



College Eligibility of MMP Students

Today's high school graduates must possess the skills and knowledge to adapt rapidly to the ever-changing landscape of a knowledge-based economy. According to the Education Commission of the States (2005), students now need at least two years of postsecondary education to be successful in a workforce that requires advanced skills. Thus, for today's students, there is little difference in being "workforce ready" versus "college ready". College preparation is therefore a necessity in ensuring that today's high school students are prepared for life in the 21st century.

In Year 2 of the initiative, several interview participants at the MMP districts indicated they are considering revisions to graduation requirements because of their involvement with the initiative. Many interviewees talked about their districts being intentional about encouraging students to enroll in more math courses in high school, but admit that no official changes have been made to graduation requirements for next year.

As part of the program evaluation for the Microsoft Math Partnership (MMP), evaluators collected data on the graduation requirements of each MMP district and determined how many districts have graduation requirements aligned with college entrance requirements by subject area. Current entrance requirements to a Washington four-year college include four years of English, three years of Mathematics (including higher level math), two years of Science (including one lab science), two years of Social Studies, and two years of World Language. In general, MMP district graduation requirements are not aligned with college entrance requirements. As of 2009, only two of the eight partnership districts required three years of mathematics (see Figure 1).

Six of the MMP districts require fewer math courses than is necessary for entrance into a four-year university. In contrast, all eight districts require students to take at least three years of social studies. The State Board of Education recently revised high school graduation requirements. As of 2013, high schools must require students to take at least

three years of mathematics. Because the MMP initiative is concerned with college and workplace readiness, it is anticipated that partnership districts will revise their graduation requirements before 2013. Students not obtaining the necessary credits in math and world language courses is likely a significant reason why some students are not able to apply to a four-year college.

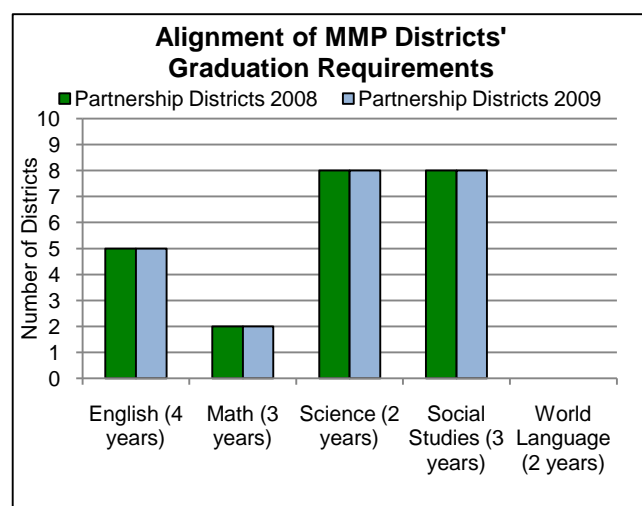


Figure 1. MMP Districts' 2008 and 2009 High School Graduation Requirements by Subject

In addition to analyzing graduation requirements from each district, evaluators also obtained transcripts from all 12th grade students for the 2006-2007 and 2007-2008 school years to determine how many students meet the requisite math courses

for admittance to a Washington four-year college. A trained team of researchers, college admissions specialists, and school counselors analyzed the transcripts to determine if the courses taken met the Washington State four-year college and university admission standards. Although there is some variation among colleges, the general math requirements include three of mathematics, which must include an introduction to trigonometry. Usually advanced algebra or integrated mathematics III satisfied this requirement.

For the purpose of this evaluation, enrollment patterns were analyzed for mathematics only. The percentage of college eligible students (math only) stayed consistent from 2006-2007 to 2007-2008, indicating that many students graduating from these schools continue to not be eligible for college admittance by Washington State HEC Board standards because of course-taking deficiencies (see Figure 2). Overall results indicate that while the graduation requirements meet the state's minimum requirements for a high school diploma, requirements do not align with the colleges' admission requirements.

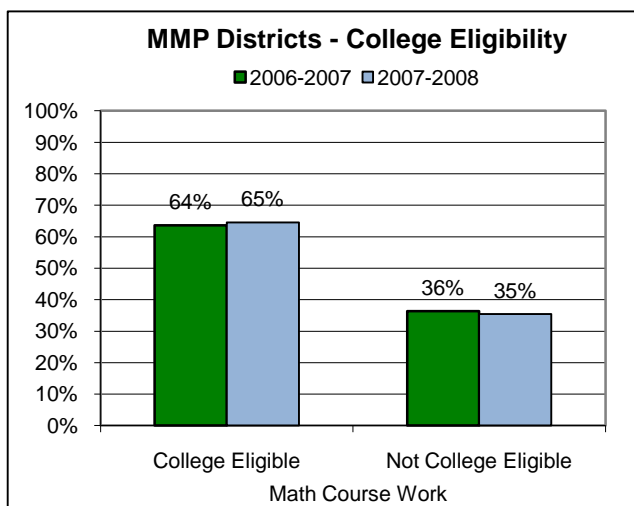


Figure 2. Math College Eligibility of 2007 and 2008 Seniors

Overall, results show that changing the number of math credits required to graduate from high school does not necessarily ensure that students will graduate college eligible. Two districts already required three credits of math, but many students fulfilled this requirement with lower-level math courses. To improve, districts must also specify the level of math classes required. This will ensure that more students graduate with the math skills required to succeed in an increasingly technical society.

In addition to ensuring students have math skills, students must also understand mathematics concepts at each level so that they may continue to progress to higher levels of mathematics without remediation. This requires vertical alignment of math content and instruction through elementary, middle, and high school math courses. Partnership schools are currently in the early stages of curriculum alignment. In most cases, math coaches at each school are involved in the process of curriculum alignment. One teacher talked about the coach's role in this process by stating,

**"We had a class on aligning standards with the CMP curriculum. The math coaches coordinated that piece...I like the idea of aligning tests with the curriculum."
~ Teacher**

New curriculum adoptions have required alignment to state standards. However, because of recent revisions to state standards, several individuals acknowledged that they have delayed this process.

A few districts are revisiting their course offerings and making programmatic changes to allow for double dosing in mathematics. Instead of offering struggling students a single low-level intervention course, these districts intend to offer a standard grade-level math course combined with a support class. Administrators and coaches in these districts expressed hope that these courses will bring students up to grade level. They also hope that these revisions will promote increased teacher collaboration. In many of the districts, students are also supported by math focused computer programs. Coaches from some of the schools talked about finding computer programs to help supplement the core curriculum. Schools are using the 'I Can Learn' computer program, as well as, Gizmo, Cognitive Tutor, and SuccessMaker.

Analysis of college eligible students in MMP districts indicates the need to help more students complete higher level mathematics courses. Current efforts to improve curriculum and instruction alignment show positive initial feedback from teachers and administrators in helping all students understand math at a more rigorous level.

Reference:
Education Commission of the States. (2005). State strategies for redesigning high schools and promoting high school to college transitions. Denver, CO: Author. Retrieved 12/29/05 from www.ecs.org.