Math in the Middle Institute Partnership (M²) is to create and sustain a University, Educational Service Unit (ESU), Local School District partnership with the capacity to educate and support teams of outstanding middle level (Grades 5 – 8) mathematics teachers (122 total) who will become intellectual leaders in their schools, districts, and ESUs. By investing in high-quality teachers, our long-term goal is to improve K-12 student achievement in mathematics and to significantly reduce achievement gaps in the mathematical performance of diverse student populations. The work of the M² Institute is informed by and provides evidence-based contributions to research on learning, teaching, and teacher professional development. A focus feature of M² is our commitment to rural teachers, schools, and districts.

**Math in the Middle Institute Partnership (M²) will have three major components:**

- **The M² Institute**, a multi-year institute that offers participants a coherent program of study to deepen their mathematical knowledge for teaching and to develop their leadership skills;
- **Mathematics learning teams**, led by M² teachers and supported by school administrators and university faculty, which develop collegiality, help teachers align their teaching with state standards, and assist teachers in examining their instructional and assessment practices; and
- **A research initiative** that will transform the M² Institute and the M² mathematics learning teams into laboratories for educational improvement and innovation.

The M² Institute is: (1) enriching teachers’ mathematics knowledge; (2) assisting them in transferring mathematics knowledge into their classrooms; and (3) creating communities of professionals (K-12 and college) who work together as leaders to strengthen middle level mathematics courses and curricula in the middle level classroom. Strengthened by the knowledge and leadership skills gained in the M² Institute, M² teachers lead district and ESU efforts to improve mathematics teaching and learning by creating mathematics learning teams in which they mentor and coach their peers as they develop ways to enhance student achievement. The research agenda generates new evidence-based knowledge about mathematics teacher professional development.

**Intellectual Merit.** The PIs have extensive experience in mathematics teacher education and one of the most experienced mathematician-mathematics educator partnerships nationwide. The M² Institute will become a model for a content-focused professional development Institute that produces intellectual leaders with a deep understanding of the mathematics taught in the middle grades and the ability to lead school and district efforts to greatly increase student achievement in mathematics. Learning teams that combine the expertise of teachers and university faculty will ensure that the benefits of the M² Institute reach far beyond the original M² 122 middle school participants.

**Broader Impact.** Higher education needs successful models for faculty to work across colleges to improve teacher professional development and pre-service education. In Nebraska, the extensive engagement in teacher education by faculty and graduate students in a departmental culture that is supportive of educational activities will spark further change in the university culture and help develop a generation of mathematicians with a strong commitment to outstanding teaching, teacher education, and K-12 outreach. The commitment to support education in rural schools offers promise for contributing to a segment of our education community that has been neglected for too long.