



Mathachusetts

Massachusetts Mathematics Association
of Teacher Educators

Affiliate of the Association of Mathematics Teacher Educators

Winter 2009

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Message from the President: Jenny Tsankova

Something Old, Something New, Something Borrowed, Something Blue!

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Is it just me, or does it feel as though everything is related to teaching mathematics these days? "Something old" -- all of the experiences I have collected; all of the strategies that work; the number games my students love; the mathematical tricks under my sleeve; that problem-solving book out of print I absolutely love and still use, even the gray hair under the new color.

"Something new" must be about the new administration with innovative initiatives the math education deserves; it is about going to that professional development opportunity we hope to rejuvenate us, motivate us, excite us, teach us something new; it is the "aha" moment I hope to have even when I retire; it is, no doubt, about the new generation of teachers and students who look so much younger to me every year; it must be about trying to learn "new tricks" such as placing my much younger-looking picture on my math facebook page; and it is definitely about the need to read "Twilight," the newest book our students read hoping to make math references; it is again a new year with new hopes, new math life-page to fill with improved penmanship.

"Something borrowed" is what I admire in others and I decide to try it in my own classroom; it is the

realization that I can present at a conference as well as somebody else; it is the recognition of a creative idea I can incorporate in my mathematical toolkit. Something borrowed is the core of the generosity of a mentor to a new teacher, the cooperating teacher to a student teacher, a conference presenter to the audience, our collective contribution to the mathematical education community to each and one of its members.

"Something blue" has always symbolized faithfulness, love, and loyalty. One becomes a teacher for the love of the profession, for the devotion to the students, for the passion to the subject matter.

There you go - I believe I can tell you any word and you can find a connection to mathematics education. Some people would call this "having a one-track mind." I call it true love!

I think it is beautiful to go on a lyrical digression especially when mathematics is concerned. And who else is going to do that anyway but us?! I invite you to use the forum of our "Mathachusetts" newsletter to express your mathematical inspirations in any form. The board of MassMATE wishes all of you a successful second half of the school year and we hope to see you at the Symposium in June!

Visit us at our on-line home!
www.MASSMATE.net



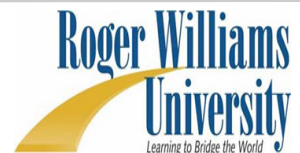
save the date!

It's time to think of June!

The third annual MassMATE Symposium and Luncheon will be held on June 9th, 2009 at Roger Williams University .

This year's theme is Effective Models of Professional Development

See more information at www.MASSMATE.net and on page 8.



Board of Directors of MASSMATE:

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MASSMATE'S Purposes and Goals

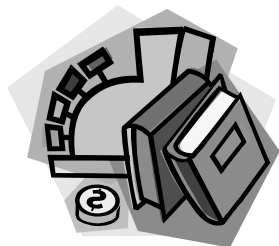
The Massachusetts Mathematics Association of Teacher Educators (MassMATE) is a nonprofit organization whose purpose is to provide a forum for mathematics teacher educators to communicate with each other and collaborate with other groups interested in the teaching of mathematics in the state of Massachusetts. Specifically, the goals of MassMATE are to:

- promote **leadership** among mathematics teacher educators;
- serve as a **forum** for ideas and resources in mathematics teacher education;
- encourage **research** related to mathematics teacher education;
- promote quality **undergraduate** and **graduate** programs in mathematics education;
- encourage and support professional development programs for **in-service** teachers;
- encourage and support professional development programs for **postsecondary faculty** involved in mathematics education;
- facilitate **communication and collaboration** among **professionals** involved in mathematics education and mathematics teacher education at all levels;
- facilitate **communication and collaboration** among members of educational **administrative** units, such as departments of mathematics and departments of education;
- coordinate activities and work collaboratively with **other associations** and organizations concerned with the preparation and professional development of mathematics teachers;
- work cooperatively with the **federal and state** agencies to enhance the mathematical, pedagogical, and clinical **preparation of teachers** of mathematics at all levels with respect to criteria for credentialing and licensing teachers in Massachusetts.

Share these with a colleague and have them join MassMATE today!

Treasurer's Report

Submitted by Tom Brady



Thanks to your participation in the spring MassMATE conference, and generous hosting by Roger Williams University, we were able to bolster our coffers to \$2,700.41.

We have big plans for how to use this money to improve our services to our members including an updated website and our version of a listserv to facilitate more communication between mathematics teacher educators. We also have been granted non-profit status by the federal government, and plan to apply for non-profit mailing status through the post office which will help lessen the cost of future mailings.

Look what's new at MASSMATE:

MassMATE is planning a complete overhaul of our organization's website to include more dynamic resources for our membership.

We are also setting up a listserv that you can join to discuss topics that are of interest to mathematics teacher educators.

Keep an eye out for these exciting new mediums in the coming months.

MCAS Reports for 2008

Submitted by Susan Looney - K-12 Liaison

Results of the 2008 MCAS have been reported, and 50% of all Massachusetts public schools have been identified as needing improvement in corrective action, or for restructuring under the federal accountability system. According to Education Commissioner Mitchell Chester, "Under a federal accountability system (NCLB) that raises the bar each year, it's not surprising that more of our schools have been identified. We have one of the nation's most challenging assessments and have set high standards for every child, but with good reason. Every one of our students deserves a top-notch education and to be properly prepared for college, career and life in the 21st century. These Annual Yearly Progress (AYP) results serve to highlight where we still have more work to do."

Districts and schools that fail to make AYP for two or more consecutive years face consequences that grow in intensity each year they remain on the list. Thirty-six percent of all schools have been identified this year based on performance in just mathematics and 17% for performance in both English Language Arts and

mathematics. This year there are 214 newly identified schools. Of these schools, 168 are located in non-urban districts and 103 are elementary schools. Commissioner Chester has outlined plans to provide greater support to districts and schools identified for improvement.

The impact of NCLB is something worth great consideration. The pressure of high stakes testing as half of the state of Massachusetts fail to meet AYP affects both teachers and students alike. As educators, we must continue to work towards improving the performance of all students, but must also not lose sight of best practices in education.



Membership Report

Submitted by Stan Dick—Membership Chair

This has been an exciting year for MassMATE! MassMATE is a young organization, started in 2006, but already has more than 80 members and is growing rapidly.

Members of MassMATE are occupied in a wide variety of vocations including Professors and Students in Graduate Colleges of Education and Mathematics Departments; Chairs of Math Departments; K-12 Principals, Program Directors, Center Directors, Coordinators, Teachers, Lead Teachers, Title I Teachers, Developmental Specialists, Coaches



and Coach Coordinators; District and Department Mathematics Specialists; Curriculum Specialists and Directors; and Professional Development Providers.

MassMATE provides its members with ways to stay connected with other teacher educators through newsletters, our growing website, and annual Symposia. This summer, MassMATE will host its Third Annual Symposium with the theme "Effective Models of Professional Development". MassMATE will also be initiating a discussion board where members can network and discuss issues important to their work in mathematics teacher education.

Opportunity to participate in Algebra 1 research

Mathematics education researchers at the Harvard Graduate School of Education, Vanderbilt University, and Temple University are seeking Algebra I teachers in the greater Boston area to participate in a research project funded by the National Science Foundation.

The project involves creating, implementing, and evaluating curriculum materials designed to improve students' learning of topics in an introductory algebra course. Participating teachers would attend a one-week

professional development institute at Harvard during Summer 2009, and then pilot some of the curriculum materials with their own Algebra I students during the 2009-2010 school year. Participating teachers will be paid an honorarium for their work on the project.

For more information or to express interest in participating, please contact Dr. Jon Star at compare@gse.harvard.edu.

Dates to Remember:

- ✦ **ATMIM Spring 2009 Conference**
Association of Teachers of Mathematics in Massachusetts
March 26, 2009
Marlborough, MA
www.ATMIM.net
- ✦ **NCSM Annual Meeting**
National Council of Supervisors of Mathematics
April 20 - 22, 2009
Washington, D.C.
www.NCSMonline.org
- ✦ **NCTM Annual Meeting & Exposition**
National Council of Teachers of Mathematics
April 22 - 25, 2009
Washington, D.C.
www.NCTM.org/meetings
- ✦ **MassMATE Symposium**
Effective Models of Professional Development
June 9, 2009
Roger Williams University, Bristol, RI
www.MassMATE.net
- ✦ **PME33**
International Group for the Psychology of Mathematics Education
July 19-24, 2009
Thessaloniki, Greece
<http://www.igpme.org>
- ✦ **MAA MathFest!**
Mathematics Association of America
August 6-8, 2009
Portland, OR
www.MAA.org
- ✦ **NCTM Regional Meeting & Exposition**
National Council of Teachers of Mathematics
October 21-23, 2009
Boston, MA
<http://www.nctm.org/regionals.aspx>
- ✦ **AMATYC Annual Conference**
American Association of Two Year Colleges
November 12-15, 2009
Las Vegas, NV
www.AMATYC.org



Useful Links:

- ☞ Massachusetts Mathematics Association of Teacher Educators (MassMATE)
www.MassMATE.net
- ☞ Association of Mathematics Teacher Educators (AMTE)
www.AMTE.net
- ☞ Association of Teachers of Mathematics of New England (ATMNE)
www.ATMNE.org
- ☞ Association of Teachers of Mathematics in Massachusetts (ATMIM)
www.ATMIM.org
- ☞ National Council of Supervisors in Mathematics (NCSM)
www.NCSMonline.org
- ☞ National Council of Teachers of Mathematics (NCTM)
www.NCTM.org
- ☞ Massachusetts Department of Elementary and Secondary Education Professional Development
www.doe.mass.edu/pd

Getting involved in MassMATE

Contribute to Mathachusetts



We value our member's thoughts and contributions! Please consider writing an article for *Mathachusetts*.

Also, let us know of any noteworthy events, projects, or programs occurring in your district or school, so that we may consider including it in *Mathachusetts* or on our website!

Please contact Polina Sabinin at Polina@Sabinin.info with your submissions.

Expect Big Changes to the General Curriculum MTEL for Elementary School Teachers and Others

Submitted by Stan Dick

Recently the Massachusetts Department of Education (now the Department of Elementary and Secondary Education) passed a new regulation affecting the mathematics requirements for elementary school teachers, and others, including Teachers of Students with Moderate and Severe Special Needs, Teachers of the Deaf and Hard of Hearing, and Teachers of the Visually Impaired. Note that some of these groups include teachers in grades up to 12th grade, so the regulation affects others besides elementary school teacher candidates. The regulation was first proposed and released for public comment in January, 2007 and is now in effect.

The new regulation requires candidates in these fields to pass a new mathematics subtest covering K-8 mathematics and calls for new and existing teacher training programs to include sufficient coursework to prepare these candidates for the new exam, strongly suggesting a minimum of three courses. The old General Curriculum MTEL included about 14 mathematics questions which were graded along with all of the other questions. The new MTEL has two subtests: one which is similar to the old MTEL, but without any math questions, and a new independently-graded mathematics subtest. The first General Curriculum MTEL will be given on March 7, 2009 and all those taking it will be required to pass both subtests independently to obtain licensure.

The purpose of the new regulation is to raise the level of mathematics taught in the commonwealth, by starting the process with the youngest students and the teachers who teach them. The intention of DESE in passing this regulation is nothing less than to launch a fundamental change in the way mathematics is taught in this country, starting in Massachusetts. They seek to change the statistic that says the United States are last, or next to last in mathematics in developed countries. DESE believes that without first lifting the mathematics knowledge of elementary teachers, this change cannot come about.

The new mathematics subtest will have about 45 multiple-choice questions and one open response question designed to assess integration of knowledge and understanding. Candidates may take both subtests of the General Curriculum MTEL in one four-hour session or may take each subtest in a separate four-hour session. A list of the sub-areas covered and their approximate percentage weights is given below.

NUMBERS AND OPERATIONS	41%
FUNCTIONS AND ALGEBRA	22%
GEOMETRY AND MEASUREMENT	18%
STATISTICS AND PROBABILITY	9%

A practice Mathematics Subtest was posted by DESE and can be accessed at:

http://www.mtel.nesinc.com/PDFs/MA_FLD003_SubtestII_PRACTICE_TEST.pdf

MassMATE and virtually all those in the mathematics teacher educator community agree with the purpose and

sentiment surrounding this new legislation. However, the feedback from some who have examined the practice exam is that it is quite difficult. The practice exam provided the first real look at the nature and rigor of the questions on the new MTEL and was not published until June 30, 2008. There is some question as to whether this provided sufficient time for teaching programs to develop their courses and prepare their students for an exam of this nature. There is also a sense that while the content that is being tested seems reasonable, answering the particular questions requires a good deal of mathematical sophistication. Finally there is a feeling that many of the questions are either confusing or just plain tricky.

The following three questions, the only number theory questions on the practice exam, will give the readership a feeling for the level of the questions provided.

12. *The prime factorization of a natural number n can be written as $n = pr^2$ where p and r are distinct prime numbers. How many factors does n have, including 1 and itself?*

- A. 3
- B. 4
- C. 5
- D. 6

13. *Given $pn = 150$ where p is a prime number and n is a natural number, which of the following must be true?*

- A. p is a factor of either 10 or 15.
- B. 10 is a factor of n .
- C. n is a factor of either 10 or 15.
- D. 15 is a factor of n .

14. *The greatest common factor of n and 540 is 36. Which of the following could be the prime factorization of n ?*

- A. $2 \cdot 3^2$
- B. $2^2 \cdot 3^3$
- C. $2^4 \cdot 3^2 \cdot 7$
- D. $2^4 \cdot 3^5 \cdot 5$

If a student takes only the math portion of the exam in a 4 hour sitting, assuming that the open response question takes three times as long as a multiple choice question, this allows 5 minutes to answer each multiple choice question.

If the practice exam is representative of the new General Curriculum MTEL, those taking it may have difficulty passing it. It is not known at the moment what the passing grade for the exam will be, and it is likely that it will not be set until after the exam is graded.

I encourage those who have a stake or an interest in this area to examine the practice subtest and send comments to me at ssdick@comcast.net. Please set the subject of the e-mail to *Math Practice Subtest*. Comments will be categorized and reported on in the next newsletter.

Board of Directors Call for Nominations



Show your commitment to the value of Mathematics Teacher Education and help to shape our organization's future! This year we will elect two Board members-at-large and a President-elect. You may nominate yourself or someone else. Nominating candidates for office is a valuable service to MassMATE and your thoughtful

participation in this process will be greatly appreciated.

Board elections will take place on June 9, 2009 at the MassMATE Symposium.

E-mail Polina@Sabinin.info before June 1, 2009 to submit your interest in running for a position on the Board or to nominate a fellow mathematics teacher educator.

Reflections on Stanley J. Bezuska

There is now a void at professional conferences of the mathematics education community that can never be filled. For over fifty years, the highlight of hundreds of mathematics conferences across North America has been the presentations of Stanley Bezuska. Father Bezuska's talks were filled with wisdom, humor, insight, and a deep love of mathematics. Father Bezuska was always attuned to the great mathematicians of the past. He unfolded the thoughts and ideas of his close friends (Pascal, Euler, Fibonacci, and Newton) so that teachers could see new and exciting ways to convey mathematics to their students.

Father B. was an icon for the leaders of mathematics education. For example, I knew that if I attended one of his sessions, I would see most of the major speakers at a conference because his was a session they would not miss. Yes, everyone came to see Father B. We came to learn, to be inspired, and simply talk with him after the session. Oh yes, Father Bezuska always attended the sessions of others. He was there to learn, encourage others, and enjoy mathematics. He was our mentor and friend. The highlight of many of those infamous "Saturday Night Stay-overs" was sharing dinner with Father B. I clearly remember one evening when many of Father Bezuska's dinner partners were complaining about the "publish or perish" aspect of university life. After listening to his friends complain, Father B. noted that he was under an even greater pressure "publish or parish."

The impact of Stanley J. Bezuska on mathematics education is beyond measure. Yes, we can note his long service at Boston College, and his service on the Board of Directors of the National Council of Teachers of Mathematics. Yes, we can note the mathematics education community's attempts to thank Father B. by presenting him with the NCTM Lifetime Achievement Award for Teaching and the NCSM Glenn Gilbert National Leadership Award, and many others.



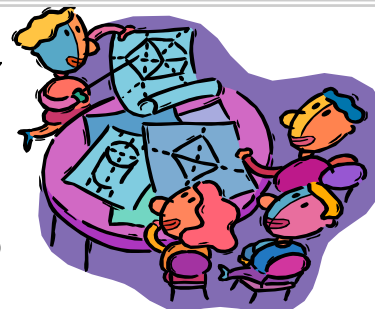
It all seems inadequate. Father B. touched our hearts and our minds. He changed us. His legacy is generations of teachers and students who see the beauty of mathematics and the joy of problem solving—all mixed with enthusiasm, humor, and love. Godspeed Father B.

Jim Rubillo, Executive Director, National Council of Teachers of Mathematics

Exhibiting at the MassMATE 2009 Symposium

For the first time this year, MassMATE would like to invite companies intimately involved with Mathematics Teacher Education to join the symposium as exhibitors. There will be room for a limited number of exhibitor tables, and time set aside for attendees to browse the exhibits.

All companies or individuals who are interested in this opportunity and would like to find out about fees and conditions, are asked to contact Stan Dick at ssdick@comcast.net.



Advertising in Mathachusetts

Mathachusetts will be publishing advertisements related to Mathematics Education. For more information, formats, fee schedules, and to obtain an application, please contact Polina Sabinin, the newsletter chairperson at Polina@Sabinin.info.

Please note that by publishing an advertisement, MassMATE does not imply endorsement of the advertised product or the company.

Professional Development Opportunities:

Mathematics Leadership Program (MLP)

Summer 2009

Institutes at Mount Holyoke College

The Education Development Center (EDC) of Newton, MA and SummerMath for Teachers at Mount Holyoke College in South Hadley, MA are proud to offer The Mathematics Leadership Program (MLP), a set of coordinated professional development experiences for educational leaders with a range of roles and responsibilities. We invite district teams to participate; teams may include math specialists, coaches, teachers, teacher-leaders, building principals, special educators, district administrators or other educators who are engaged with improving mathematics instruction.

MLP is strategically designed to provide flexibility to school systems by offering a variety of one-week programs among which team members can choose. Opportunities for conversations among team members attending different program strands are included.

July 12 to July 17

Developing Mathematical Ideas (DMI) content

Participants may choose any one of the seven DMI modules:

- Building a System of Tens (BST)—revised to include grades K - 8
- Making Meaning for Operations (MMO)-revised to include grades K- 8
- Examining Features of Shape (EFS)
- Measuring Space in One, Two, and Three Dimensions (MS123)
- Working with Data (WwD)
- Reasoning Algebraically about Operations (RAO)
- Patterns, Functions, and Change (PFC)

This one-week program will be an opportunity to be a participant in one of the DMI modules and to learn the content of the module.

Participants may choose this as a single one-week experience or may choose one of the three follow-up options for the second week.

July 19 to July 25

DMI Facilitation (DMIF)

Prerequisite: Previous experience with the DMI module of interest

This one-week institute is focused on facilitation of one of the DMI modules. Participants will choose a particular DMI module on which to focus their facilitation work. (Participants should have experience with the module of their choice before attending the facilitation week.) The one-week program will include identifying the key ideas of the seminar

Professional Development for Mathematics Coaching (PDMC)

This one-week institute is designed for elementary math specialists and other district leaders who have responsibilities for supporting teachers or coaches in the development of a strong mathematics education program in individual schools and/or across districts. The institute will engage coaches with mathematics content, while at the same time, develop deeper understandings of and strategies for the complexities and challenges of coaching work. Additionally there will be strategic planning sessions with other team members.

LOL-S (Lenses on Learning with a Focus on Systems)

This one-week institute is designed for leaders in both administrative and instructional roles. Based on the newly-published *Secondary Lenses on Learning* materials, it will be anchored in the algebra strand and expanded to address K-12 school-wide systems and practices. The institute is designed to provide leaders with experiences, information, and resources needed to guide their work in key areas known to have an impact on making significant mathematics accessible to all students.

Week of July 26

PDMC Facilitation (ends July 29)

This three-day institute is designed for those who are charged with leading professional development for mathematics coaching at their own sites.

LOL-S Facilitation (ends July 31)

This institute is designed to prepare pairs of mathematics leaders to facilitate LOL-Systems/Secondary LOL. Expanding on work begun during LOL-S, which is a prerequisite, it will elaborate on using *Secondary Lenses on Learning* as a context for preparing building-based mathematics leadership teams to offer coherent and strategic team leadership for mathematics in their schools, by:

- building a common vision of what a high quality mathematics program looks like, and drawing on qualitative and quantitative data collected from participants' own sites to create a model of continuous improvement of the school's mathematics program.

LOL-S Facilitation will work with a combination of participant data (collected prior to the seminar) and data collected from other *Secondary Lenses on Learning* sites.

Participants may attend any of the one-week programs for a fee of \$2200. The fee for attending two of the one-week programs is \$3000. The fee for PDMC-F is \$1250.

For more information: <http://www.edc.org/MLP>

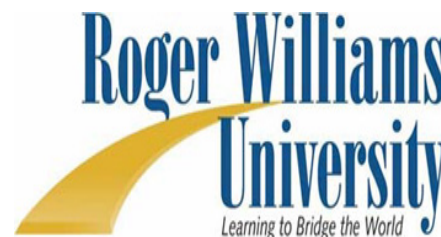
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Massachusetts Mathematics
Association of Teacher Educators

and



Effective Models of Professional Development

Symposium and Luncheon

June 9, 2009

Keynote Speaker: Jim Matthews
Siena College, Loudonville, New York
Math Ed Revolutionary

As teacher educators, teachers of mathematics, professional development providers, district math specialists, and consultants, our members are involved with the professional growth of the teachers with whom we work. This may involve arranging for professional development opportunities, conducting workshops, or teaching courses. Through this symposium we will examine how to maximize the effectiveness of professional development.

Tentative symposium schedule:

Breakfast and lunch are compliments of Roger Williams University School of Education	
8:00—9:00 am	Registration, Breakfast, and Exhibits
9:00—10:20 am	Welcome and Keynote
10:30—12:00 noon	Topic Sessions
12:00—1:30 pm	Lunch, Networking, and Exhibits
1:30—3:00 pm	Sessions
3:10—3:30 pm	Final Comments

Please visit www.MASSMATE.net for more information about:

Speaker proposal form—Deadline April 17th, 2009

Registration form—Early Bird Deadline May 25th, 2009

Current information about the conference posted as it becomes available

Information for Exhibitors

For further information e-mail the Conference Chairs: Stan Dick (ssdick@comcast.net) or Paula Sennett (Paulasennett@aol.com).