

**Annual Report for Period:**02/2005 - 01/2006

**Submitted on:** 11/18/2005

**Principal Investigator:** Tucker, Alan C.

**Award ID:** 0230847

**Organization:** Math Assn of America

**Title:**

Preparing Mathematicians to Educate Teachers

### Project Participants

#### Senior Personnel

**Name:** Tucker, Alan

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

**Name:** Moore, Lawrence

**Worked for more than 160 Hours:** No

**Contribution to Project:**

Dr. Moore's role has been reduced because website knowledgeable staff at the MAA headquarters and at the U Arkansas PMET office have been able to handle the initial website work fo the PMET project. His role may increase later in the project.

**Name:** Madison, Bernard

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

**Name:** Dubinsky, Ed

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

**Name:** Lewis, William

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

PMET regional coordinator and co-leader of Nebraska workshop

**Name:** Narayan, Jack

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

PMET regional coordinator and co-leader of Potsdam workshop

**Name:** Oliver, Dale

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

PMET regional coordinator and co-leader of California workshop

**Name:** Lien, Magnhild

**Worked for more than 160 Hours:** No

**Contribution to Project:**

PMET Regional coordinator

**Name:** Heaton, Ruth

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

PMET regional coordinator and co-director of Nebraska workshop

**Name:** Hirst, Holly

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

PMET regional coordinator and co-director of North Carolina workshop

**Name:** Royster, David

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

PMET regional coordinator and co-director of North Carolina workshop

**Name:** Stackelberg, Olaf

**Worked for more than 160 Hours:** No

**Contribution to Project:**

PMET regional coordinator

**Name:** Klarreich, Naomi

**Worked for more than 160 Hours:** No

**Contribution to Project:**

PMET regional coordinator

**Name:** Groman, Margaret

**Worked for more than 160 Hours:** No

**Contribution to Project:**

PMET regional coordinator

**Name:** Pearson, Mike

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

Project Manager at MAA Washington headquarters

**Name:** Pearson, J Michael

**Worked for more than 160 Hours:** Yes

**Contribution to Project:****Post-doc****Graduate Student****Undergraduate Student****Technician, Programmer**

**Name:** Trzeciak, Tami

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

Project administrator at the PMET project office at U Arkansas

**Name:** Hetzel, Sandy

**Worked for more than 160 Hours:** Yes

**Contribution to Project:**

Project administrator at PMET Workshop Office at Kent State

**Other Participant****Research Experience for Undergraduates**

**Organizational Partners****Other Collaborators or Contacts**

PMET project personnel have collaborated with leadership of, or made presentations of meetings of, the American Mathematical Society, the American Statistical Association, the Association of Mathematics Teacher Educators, Educator Trust's National Association of System Heads, and Project Kaleidoscope. PMET is collaborating with the Common Ground initiative of Richard Schaar from the Business Roundtable. PMET will be sharing its participant survey data with the Center for Learning and Teaching at Univ. of Michigan.

**Activities and Findings****Research and Education Activities: (See PDF version submitted by PI at the end of the report)**

Twelve summer workshops enrolling over 200 mathematics faculty to prepare them to educate future teachers. 3 HBCU's and one tribal college were among the workshop sites.

Minigrants to over 40 mathematics departments to improve instruction in the mathematical education of teachers.

Overseeing an essay project to engage the research mathematics community in issues in K-12 mathematics instruction..

**Findings:**

PMET is finding widespread interest among mathematics faculty in reworking courses for future teachers and adoption of the MET Report recommendations. In the two rounds of proposals of 80 mini-grant applications were received mathematics departments from 20 states.

**Training and Development:**

The 2005 PMET summer workshops trained 205 mathematics faculty to provide better mathematical instruction to future teachers.

**Outreach Activities:**

Collaboration with the NSF CLT at Georgia/U Michigan to co-sponsor activities for mathematics faculty who teach future teachers.

Collaboration with the Common Ground initiative of Richard Schnaar of the Business Roundtable. A supplement to the PMET grant is funding a Common Ground conference this winter.

Collaboration with the Inst. of Advanced Studies's Park City Mathematics Institute to support meetings on school mathematics that bring together school teachers, math educators, and mathematicians.

**Journal Publications****Books or Other One-time Publications****Web/Internet Site****URL(s):**

[www.maa.org/pmet](http://www.maa.org/pmet)

**Description:**

The PMET website has extensive information about PMET and its activities. In the coming year, materials for math professors from PMET workshops and other resources and website links will be added to make the PMET website a one-stop source for resources to enhance mathematics instruction for future and practicing teachers.

**Other Specific Products**

## Contributions

### **Contributions within Discipline:**

PMET's goal is promote improved mathematical education of teachers and raise the attention given to the mathematical education of teachers in the mathematics community. The PMET summer workshops and minigrants are supporting efforts by mathematics faculty to improve teacher education in their departments. PMET conference presentations, minicourses, and panels are increasing the visibility of mathematics education in coordination with other interested parties. The PMET supported Park City essay project is engaging leading research mathematicians, such as Dick Askey, Roger Howe, Andrew Gleason, James Milgram, and HH Wu, in efforts to rethink the K-12 mathematics curriculum in concert with math educators and school teachers.

### **Contributions to Other Disciplines:**

#### **Contributions to Human Resource Development:**

Improving the mathematical instruction in K-12 classrooms is perhaps the most important way to strengthen the future Science, Math, Engineering and Technology workforce in this country. International comparisons highlight the weakness of mathematical education of American students. Employers cite the superior quantitative skills of workers in other Asian countries, along with lower labor costs, as a major incentive for exporting technology-based jobs to that part of the world.

Surveys consistently indicate that the U.S. public believes that a highly qualified teacher is by far the most important factor in improving K-12 education.

#### **Contributions to Resources for Research and Education:**

See earliler comments about website resources.

#### **Contributions Beyond Science and Engineering:**

Improving the mathematical education of teachers is critical to improving the mathematical instruction in schools which is critical to helping the U.S. maintain a workforce that is technical competitive in the 21 century.

## Special Requirements

**Special reporting requirements:** None

**Change in Objectives or Scope:** None

**Unobligated funds:** less than 20 percent of current funds

**Animal, Human Subjects, Biohazards:** None

### Categories for which nothing is reported:

Organizational Partners

Any Journal

Any Book

Any Product

Contributions: To Any Other Disciplines

