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The Michigan Merit Curriculum and Teacher Compositional Change

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Introduction and Purpose

In the spring of 2006 the state of Michigan enacted the Michigan Merit Curriculum (MMC) with the intent to increase the rigor of student course-taking, improve student performance, and increase college matriculation rates. This policy brief focuses on corresponding changes in the composition of teachers in Michigan high schools from the time period prior to the introduction of the MMC to after implementation. Because schools were required to offer more rigorous coursework for students, they may have also needed to hire more teachers to teach the new courses or otherwise respond to the demands of the reform. Our goal is to understand how schools have managed the changing human resources requirements associated with the MMC as a way to contextualize other findings about changes in student course-taking, academic performance, and variation in district outcomes.

To answer these questions, we use state administrative data from the Registry of Educational Personnel (REP) about teacher hiring and personnel assignments from 2004 to 2011.[1] Following convention in the literature, we report student-teacher ratios in this brief. However, it is important to note that while these ratios represent statewide access to different kinds of teachers, they do not indicate actual class sizes.

Findings

In Table 1 we present an overview of the distribution of full-time high school teachers compared to the number of students enrolled in high school between 2004 and 2011.[2] Over this time period the number of full-time high school teachers decreased from 19,390 to 15,486 (a total decrease of 20 percent). However, the corresponding decline in total student enrollment was only 11 percent. This means that because the proportion of teachers declined more rapidly than the proportion of students, student-teacher ratios increased from about eighteen students per teacher (18:1) in 2004 to about twenty students per teacher (20:1) in 2011 (for full-time high school teachers).
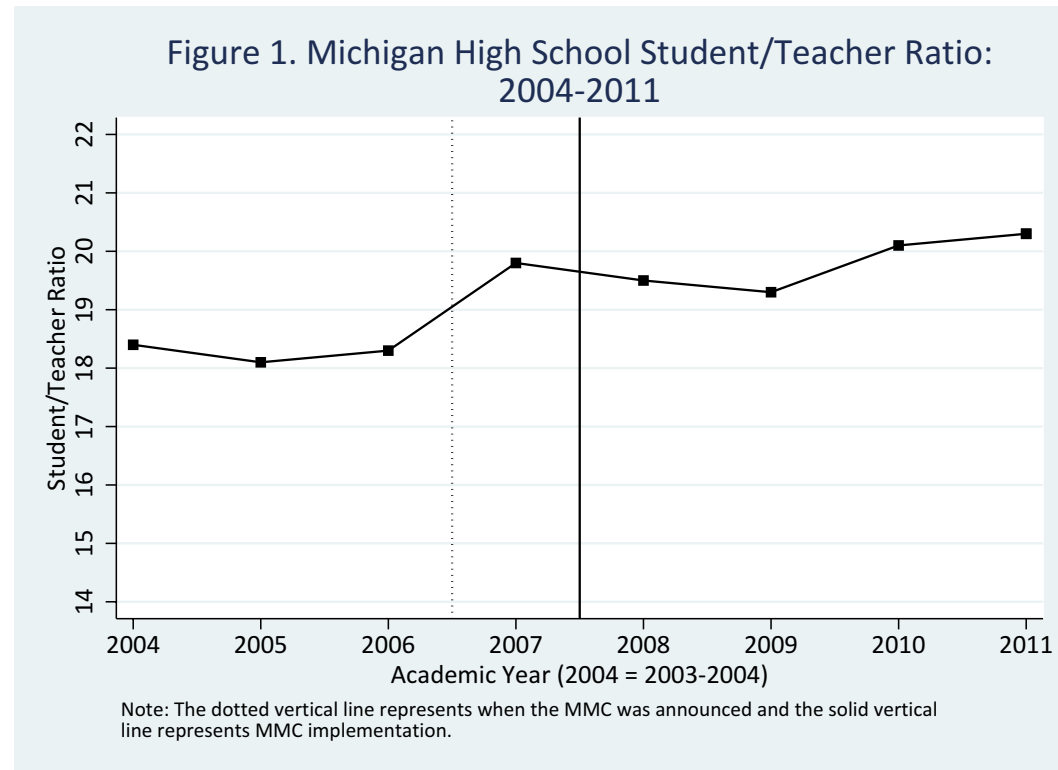
Table 1

High School Teachers in Michigan, 2004-2011

Year	Full-time High School Teachers	High School Students	Student-Teacher Ratio
2004	19,390	355,961	18:1
2005	19,685	355,439	18:1
2006	19,571	358,591	18:1
2007	17,595	349,003	20:1
2008	17,552	341,565	19:1
2009	17,186	331,569	19:1
2010	15,990	320,998	20:1
2011	15,486	315,139	20:1

Findings (continued)

Figure 1 illustrates how changes in the student-teacher ratio correspond to the implementation of the MMC. Just prior to the MMC rollout, between 2006 and 2007, there was an especially sharp increase in the student-teacher ratio, from 18:1 to 19:1 for full-time teachers. This jump occurred during a time when high school student enrollment declined by 3 percent, relative to a 10 percent reduction in full-time high school teachers. The full-time teacher-to-student ratio rises again for full-time teachers to over 20:1 in 2011.

Figure 1. Michigan High School Student/Teacher Ratio: 2004-2011

Note: The dotted vertical line represents when the MMC was announced and the solid vertical line represents MMC implementation.

In addition, with the implementation of the MMC, schools also focused on hiring teachers in the MMC core academic areas. Figure 2 shows that from 2004 to 2011, the number of teachers teaching MMC core academic subjects (mathematics, science, English, social studies,[3] and world languages) remained relatively steady as did the number of individuals teaching both MMC and non-MMC (i.e., mixed) courses. During this same period, however, the number of teachers teaching only non-MMC subjects declined. Specifically, the proportion of MMC teachers increased from 58 percent in 2004 to 71 percent in 2011, while the proportion of non-MMC and mixed teachers changed from 41 percent in 2004 to 28 percent in 2011. These figures suggest that districts shifted resources to meet the extra teaching demands imposed by the MMC.

Figure 2

Number of Full-Time High School Teachers by MMC Core Academic Subject, 2004-2011

Note: Dotted lines indicate announcement and implementation of the MMC, respectively.
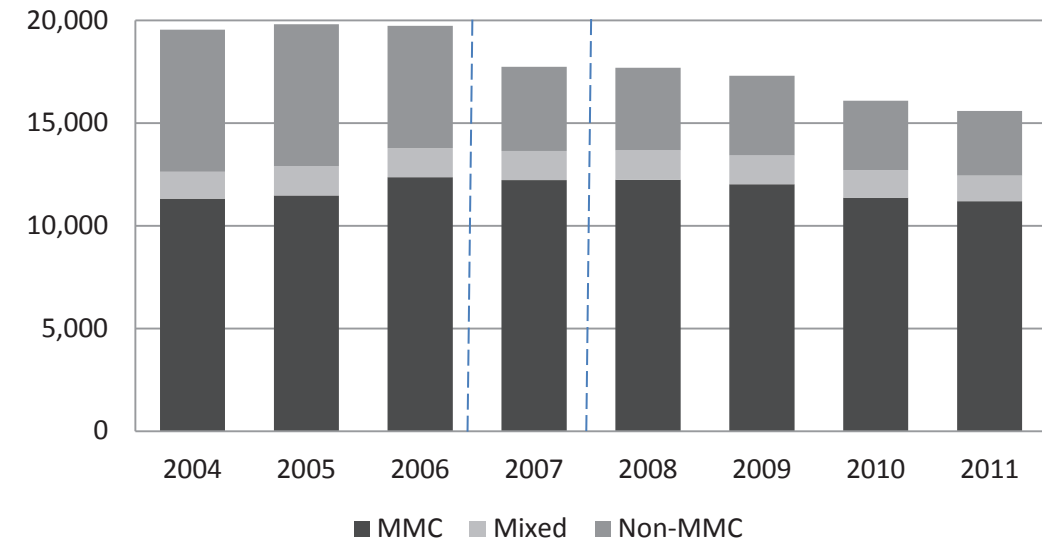
Figure 3 shows how these trends in teacher levels translated into student-teacher ratios. The student-teacher ratio for individuals who taught MMC subjects exclusively decreased from 31:1 in 2004 to 28:1 in 2011. In contrast, the student-teacher ratio for all other full-time high school teachers increased from 43:1 in 2004 to 72:1 in 2011.

Figure 3

Student-Teacher Ratios: MMC-Teachers and Other Teachers

Note: Dotted lines indicate announcement and implementation of the MMC, respectively.
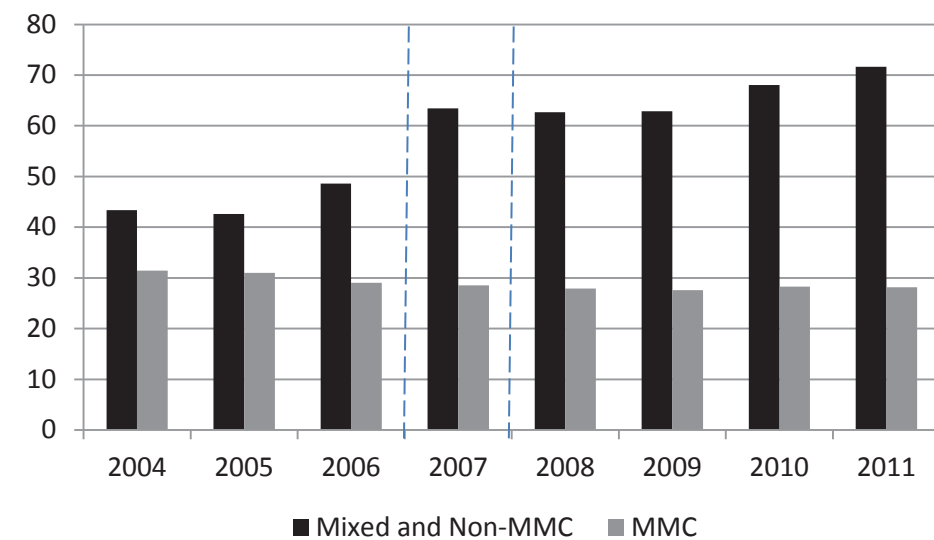
Conclusions and Next Steps

Between 2004 and 2011, the overall number of high school teachers in Michigan fell. However, with the introduction of the MMC it appears that schools and districts focused their limited resources on individuals who taught core academic subjects. Even as overall student-teacher ratios were increasing, the student-teacher ratio among teachers of MMC subjects exclusively dropped. These changes suggest that students statewide may have gained greater access to teachers of MMC subjects, which may enhance the student experience in two ways: (1) students may experience more individualized attention in certain courses; and/or (2) students may have access to a greater variety of MMC courses, as course offerings within MMC academic subject areas expand. At the same time, one consequence may be that districts are shifting focus away from other subjects that are not required under the MMC.

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[1]   For more detailed information about our base analytic sample, please consult the Technical Appendix (a separate document).

[2]   We define "full-time" high school teachers as having greater than 99 percent of their teaching assignment in a high school.

[3]   Social studies includes United States history, world history, world geography, economics, and American government.