



The Science & Mathematics Teacher Imperative (SMTI) is a collaboration of public university leaders working to catalyze action across sectors—state and federal governments, the business community, the K-12 community, and others—to adequately prepare teachers to teach science and mathematics in the 21st century. A·P·L·U's 218-member institutions and university systems, with their heavy involvement in research and education in the science, technology, engineering and mathematics (STEM) disciplines, are ideally positioned to make significant contributions to the critical needs for highly qualified and diverse science and mathematics teachers.

Through the Science and Mathematics Teacher Imperative (SMTI), leaders of A·P·L·U-member institutions commit to:

- Substantially increase the number and diversity of high quality mathematics and science teachers in middle and high schools.
- Identify the immediate and longer term needs for science and math teachers in their states.
- Build partnerships among universities, community colleges, school systems, state government and other stakeholders to address statewide needs for teachers on a sustained basis.

SMTI will provide technical tools and support to produce high quality science and mathematics teachers, including the following resources:

Promoting Institutional Change to Strengthen Science Teacher Preparation (Sci Teacher Prep)

The Sci Teacher Prep project, funded by NSF and hosted on MSPnet, is a three-year partnership between A·P·L·U, 27 institutions of higher education, and two discipline-based organizations, the Physics Teacher Education Coalition (PhysTEC/PTEC, an effort of the American Physical Society and the American Association of Physics Teachers) and the American Chemical Society. The project seeks to assess the impact of creating a national network of universities on strengthening teacher preparation as well as to understand the necessary and optimal conditions for institutional change by collecting quantitative and qualitative data from the 27 institutions of higher education as they implement strategies to strengthen their science teacher preparation programs. Lessons learned from this project will be shared with the SMTI institutions for further implementation.

Assessing the Need for Teachers

The Needs Assessment project will assist state policymakers and education leaders to rigorously evaluate their states' needs for middle and high school science and mathematics teachers, and their ability to meet those needs. The project will help states identify best practices in developing and implementing data systems that provide institutions with the necessary information to establish numerical goals for science and mathematics teacher production and effectiveness.

Identifying Leading Approaches

The Analytic Framework will be a user-friendly online resource that summarizes major components of leading practices of science and mathematics teacher preparation programs across the country. The Analytic Framework will contain information about promising practices in science and mathematics teacher recruitment, preparation, mentoring and development across universities. It will be an important resource for institutions attempting to benchmark or launch new efforts.

For more information please contact:

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