



THE MATHEMATICS EDUCATION CENTER
at George Mason University
<http://gse.gmu.edu/centers/cscvm/main.html>

Focusing on the Study of Concrete & Virtual Manipulatives
George Mason University

CENTER NEWS
FALL 2004

**MEC Receives \$14.7 Million Funding from the
National Science Foundation**

Patricia Moyer-Packenham, Director of the Mathematics Education Center, along with colleagues Dr. Robert K. Yin (Lead-PI, Cosmos Corp.), Dr. Kenneth Wong (Co-PI, Vanderbilt), and Dr. Jennifer Scherer (Co-PI, Cosmos) received a \$14.7 million dollar contract award to conduct the Mathematics and Science Partnerships Program Evaluation (MSP-PE). The goal of the MSP-PE is to evaluate the MSP program in its entirety. The evaluation will assess the MSP program's impact as well as its contribution in advancing knowledge about mathematics and science education.

**Mathematics Education Leadership Program
New Cohort Begins Fall 2004**

The Mathematics Education Leadership Program is pleased to welcome a new group of students to the MEL Ph.D. and M.Ed. programs. This group began study during the fall 2004 semester. These students will have opportunities to collaborate on research projects, write for publication, and develop and deliver national and international conference presentations during their study in the MEL program. The cohort is made up of individuals with a variety of strengths and experiences in mathematics education and leadership. WELCOME new cohort students!

For more information about the MEL programs, students can visit the CEHD/GSE website or contact MEL program coordinator, Patricia

Moyer-Packenham for more information:
pmoyer@gmu.edu or (703) 993-3926.

**MEL Students and Alumni Making Positive
Change in Mathematics Education**

During the time that Mathematics Education Leadership students are enrolled in the program and following their graduation, they make significant contributions to mathematics education in a variety of leadership roles. Many MEL students begin the program as classroom teachers and, through their own personal initiative and professional development, they move into positions of leadership in school systems, universities, and other professional organizations. We are proud of their leadership accomplishments listed below:

- Johnna Bolyard – Senior Mathematics Specialist, Loudoun County Public Schools.
- Cheryl Gray – Middle School Mathematics Specialist, Spotsylvania County Public Schools.
- Vickie Inge – Co-PI of an NSF grant providing the model for the Mathematics Specialist licensure in Virginia and Mathematics Supervisor, Stafford County Public Schools.
- Tamie Lankey – Teacher Ambassador, Teach for Virginia.
- Monique Lynch – NCTM Director of Professional Development and Services.

- Lorraine Smith – Elementary Mathematics Specialist, Loudoun County Public Schools.
- John Staley – Coordinator of Secondary Mathematics, Baltimore County Public Schools.
- Jennifer Suh – Adjunct Faculty, Mathematics Education, George Mason University.

We congratulate our students and alumni on all of their successes!

A Productive Visit for Korean Scholar and MEC Center Director

During the 2003-2004 academic year, Dr. Hae-Ja Heo, Professor of Mathematics Education at Kwandong University, South Korea, visited and collaborated with American host and MEC Center Director, Patricia Moyer-Packenham. During the visit Drs. Moyer-Packenham and Heo worked with MEL Doctoral Student, Jennifer Suh, on research that resulted in the following publications on virtual manipulatives:

- Heo, H. J., Suh, J., & Moyer, P. S. (2004). Impacting student confidence: The effects of using virtual manipulatives and increasing fraction understanding. *The Journal of Educational Research in Mathematics*, 14(2), 207-219.
- Moyer, P. S., Suh, J., & Heo, H. J. (2004). The impact of virtual manipulatives on different ability groups: An exploratory study in four classrooms. *Unpublished manuscript*.
- Suh, J., Moyer, P. S., & Heo, H. J. (in press). Examining technology uses in the classroom: Developing fraction sense using virtual manipulative concept tutorials. *The Journal of Interactive Online Learning*.

MEL Faculty and Students Present at NCTM 2004

The annual NCTM Conference was held April 21-24, 2004, in Philadelphia, Pennsylvania. Several of our own Mathematics Education Leadership faculty and students presented the following sessions:

- Johnna Bolyard - Exploring Algebra with Virtual Manipulatives
- Patricia Moyer-Packenham & Deborah Niezgodá - Children's Patterns Using Concrete and Virtual Pattern Blocks
- Lorraine Smith & Cris Kasales-Gimenez - Learning to Measure with Student-Created Tools
- Jennifer Suh & Hae-Ja Heo - Investigating Fraction Concepts Using Virtual and Concrete Manipulatives

Doctoral candidates Johnna Bolyard and John W. Staley presented "Manipulating Success in Algebra with Virtual Manipulatives and Technology" at the NCTM Southern Regional Conference, New Orleans, LA, November 2004.

Center Funding Provides Resources for MEL Students

CONGRATULATIONS to Wendy Schudmak – recipient of the 2004-05 CEHD MEL Master's Degree Student \$500 Fellowship Award!

An important goal of the Center is to support students enrolled in the Mathematics Education Leadership program through their participation in the Center's externally funded research and teacher professional development activities. External funding has supported MEL students through awards and in a variety of activities including: instruction for summer teacher workshops, web page development, and research activities. These resources enable students to engage in professional activities that support their development in mathematics education leadership.