

Math & Science Advisory Council Legislative Education Study Committee Meeting

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CORE UNDERSTANDINGS:

All children and youth are capable of learning mathematics when provided with responsive, rich, and rigorous opportunities to learn and make sense of the math. We are all math people.

Supporting students to develop a conceptual understanding of mathematics requires students to engage in productive struggle & to verbalize and model their sense-making.

There are evidence-based practices that all teachers can learn and refine to ensure children thrive learning mathematics; Such learning requires a seismic shift from traditional methods, and often supports teachers to heal their relationship with mathematics.

The Math and Science Advisory Council

“The Math and Science Education Act” was passed in 2007. The Act created in statute [[NMSA 1978 22-15E-1](#)]:

- The Math and Science Bureau in the Public Education Department and a statewide Math and Science Advisory Council (MSAC).

The purpose of the council is to advise the Math and Science Bureau:

- make recommendations regarding the statewide strategic plan for improving mathematics and science education,
- advise the Bureau, the PED and the legislature regarding appropriations for math and science education, administration, resources and services, including programs for students and staff, and
- work with the bureau to determining the need for improvement in math and science achievement of public school students and make recommendations to the department on how to meet these needs.

MSAC is composed of twelve members appointed by the Secretary of Public Education for staggered terms of four years.

The council meets quarterly.

Current MSAC Members:

- **Angela Alderete**, Secondary Science Educator, Albuquerque Public Schools (Co-Chair)
- **Kersti Tyson**, Ph.D., Director of K-12 Education, LANL Foundation, (Co-Chair)
- **Cari Hushman**, Ph.D. Associate Dean of Research and Distance Ed. College of Education and Human Sciences, UNM (Secretary)
- **Nathaniel Evans**, Middle School Math Educator, Dean of Students, Taos Municipal Charter School
- **Kelsey Garner**, Geology Exploration Manager, Geology Exploration Manager
- **Tammy Gaudet**, Instructional Support Specialist K-12, Albuquerque Public Schools
- **Paulo Oemig**, Ph.D., Director, New Mexico Space Grant Consortium, NM NASA EPSCoR, NM State
- **Mónica Martínez-Archuleta**, Ed.D., K-12 STEM Outreach Specialist, Los Alamos National Laboratory
- **Allison Nannemann**, Ph.D., Assistant Professor, Dept of Special Education, UNM
- **Heather Summers**, NBCT, NMPMSE Board Representative, Senior Program Director for STEM, Project ECHO
- **Stephanie Thompson**, Engineer, Raytheon Technologies

Recommendations of the MSAC for SY2024–25

Teacher Preparation

Require all teacher preparation programs include a minimum of 3 hours of mathematics methods aligned to national standards.

Currently only traditional programs have this requirement. Alternative licensure and special education programs lack this requirement.

On-going Professional Learning

Require all mathematics teachers to participate in collaborative, on-going job embedded professional learning on mathematics content and pedagogy as part of maintaining their professional license.

Teacher Leadership

Ensure every elementary school has an instructional coach or math teacher leader with an Elementary Math Specialist endorsement to work with teachers during their professional day to plan, assess, reflect, and collaborate around their students' opportunities to learn and thrive as mathematicians.

**Creating A System of Teacher Professionalism
that Maintains a State and National Standard of Practice
for Teaching Mathematics to children and youth in NM.**

Current Math System

Math content requirements are inconsistent and insufficient. National standard (NCTQ) is 9 credits for elementary teaching license; current requirement for traditional elementary programs is 6 credits.

Teachers do not have consistent, systematic access to on-going professional learning to grow from novice to master teacher and to maintain a National Standard of Practice for teaching mathematics to children.

Not all schools have math teacher coaches with advanced training to coach mathematics;

Teacher Preparation

Access to methods/pedagogy aligned to National Standards of Practice is inconsistent; especially for teachers prepared in alternative licensure programs. Traditional elementary program requires 3 credits; Alternative Licensure 0 credits; Special Education 0 credits.

Teaching Profession

Minimal alignment between teacher preparation programs and school districts; Cooperating teachers' & Mentor teachers' practices and methods courses often lack alignment; Teacher prep & districts often lack alignment for how to teach mathematics.

Teacher Leadership

Approximately 97 EMS have been/are being prepared through NMSU (80) & MSA/NMHU (17) EMS programs.

Administrator Leadership

Teacher evaluation & systems are not aligned to National Standards of Practice. Administrators lack access on-going learning to be instructional leaders of mathematics

Desired Math System: Ensuring every student has access to the learning opportunities they need to thrive as mathematicians.

