 42 states have requirements for graduation, with 25 offering a "college preparatory" diploma (Education Commission of the States, 2007). Some states have low-level mandates, requiring only that students complete a certain number of courses. Others have mid-level mandates, requiring a certain number of courses in specific core content areas. Still others

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Table 1
MMC Graduation Requirements

Michigan Merit Curriculum High School Graduation Requirements	
Mathematics: 4 credits	
Algebra I	Geometry
Algebra II	One math course in final year of HS
English Language Arts: 4 credits	
English Language Arts 9	English Language Arts 11
English Language Arts 10	English Language Arts 12
Science: 3 credits	
Biology	One additional science credit
Chemistry or Physics	
Social Studies: 3 credits	
1/2 credit in Civics	1/2 credit in Economics
U.S. History and Geography	World History and Geography
Physical Education and Health: 1 credit	
Visual, Performing, and Applied Arts: 1 credit	
Online Learning Experience	
World Language: 2 credits (Class of 2016)	

have high-level mandates, requiring students to complete a large number of specific courses. With the introduction of the MMC, the state of Michigan joined the high-level mandate states. While this method removes a large degree of local autonomy, it has been a popular reform in recent years as eight states, in addition to Michigan, have adopted rigorous, high-level standards. Two advantages of these high-level mandates are that high school diplomas from across the state have essentially identical value and that students stretch to participate in courses that the state feels will help prepare them for higher education. However, schools have struggled to implement the changes and ensure broad student success.

Methods

Through an online survey, 238 high school principals across the state reported on the implementation of the Michigan Merit Curriculum. While the responding principals were slightly more likely to be from affluent schools than their peers who did not respond, respondents included principals representing a broad cross-section of Michigan high schools.¹ Following the survey, in-depth personal interviews with thirteen school officials at the building, district, and intermediate school district

(ISD) level were conducted. These officials were selected to represent different types of schools (urban, suburban, rural) and different perspectives on the curriculum (teachers, principals, superintendents, ISD-level staff).

Key Findings

- 79 percent of schools surveyed have had to make changes to their course offerings to accommodate the mandates outlined by the Michigan Merit Curriculum.
- 86 percent of schools surveyed reported that more students were taking challenging courses as a result of the new state standards. Whether or not students are succeeding in these courses, however, remains to be seen.
- 48 percent of schools surveyed reported that teachers were having some or extensive difficulty aligning their courses to state standards.
- 55 percent of schools surveyed reported that students were poorly prepared, upon entering high school, to meet the demands of the new curriculum.
- Schools surveyed also reported a number of other common challenges in implementing the Michigan Merit Curriculum, including lack of qualified teachers, lack of resources, and less time for student electives.
- In all cases, principals from higher poverty schools reported greater challenges in meeting the new requirements than their colleagues in more affluent schools.
- Many schools have found creative ways to adapt to the new curriculum—these strategies offer potential ideas for school officials to consider.

Reported Challenges

An evaluation of class of 2009 academic course-taking data (two years prior to full implementation of the MMC), reveals that while two-thirds of students were already meeting the MMC’s outlined science requirements, much smaller numbers were meeting the state’s new math (31 percent) and social studies (just 6 percent) requirements. In addition, 18 percent



of students had less than three years of high school math and 25 percent of students had less than three years of high school science (See *Table 2*). Consistent with these statistics, only 14 percent of the 235 high school principals who responded to this survey question reported that all of their students had already been taking all of the classes now required by the

Michigan Merit Curriculum, while 82 percent reported that the curriculum had altered course-taking patterns for either some students (45 percent) or for significant numbers of students (37 percent). With this data in mind, it is easy to understand why the MMC has posed such a challenge to schools as they work to meet the state’s rigorous new mandate.

Table 2
Student Self-Reported Course Paths, Class of 2009

Academic Course-Taking in Michigan		
Math		
Percent of students who took the following course sequences:		
Algebra I, Algebra II, Geometry, 1 other	10%	} These 31% of students would have met the MMC requirements
Algebra I, Algebra II, Geometry, Trigonometry	8%	
Algebra I, Algebra II, Geometry, Trigonometry, 1 Other	8%	
Algebra I, Algebra II, Geometry, Trigonometry, Calculus	5%	
Algebra I, Algebra II, Geometry	19%	} These 66% of students would <u>not</u> have met the MMC requirements
4 years Math (Other)	24%	
3 years Math (Other)	5%	
<3 years Math (Other)	18%	
Science		
Percent of students who took the following course sequences:		
Biology, Chemistry, 1 Other	29%	} These 68% of students would have met the MMC requirements
Biology, Chemistry, Physics	7%	
Biology, Chemistry, Physics, 1 Other	32%	
3 years Science (Other)	4%	} These 29% of students would <u>not</u> have met the MMC requirements
<3 years Science (Other)	25%	
Social Studies		
Percent of students who took the following course sequences:		
U.S. History, World History, Government	4%	} These 6% of students would have met the MMC requirements
U.S. History, World History, Government, 1 Other	2%	
4 years Social Studies (Other)	44%	} These 91% of students would <u>not</u> have met the MMC requirements
3 years Social Studies (Other)	34%	
<3 years Social Studies (Other)	13%	

NOTE:
The fractions do not add to 100% because of rounding and some non-response.

Source:
ACT student information section. See note 2.

Staffing new courses and sections

The majority of Michigan's high school principals were required to add classes and sections to accommodate increased enrollment in the core subjects outlined by the MMC. Of the 231 principals who responded to this question in the online survey, only 22 percent reported that enough classes had been offered already, while 41 percent stated that new courses had been added, and 57 percent stated that new sections of existing courses had been added (respondents were allowed to select more than one answer). Interestingly, schools with lower poverty levels were more likely to need new courses than those with higher poverty levels. While this may seem counterintuitive, schools with higher poverty levels tend to be those that are already subject to closer supervision and assistance, and thus were in a better position to meet the new standards.

Finding qualified teachers

The need to add courses and sections to cover higher enrollment in core subject areas drove school principals across the state to hire new teachers. Finding qualified teachers was sometimes a challenge. A 2008 study by Keesler et al., anticipating that the MMC would drive teacher shortages, suggested that up to 25 percent of schools in the state of Michigan could have a potential undersupply of teachers in mathematics, compared with 7 percent in English, 5 percent in science, and 4 percent in social studies. In addition, Keesler suggested that these schools would tend to serve larger numbers of students than the state average. Of the administrators surveyed in 2009, 15 percent indicated that they were faced with the challenge of an insufficient number of qualified teachers. In addition, principals of smaller schools and schools with higher concentrations of poverty seemed to have the greater challenge with insufficient numbers of teachers. Those who indicated a challenge with staffing had, on average, 539 students compared to the average of 810 students in schools without an indicated challenge. Also, 30 percent of schools in the highest poverty quartile indicated a staffing challenge, compared to only 5 percent of those in the lowest poverty quartile.

Meeting content expectations

Developed concurrently with the Michigan Merit Curriculum were new High School Content Expectations (HSCEs) which outlined specific content to be covered in each core course to provide some measure of uniformity across the state (Michigan Department of Education, 2006a). In the online survey, 224 principals reported on the level of difficulty teachers experienced in aligning their courses to the newly established state content areas. While 54 percent said that their teachers had not had difficulties aligning their courses to state standards, 39 percent reported some difficulties and 7 percent reported more extensive difficulties. Again, differences were noted for specific demographic populations. Principals in urban locations were less likely to report teacher difficulty with alignment, while principals in rural locations reported the most difficulty.

Getting students up to speed

Over half of the principals surveyed (55 percent) indicated that one of the largest challenges they faced was in regards to student preparation entering high school. These principals indicated that students entering their schools did not have the prerequisite knowledge and skills to be immediately successful in the MMC without substantial remediation and support. A comparison of Michigan Merit Examination (MME) scale scores in math showed that schools that indicated an insufficient number of qualified teachers and poor student preparation had lower average scale scores and more students living in poverty. Schools with more students living in poverty also tended to indicate an increase in course rigor, which might, over time, address the insufficient student preparation.

Many principals also indicated that a longer period between passage of the legislation and enactment would have been beneficial to students. When the MMC legislation was passed, the first group subject to its requirements was already in eighth grade. As a result, while high schools had time to build higher level courses into their curricula, middle schools had no opportunities to increase student proficiency in key areas, such as math. These principals claimed that as the MMC continues and middle schools begin to feel pressure to reform, student proficiency when entering high school will increase, making it



easier to meet the requirements of the curriculum. However, given the relatively small movement in student proficiency in the middle grades over the last several years, it is difficult to discern whether this is possible without major interventions at the middle school level.

Leaving room for electives

Because the MMC requires so many specific courses, it places constraints on the number of electives students can feasibly take during their high school careers. School schedules, which are determined locally, generally have students taking six to eight courses. With this range, the MMC dictates between 55 and 75 percent of the courses students take during their high school careers, leaving room for only one to three electives per year. Here, “electives” refer to any course not specifically outlined in the MMC which includes courses like band, orchestra, choir, debate, theater, psychology, and creative writing.

Being flexible

While this was not a question on the online survey, open-ended responses indicated some concern about the procedures for accommodating students with special needs, pointing out that they are ambiguous and difficult to implement. While the MMC is restrictive, it does leave room for some flexibility, allowing for the creation of a Personal Curriculum (PC) for students who may have trouble completing MMC requirements. In addition, the MMC allows for the elimination of specific requirements for students who have an Individualized Education Plan or students who have transferred in from out of state, reduction of the Algebra II requirement in some cases, substitution opportunities, and ways to opt out for students who can demonstrate proficiency in required subjects.

Ensuring student success

Many fear that failure rates will increase substantially as more students are forced to take more challenging courses. Preliminary data from Macomb County suggest that failure rates have not increased as much as feared, even as students take more rigorous courses. As cohorts continue to progress through the MMC, however, districts will need to watch course completion and graduation rates carefully.

Finding the resources

While at least some challenges were identified for the vast majority of schools, many principals consistently pointed to limited financial resources as a barrier to effective implementation. Principals noted that high poverty schools and districts not only have many students who are not academically prepared to succeed in the rigorous MMC courses, but also have lower per-pupil spending and less ability to generate revenue locally relative to more affluent peers (Summers-Coty, 2007). In addition to financial resources, physical resources such as classroom space and computer access also present problems for schools throughout the state. Principals in both urban and rural schools reported problems related to non-financial resources. For example, while urban schools in this survey reported challenges meeting the regulations of the online learning experience mandate of the MMC, rural schools reported challenges with insufficient classroom space. More generally, the survey responses suggest that school location and size affect implementation challenges.

Responses to MMC Pressures

Schools have tried different strategies to meet the requirements of the Michigan Merit Curriculum. While many principals have stated that it is too early to see if these tactics were successful, the changes that schools implemented are summarized below.

Scheduling Changes

Given that the MMC placed much higher constraints on student schedules than previous curricula, many schools opted to alter their schedules to provide more opportunities for students to earn credits by expanding the number of courses they can complete in any given year.

- *Trimester System:* Many high schools adopted a trimester calendar in lieu of a semester system. This switch has several benefits. Since the trimester system can allow students to take more classes than the semester system, switching to a trimester system can help save room for electives in students' schedules and give students who fail a course the opportunity to retake that course in the same year without needing to spend an extra year (or years) in high school.³

- *Additional Class Periods Per Day:* While switching to the trimester system was a more common strategy, a few schools adopted a seven-hour day instead. Like the trimester system, this tactic allows students to take a greater number of courses, including more electives or academic support classes.⁴
- *Block Classes:* A few schools have started block classes to help students meet Michigan Merit Curriculum standards. These block classes⁵ are usually for English and math, especially algebra. At some schools, only struggling students have block classes and these block classes frequently incorporate study skills.
- *Changing Course Sequence and Timing:* Some schools changed the sequence and timing of courses. For example, some schools opted to offer geometry before Algebra I (it is traditionally offered after Algebra I) to reduce the amount of re-teaching occurring in Algebra II on Algebra I content. Others opted to offer some courses earlier (in middle school) or to provide a longer time to complete the courses.

New and Modified Courses

Even though the goal of the MMC was to encourage students to take more rigorous courses already being offered, many schools created entirely new courses to support students as they completed the requirements of the curriculum.

- *Two Year Algebra II:* One frequent response to the Algebra II and four-year math requirement was to offer Algebra II as a two year course. Doing so slows the course pace, which can reduce the number of students struggling to meet the new requirement.
- *New Math and Science Courses:* To help students meet the standards, many schools added new math and science courses, such as personal finance and conceptual physics. One school incorporated statistics into all courses to satisfy the senior math requirement.
- *More Advanced Placement Classes:* While less common than adding new math and science classes, some principals mentioned that their schools increased Advanced Placement course offerings, especially for junior and senior electives.
- *Integrating Online Learning Requirement:* Though many schools mentioned the benefits of online classes, some tried

to fulfill the online learning experience requirement by integrating it into existing courses.

- *Online Learning:* Some schools expanded course offerings using online courses so that students could fulfill all needed electives through programs such as Apex or Nova Net. Online classes were also frequently used for credit recovery. A popular credit recovery program that many schools adopted is E2020.

Additional Support for At-Risk Students

A number of schools indicated that they were adjusting to the MMC requirements by offering extra support for those students deemed most at-risk of failure or dropouts. Specific strategies are outlined below.

- *Early Identification of At-Risk Students:* Some high schools are increasing communication with elementary and middle schools so that future incoming high school students are more prepared to begin the Michigan Merit Curriculum and high school staff are more aware of which students may need additional support.
- *Student Counseling, Mentoring, and Tutoring:* Many schools offered additional student counseling, especially for at-risk students. These interventions have taken a few different forms, including transition programs, tutoring, mentoring, interventions, and remediation opportunities. All of these strategies try to intervene early to help struggling students and provide academic support.
- *Special Classes for At-Risk and Failing Students:* Many principals also reported additional classes for at-risk and failing students. These included academic support classes, guided academic classes, remediation classes, credit recovery classes, and focus/study skills classes.
- *Summer School:* Several principals mentioned that summer school was another way that they were helping students adjust to the Michigan Merit Curriculum.

Student and Parent Outreach

Some principals were proactive about spreading information about the new graduation requirements and sharing



opportunities for additional support to ensure better cooperation with students and their families.

- *Outreach to Parents and Students:* Several principals mentioned doing outreach with students and parents through initiatives such as freshman parent orientations.
- *Letters Suggesting Alternative Education:* At some schools, families were informed of other educational opportunities that might be better suited for their children's needs.

Teacher Support and Changes in Teaching Methods

The new graduation requirements also inspired changes in how teachers instructed their students, planned their lessons, and were trained.

- *Test Preparation and Continuous Assessments:* As part of the transition to the Michigan Merit Curriculum, many schools are developing common assessments, and, in some cases, developing databases to better record student performance. Furthermore, assessments are becoming more common, as are classes related to test preparation, including some specifically targeted toward the ACT and MME.
- *Common Planning and Support:* Many school principals reported more common planning of curricula, both within and across academic disciplines. To facilitate common planning, districts and schools have helped allocate time for teachers to meet and work together. Teachers have also generally begun to support each other more. There is also a trend toward adopting the “Professional Learning Communities” model, which encourages teachers to share best practices.
- *Team Teaching:* Many school principals also reported an increase in team-teaching in order to help special education students. This strategy usually involves partnering a general education teacher with a special education teacher for classes with a combination of general and special education students.
- *Professional Development:* Many principals reported additional teacher training in preparation for the Michigan Merit Curriculum.
- *New Textbooks:* Some schools also mentioned that they need to invest in new textbooks to better implement the Michi-

gan Merit Curriculum. One principal shared that the school spent \$250,000 on textbooks. Another principal mentioned that when school staff were realigning curriculum, they also purchased new textbooks where necessary. In particular, one principal mentioned that a new high school math textbook series had been needed.

In Their Own Words

Open-ended questions in the survey of high school principals revealed that administrator attitudes to the Michigan Merit Curriculum are mixed. Some principals expressed enthusiastic support for the curriculum. One volunteered, “I fully support the higher course standards and see it as a way for all of our students to be successful at some point in the future.” This administrator seemed to agree with legislators who crafted the standards, stating that, “Our culture has changed from a manufacturing base to an information/service based economy. If we do not prepare our students for this kind of global economy, we are only shortchanging them.”

A portion of administrators expressed frustration with the new standards. One principal wrote that the MMC had taken local control from school districts and “created a “one size fits all” approach to education in Michigan.” Another shared the concern that the MMC was expecting too much of students and teachers. “It is unrealistic to believe that the State can legislate students to pass Algebra II and other more advanced classes. You cannot legislate student achievement!”

By far, however, most administrators indicated that they supported more stringent graduation requirements, but felt that changes in implementation were necessary including better funding, and the addition of other curriculum and certification tracks. Among the suggestions from this group included developing “different pathways, so students who have differing learning styles have the ability to graduate from high school with a state endorsed diploma,” and providing quality end-of-course assessments for every MMC class that are aligned to the ACT. This strategy, pointed out the administrator, “would allow us to work backward to create proper pacing guides and concept

maps for each course. As it stands, Districts are creating their own assessments—many of which are not of high quality and their results on the MME show it.”

One principal pointed out that the MMC was, “Too politically motivated—decisions were made because lawmakers wanted Michigan to lead the nation with respect to academic requirements, but applying these requirements to all students is not necessarily in the best interest of all students.” This administrator felt that the Personal Curriculum component of the MMC could stand to be improved considerably. “While the idea behind it is a good one, the practicality of its implementation is not there.”

Finally, an administrator in favor of the MMC was worried about the constraints it placed on students pursuing their own talents and interests. “For the most part, this is an excellent change for our kids and our state,” said this administrator, but, “...We lose out when students can’t take art and music. Our state and our country suffer because of lack of creativity and innovation.” This concern might also be extended to debate, economics, sociology, and the many other courses not covered by the MMC.

Conclusions

This report describes some of the challenges that Michigan schools face in implementing the rigorous course requirements associated with the MMC. While it is still too early to tell how schools will meet these challenges, the findings presented above raise concern about the ability of disadvantaged schools to effectively implement the new mandates. At the same time, the findings highlight the many creative ways in which teachers and administrators are attempting to adapt to the new regime. As the first MMC cohort progresses through its senior year in 2010-2011, state and district leaders will need to closely monitor student success rates. And moving forward, educators and researchers should engage in a systematic and comprehensive evaluation of the policy, including an assessment of various strategies to increase student success.

¹ For example, responding principals worked in schools with an average of 34.4 percent of students qualified for free or reduced price lunch while non-responding principals worked in schools with an average of 39.4 percent of students qualifying for subsidized lunch. Overall, 39.4 percent of the 604 principals contacted responded to the survey, which representing 27 percent of all 892 public high school principals in the state. For more information on the methodology and results of the survey, see Byrd and Langer (2009) at www.closup.umich.edu.

² Even though the state of Michigan does not maintain public records at a state level about which courses students are enrolling in and how many complete each course series, this information can be obtained using data released from the ACT. Since 2007, every eleventh-grader in the state of Michigan has been required to take the ACT as part of the Michigan Merit Examination. While completing the ACT, students fill out an informational section about which classes they have taken and expect to complete by the time they graduate. By examining the results for the graduating class of 2009, we can begin to develop a baseline understanding of how many students in the state of Michigan are already meeting the requirements of the Michigan Merit Curriculum. It is important to note, however, that many of these results come from 11th grade students in the spring, and ask about what courses they expect to complete by the time they graduate. As a result, some students may have expected to take particular course sequences that they did not complete, and other students may have completed course sequences that they did not intend to take. We should therefore take these results as a preliminary and cursory view of academic course-taking, rather than an exact measure which would require detailed transcript studies.

³ Trimesters can increase the number of classes that students take by allowing them to complete courses that previously lasted a full academic year in just two trimesters, thus decreasing the amount of time students have to learn the material. Students could then begin a new course sequence or enroll in an elective class during the third trimester. Additionally, elective courses that were previously one semester long could now take only one trimester, allowing students to enroll in three shorter elective courses instead of two.

⁴ As is the case with trimesters, less classroom time to complete the same amount of material is the trade-off for increasing the number of class periods per day.

⁵ Block classes typically take two consecutive class periods per day instead of one.



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