Milwaukee Mathematics Partnership
Phase I and Phase II

MMP Definition of Student Success

A major goal of the MMP is to ensure all students, PK-16, have access to, are prepared and supported for, and succeed in challenging mathematics, as envisioned in the Comprehensive Mathematics Framework.

As measurable proxies for student achievement, the MMP uses scores on district benchmark assessments, the Wisconsin Knowledge and Concepts Examination (grades 3-8 and 10), and college placement tests.

MMP Research and Theory of Action

Conceptual Framework

- Strengthen teacher understanding of the mathematics they teach to students
- Develop aspects of Mathematical Knowledge for Teaching (MKT)—mathematical representations & connections, common student misconceptions, how students best learn mathematics
- Utilize principles of formative assessment in mathematics classroom practice

Research Methodology

Use of Hierarchical Linear Modeling (HLM) to analyze value-added relationships of implementation of MMP principles, professional learning, teacher MKT, and student achievement

Roles and Responsibilities of MMP Partners

**STEM Faculty**
- Develop IHE preservice math courses
- Ensure rigor in teacher leader & teacher PD sessions and in district mathematics assessments

**K-12 District**
- Provide support for master teachers in math leadership roles (MTL & MTS)
- Ensure MMP connections to classroom practice and district policies

**Education Faculty**
- Support district mathematics leadership
- Ensure high-quality mathematics pedagogy and curricular relevance in coursework and PD sessions

**Evaluators**
- Evaluate and suggest modified theories of action
- Enable and assist in collaborative data collection between partners

Challenges

- Linking district teacher & student databases
- Linking district & higher education databases
- Linking teacher professional development (PD) to student achievement
- Competing initiatives and inconsistent messaging within the district
- Lack of growth in student achievement in high school

Questions

- How have projects examined links between teacher PD and student achievement?
- What Math Teacher Leader (MTL) models have been implemented in districts and to what extent have these models proved effective in increasing student achievement?
- What successful strategies have projects implemented to improve student mathematics achievement in high school?