

Connections

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AMTE PRESIDENT’S MESSAGE

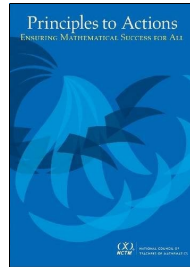
Fran Arbaugh, Penn State University

“Summer Professional Reading List”



Ah - summer is upon us. As I finish up some work tasks left over from the spring semester, I find myself looking with longing at the pile of new books that has accumulated on the corner of my desk during this academic year. Although I would like to think that I will spend long, lazy afternoons on a lounge chair at the neighborhood pool with a book in my hands, experience tells me that I will not get to the bottom of my pile of new books anytime soon. So, I have decided to focus my summer professional reading on two resources that I believe have the potential to impact my teaching in important ways in the coming year.

The first resource is *Principles to Action: Ensuring Mathematics Success for All*, which was released this past April at the Annual Meeting of the National Council of Teachers of Mathematics. I have only had time to flip through this resource, skimming pages, and beginning to think about implications of this book for my mathematics teacher education practices (with both preservice and inservice teachers). While flipping through the document, a statement that caught my eye is: “In *Principles to Actions*, NCTM sets forth a set of strongly recommended, research-informed actions for all teachers, coaches, and specialists in mathematics; all school and district administrators; and all educational leaders and policymakers” (NCTM, 2014, p. 4).



Let me share why I am so excited about this document and how I believe that its contents position our mathematics teacher education community to make a major step forward in educating teachers. I have collaborated for years with science teacher educators on a number of projects. One of the aspects of their scholarship that I have long admired is a set of agreed-upon teacher practices, developed through research, that the community draws upon when making decisions about what to focus on in science teacher education efforts. Based on years of discussions with other mathematics teacher educators and attending sessions at the AMTE conferences, I have come to believe that we currently have strikingly different foci in our mathematics methods courses. My anecdotally-supported beliefs about this situation were fortified by a study conducted by Mark Taylor and Bob Ronau (2006). Based on a systematic analysis of 67 mathematics methods course syllabi from 45 different universities, Taylor and Ronau stated, “The most remarkable result is the surprising level of variability between mathematics methods courses in terms of emphases on graded assignments, as well as goals and objectives across grade bands and within grade bands” (p. 14).

With the publication of *Principles to Action*, NCTM has provided our community with just the thing I have been seeking for years. A set of mathematics teacher practices that research has indicated have a positive effect on students’ learning. I am gratified to see that much of what I have focused on in the past few years with teachers is found in these pages, but there is also new content for me to consider. As I carefully read this document over the summer, I intend to think hard about my own mathematics teacher education practices. I will think about necessary revisions to existing course content that I may need to make in light of this document. I also will think about what might be missing from my mathematics methods courses. At the very least, I want to have carefully read this document in preparation for one of our Fall 2014 AMTE

President's Message (continued from page 1)

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Webinars. I am happy to relate that Steve Leinwand, the lead writer of *Principles to Actions*, has agreed to speak to the AMTE membership about implications of *Principles to Action* for mathematics teacher education. Stay tuned for details about this (and other) AMTE Webinars slated for the fall semester.

The second resource that I want to spend some time exploring this summer is web-based (good thing I have an iPad to take to the pool!). At the May meeting of the Conference Board of Mathematical Sciences (CBMS), Michael Pearson (Executive Director of the Mathematical Association of America) shared with me information about the MAA Curriculum Inspirations project. What he described intrigued me, and I went exploring. Here is a blurb about the project from the website (www.maa.org/math-competitions/teachers/curriculum-inspirations):

MAA Curriculum Inspirations is a multi-media experience for the middle-school and high-school communities. Learn TEN PROBLEM-SOLVING STRATEGIES aligned with the Mathematical Practice Standards for classroom and MAA American Mathematics Contest success. Find practice examples galore listed by strategy and by Common Core topic. Bring excitement to mathematics learning, thinking, and doing!

Based on my initial exploration, I think that this site could be quite useful to me as a mathematics teacher educator. I encourage you to spend some time exploring the site too. There are currently more than 80 short videos, developed and presented by James Tanton, a former high school mathematics teacher (he is quite engaging on the videos), as well as a set of essays about different mathematical concepts. All of these materials are available at no cost.

As the summer progresses, I encourage us all to make use of the AMTE Facebook page to share impressions and subsequent ideas about potential uses of the professional resources we explore this summer. I know I cannot read all that I desire, so I am depending on our community to share! Remember, being an AMTE member has many benefits beyond a *great* annual conference! The AMTE Facebook page is a wonderful way to stay connected to your fellow mathematics teacher educators year round! That's it for me until the fall edition of *Connections* – Happy Summer Lounging!

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Join us for the 2015 AMTE Annual Conference in Orlando!

The Nineteenth Annual Conference of the Association of Mathematics Teacher Educators (AMTE) will be February 12-14, 2015

- ◆ [On-line registration](#) opens mid-August
- ◆ Early bird registration available thru Sept. 30
- ◆ Invited speakers include Dr. Margaret (Peg) Smith and Dr. Nadine Bezuk
- ◆ All events held at the Rosen Plaza Hotel



Rosen Plaza Hotel, Orlando, Florida

AMTE Research Committee-Seeking Input!

The AMTE Research Committee is working to support graduate students and new faculty members in developing as researchers, and in particular, in establishing a research agenda, understanding trends in the field, and learning to balance research productivity with the other expectations that scholars face. We are currently considering implementing a fireside chat model with senior scholars at future AMTE conferences. We welcome suggestions from the membership on what resources would be most helpful for supporting junior scholars to develop as researchers; please send suggestions to Mathew Felton at felton@ohio.edu.

We also have a number of resources targeted at the membership more broadly, which can be found on the Research tab of the AMTE website. The Research tab includes three sub-sections: *Useful Articles*, *Getting Personal*, and *News and Updates*. The first section, Useful Articles, includes a bibliography of mathematics teacher education articles grouped into the following categories: elementary methods and content, secondary methods and content, professional development, and MTE development/doctoral courses. If you have a resource to suggest, please send the citation to Tonya Bartell at tbartell@msu.edu.

The second section, Getting Personal, has interviews that the Research Committee members have done with mathematics teacher educators. Four interviews are currently posted. These feature Karen Karp discussing mathematics education and special education, Rico Gutstein unpacking issues of social justice and mathematics education, Barbara Reys describing the role of curriculum as a tool for school improvement, and Rochelle Gutiérrez considering how to develop political knowledge for teaching mathematics. The committee plans to continue this series.

The News and Updates section includes a list of important dates for conferences and proposal deadlines of interest to the AMTE membership. It also includes a brief summary and upcoming deadlines for various NSF solicitations.

Interviews with math education scholars are available on the AMTE website!

A Call to Action: Leveraging Practices

The Mathematics Teacher Educator Editorial Board

The National Council of Teachers of Mathematics recently published *Principles to Actions: Ensuring Mathematical Success for All* (NCTM, 2014; www.nctm.org/PrinciplestoActions). This document brings to the forefront issues of uneven implementation of the *ambitious teaching* (Lampert, Beasley, Ghouseini, Kazemi & Franke, 2010, p. 129) of mathematics to all students that has been espoused in various iterations of college and career ready standards, including the *Common Core State Standards for Mathematics [CCSSM]* (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). The CCSSM provides guidance on what students should know and be able to do, but intentionally leaves unanswered questions about the policy and programs that should be in place in order to implement the content standards effectively. The intent of *Principles to Actions (PtA)* is “to fill [the] gap between the development and adoption of CCSSM and other standards and the enactment of practices, policies, programs, and actions required for their widespread and successful implementation. Its overarching message is that effective teaching is the nonnegotiable core that ensures that all students learn mathematics at high levels” (p. 4). By specifying the kinds of practices that teachers need to engage in to support their students’ learning of ambitious standards, and the kind of supports that need to be in place in order for teachers to implement these practices in their classrooms, the *PtA* is an important resource for mathematics teacher educators.

The *PtA* document is based upon research about effective mathematics teaching practices that are at the core of the work of mathematics teacher educators. This document makes explicit and accessible key components of effective mathematics teaching. As such, *PtA* coalesces many important ideas that AMTE members have been implementing in their work for decades (e.g., worthwhile tasks and purposeful questioning). It also draws attention to other key elements of effective teaching (e.g., productive struggle and using student thinking) that may not be as prevalent in our collective repertoire of strategies.

Specifically, *PtA* provides eight mathematics teaching practices that could serve as an organizational structure for professional learning communities or for designing goals and assessments for coursework or professional development. The document includes several helpful tables that summarize important ideas and could be used in the work we do as teacher educators. For example, the contents of a table of productive and unproductive

(Continued on page 4)

A Call to Action: Leveraging Practices (continued from page 3)

**MTE Special
Call for
Manuscripts
Related to
*Principles to
Action*-Due
September 1,
2015!**

beliefs about teaching and learning mathematics (p. 11) could be reformatted as a card sort and used as the basis of a conversation about values and classroom teaching or serve as the ends of a continuum for survey questions given at the beginning and end of a course or professional development experience. Other important conversations could be prompted by activities based on the vignettes and student work included in *PtA*. The possibilities for using *PtA* are numerous; regardless of what you decide to try, we encourage you to document your interventions in enough detail for your efforts to be replicable, and to share your results.

The *Mathematics Teacher Educator* (MTE) Editorial Board sees the publication of *PtA* as providing a stimulus for the AMTE community to develop a collection of (1) activities, (2) tools for gathering evidence, and (3) results in such a way as to provide opportunities for replication of effective practice in multiple contexts and for the refinement of our ideas—in other words, to contribute to the knowledge base of mathematics teacher education. These resources could serve as the basis of AMTE presentations and articles for AMTE publications. In particular, the *MTE* journal is putting out a call for manuscripts that document how mathematics teacher educators make connections between their work on improving practice (with preservice or inservice teachers) and the *PtA* document. Plan now to implement your ideas and be proactive and deliberate about the collection of evidence about their impact so that you will be ready to submit your manuscript by the **September 1, 2015** deadline for this special call. More details are available on the *MTE* website: www.amte.net/publications/mte.

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AMTE Affiliate News

The [Pennsylvania Association of Mathematics Teacher Educators \(PAMTE\)](#) held its 8th Annual Symposium at Shippensburg University on May 15-16, 2014. Keynote speaker Judith Jacobs presented a talk entitled “Who am I: The Many Identities of Mathematics Teacher Educators” and AMTE President Fran Arbaugh led a presentation and conversation entitled “Advocacy for Math Teacher Education.” Several presentations by PAMTE members, updates from the Pennsylvania Department of Education, and a strand of graduate student presentations rounded out the program. PAMTE president Tom Evitts (taevit@ship.edu, Shippensburg University) presided over the two-day meeting.

The [Association of Mathematics Teacher Educators-Texas \(AMTE-TX\)](#) hosted a special strand of sessions focused on mathematics teacher education along with its annual business meeting at the Conference for the Advancement of Mathematics Teachers July 21-23, 2014 in Fort Worth, TX. Session descriptions and times can be found at <http://www.amte-tx.org/>. The annual Fall AMTE-TX Conference for 2015 that focuses on mathematics teacher education across Texas will be held September 27, 2014 at Baylor University in Waco, Texas. Information concerning speakers, schedule, and registration are forthcoming. For more information please contact Trena L. Wilkerson, President of AMTE-TX, at Trena_Wilkerson@baylor.edu, or Sandi Cooper, Fall Conference Chair, Sandra_Cooper@Baylor.edu.

The [Missouri Mathematics Association for the Advancement of Teacher Training](#), the Missouri AMTE affiliate, held a mini-conference and meeting on May 16, 2014 on the campus of the University of Missouri-Columbia. The theme of the mini-conference was “Next Steps.” The day focused on creating and implementing action plans to meet the challenges created by many changes coming to mathematics teacher education in Missouri.

The [California Association of Mathematics Teacher Educators \(CAMTE\)](#) has been providing leadership this year to universities in their state, as the California Commission on Teacher Credentialing has mandated all institutions with approved secondary programs to update their subject matter requirements to align with the new Common Core State Standards for Mathematics. CAMTE also began a new membership drive; for each 1-year referral, the referring member will receive 2 months of free membership.

Lessons I Have Learned from a Decade of Working as a Mathematics Teacher Educator

2014 AMTE Early Career Award Recipient
Amanda Jansen, University of Delaware

Reflective practices are at the heart of teaching. Yet, we as mathematics educators, similarly to K-12 teachers, are often so immersed in our daily work of teaching, scholarship, advising, service, and other administrative tasks that we may not take much time to reflect on where we have been and where we are headed. When I was invited to write this column, I appreciated this opportunity to reflect upon what I have learned about being a mathematics teacher educator over the past decade.

Much of what I currently know and believe about mathematics teacher education, I can attribute to the opportunity to learn in collaboration with others. I joined the faculty at the University of Delaware (UD) in 2004. For more than a decade, our mathematics education faculty and doctoral students have been studying and improving mathematics teacher education coursework. Over the last ten years, what have I learned about mathematics teacher education and what do I hope to learn?

- The value of being explicit and specific about goals for mathematics teachers' learning.
- The value of learning about our work as teacher educators through engaging in the practices we promote for teachers.
- The value of listening to our own students' voices.



Fran Arbaugh & Amanda Jansen

Explicit, targeted, and shared goals for teachers' learning

Through our efforts at UD to continuously and gradually improve our mathematics teacher education coursework, one lesson at a time, I have come to value developing targeted and shared goals for mathematics teachers' learning (Jansen, Bartell, & Berk, 2009). One of the enduring challenges of teacher education involves determining which learning goals to select, foreground, and background. This can be a difficult decision. There are so many possible ideas, skills, and dispositions that we want to develop among our future teachers. We do not have time to develop all of the goals we value. We select a subset of these goals and develop them thoroughly. It is important to consider what is possible to achieve within the time we have to work with the future and/or current teachers.

Targeted goals for teachers' learning are important. They direct our design of learning experiences for pre-service and/or in-service teachers. Also, targeted goals assist with measuring effects of instruction. To determine if instructional endeavors have an impact, we need to think about the kinds of impacts we want to have through explicitly clarifying goals for learning. Then, both teaching and assessment can help us further refine learning goals and gain a better understanding nature of teachers' thinking and learning.

As an example, through our instructional improvement activity, we revised a learning goal for a subtraction of fractions lesson in a mathematics content course for prospective elementary teachers. The revision was informed by the students' (pre-service teachers') thinking and resulted in a more targeted learning goal for the lesson (Berk & Hiebert, 2009). The initial learning goal for the lesson was that prospective teachers would understand how to represent the subtraction of fractions with appropriate story problems. However, even at the conclusion of the lesson, many prospective teachers continued to exhibit a classic error of using different referents for two fractions. A correct story problem for the number sentence of $5/8 - 1/4$ would use a consistent referent, such as $5/8$ pound of coffee and $1/4$ pound of coffee. In an incorrect story problem, the referent would shift from $5/8$ pound of coffee to $1/4$ of the coffee, resulting in a story problem that would require multiplication before subtraction. Given our students' thinking, the revised, more targeted learning goal became, "Prospective teachers will understand how to represent subtraction of fractions with a story problem. This involves understanding the need to employ the same referent for each fraction as well as being able to distinguish story problems in which the referent is the same from those in which the referent is different." Similarly, analyses of prospective elementary teachers'

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Lessons I Have Learned from a Decade of Working as a Mathematics Teacher Educator (Continued from page 5)

thinking about partitive division with proper fractions as divisors has revealed that learning goals for lessons on this topic could emphasize processes of both partitioning and iterating the dividend and that the goal of partitive division is determining the unit rate (Hohensee & Jansen, 2013).

Developing a *shared* set of goals among the field of mathematics teacher education appears to be a larger challenge than developing increasingly targeted goals, as ultimately choices of what to teach are based upon values (Hiebert, 1999). Although we can refine learning goals based on data from students' thinking, research cannot fully answer questions about what we should teach. However, once we have articulated targeted learning goals that we value, we can share them with others and make them an object for discussion. Teacher educators who share goals for future teachers' learning can focus on how to effectively teach toward those goals.

We should model for our teachers the kind of instruction that we want them to enact.

Engaging in the practices we promote

I have developed a deeper understanding of the value of engaging in the practices that we promote for our future teachers. At some level, this sounds obvious: We should model for our teachers the kind of instruction that we want them to enact. But what I am suggesting goes beyond modeling to deeply engage in the practices we promote. Consider skills for analyzing teaching, which are practices that we promote among our prospective teachers in our methods courses at UD (Hiebert, Morris, Berk, & Jansen, 2007). These skills involve (a) setting learning goals for students' learning, (b) assessing whether students achieved those goals from the lesson, (c) specifying hypotheses about whether or not the lesson supported students' learning, and (d) using data collected from assessing students' learning to determine the degree to which the hypotheses were met and revise the lesson accordingly. As described above, my colleagues and I constantly engage in analyzing our own teaching. The process of analyzing teaching helps us understand skills for analyzing teaching from an insider's perspective, as we improve our coursework.

We understand the challenges involved with this work, such as designing targeted learning goals, because we ourselves have faced them. We use these skills for analyzing teaching in a *gradual* effort over time to work toward continuous improvement of instruction. This perspective has allowed for us to develop a growth mindset for ourselves as teacher educators. We are constantly becoming more effective because of our instructional improvement activity.

Listening to our own students' voices

Student voice has been something I advocate and promote in my research as well (e.g. Jansen, 2006; Jansen, Herbel-Eisenmann, & Smith, 2012). I have applied ways to incorporate student voice into my work as a teacher educator. I have learned how to listen more closely to my students' voices to improve my teaching and assess their thinking about their development as future teachers.

One activity that incorporates student voice occurs at the end of the semester in my middle school mathematics methods course. I conduct a "chalk talk*" in which the full participation of the group is engaged, but prospective teachers cannot talk verbally. Instead, divided into two groups, they must

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AMTE Resources for the Common Core State Standards in Mathematics

For the latest information and resources to support MTEs in working with the CCSSM visit the [AMTE website](#). Information includes key document downloads and weblinks to resources including:

- Alphabet Soup-User's Guide to CCSSM,
- FAQs about the Common Core,
- Mathematics Common Core Coalition (MCCC),
- CCSS-M Supporting Implementation Report, and
- Mathematics Common Core Toolbox.

Lessons I Have Learned from a Decade of Working as a Mathematics Teacher Educator (Continued from page 6)

write statements (on a group poster or the chalkboard) that reflect big ideas that they learned during the semester. Then, again without talking, prospective teachers draw to indicate connections between statements, affirmations of statements made by others, and elaborations of statements made by others. Finally, the group then talks to distill the 10 main ideas they learned during the semester. They present the ideas to their instructor and the other group. The other group asks them questions about their ideas, and then presents their 10 main ideas and takes questions. The instructor waits to speak until the very end, listening to the students, and learning from them about what the course addressed, from their perspectives.

In the future, what do I hope to learn?

It is exciting to me to anticipate my future growth as a professional in our field, as a participant in our field's development over time. There is a range of ways that I hope to learn and grow. Connected to my current work with colleagues (e.g., Jansen, Berk, & Meikle, 2014), I hope that we as a field of mathematics teacher educators continue to think about how to investigate the impact of teacher education. What sorts of data do we need (formative and evaluative) to (a) help us improve our practice and (b) determine whether and how teacher preparation experiences have value more broadly? As a mathematics teacher educator, I hope to gain a stronger voice—individually and as a part of our community—to promote the value of the work we do. Also, I would like to use my voice to learn to speak louder for those whose voices are not always heard in political discourse, such as K-12 mathematics teachers and their students. I look forward to growing in this way through our work together in AMTE.

*I learned about this “chalk talk” through working with the Knowles Foundation professional development team, including Jeanne Vissa. Another description of chalk talks can be read here: <http://www.scribd.com/doc/19095261/Silent-Chalk-Talk>

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Latest on AMTE Webinars! Join in the Discussion!

AMTE continues to offer new webinars for its members. The first seven have been archived on the [AMTE website](#). These can be accessed free of charge by AMTE members. Check the [AMTE website](#) for information about future webinars. Topics and speakers for the three most recent webinars include:

- **Research, Technology, and Mathematics Methods Courses**
Presenters: Steve Rhine and Rachel Harrington, NTLI Award winners, 2014 Annual Conference
- **Writing for the Mathematics Teacher Educator**
Presenters: MTE Associate Editor, Melissa Boston, Duquesne University; Chair of MTE Editorial Panel, Denise Spangler, University of Georgia
- **Communication and Stakeholder Engagement to Support the Common Core Math Standards**
Presenter: Shannon Glynn, Associate, Council of Chief State School Officers (CCSSO)

I hope to gain a stronger voice—individually and as a part of our community—to promote the value of the work we do.

Click [here](#) for a complete listing of the AMTE Board members and [here](#) for a listing of all AMTE committees and their members.

Thank you, Nadine!

On February 8, 2014, Nadine Bezuk completed 12 years and 5 months of service as AMTE's Executive Director. She began her term as Executive Director in September of 2001. Prior to serving as Executive Director, Nadine served as AMTE Treasurer (1994–1996), as AMTE President-elect (1996), as AMTE President (1997–1999), as AMTE Past-president (1999–2000), and as AMTE's representative to NCTM (2000–2001). That's two decades of continuous service to AMTE!

In our organization, the Executive Director touches **every initiative, product, and process** associated with AMTE. Some of those activities are visible to the entire professional community, while others are related to how the organization operates and may not be visible even to members. During her time as Executive Director, Nadine helped AMTE take giant steps as an organization.

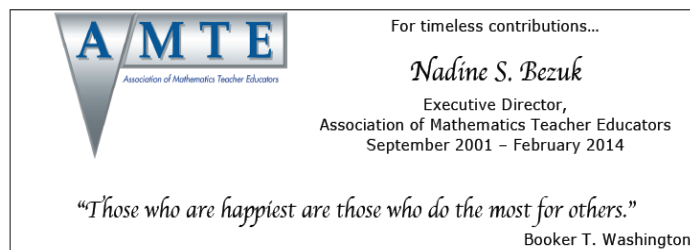
- ◇ In 2002, guidelines were approved to allow state or regional affiliates of AMTE. The first AMTE affiliate was the Illinois Association of Mathematics Teacher Educators; they were followed by others so that today there are 22 affiliates of AMTE.
- ◇ AMTE's first publication was developed by the Task Force on Doctoral Programs in 2003 and was titled *Principles to Guide the Design and Implementation of Doctoral Programs in Mathematics Education*.
- ◇ From 2005 to 2010, AMTE published a series of seven monographs.
- ◇ The AMTE logo was trademarked in 2006.
- ◇ The organization's conference attendance rose from 150 in 2002 to more than 550 in 2013 and 2014.
- ◇ Processes were created to implement the current AMTE awards program that began in 2005.
- ◇ An AMTE booth was provided in the NCTM Exhibit Hall at the Annual Meeting for the first time in 2008 and has been there in every subsequent year.
- ◇ The *Standards for Elementary Mathematics Specialists* were first published in 2009.
- ◇ The first *AMTE Professional Development Webinar* for AMTE members was held in 2012.
- ◇ A national journal, *Mathematics Teacher Educator*, was created through a partnership with NCTM.

As all of us know, Nadine made use of electronic communications with members! She also supervised the development of processes to conduct electronic elections. Furthermore, the content, style, and usefulness of the AMTE website have been shaped by Nadine's attention to this important portal for members to participate in AMTE and non-members to learn about our organization. If any of you remember the AMTE website in 2001, it looks a lot different now!

In February, during the 2014 AMTE Conference, Nadine was honored for her service. During the Business Meeting on Saturday, Nadine received a bouquet of thank you notes written by many of those attending the conference and a DaVinci clock with a lovely engraving illustrated below.

On behalf of the entire AMTE membership, thank you Nadine, and many best wishes!

Susan Gay, AMTE Conference Director
Tim Hendrix, AMTE Executive Director



Nadine Bezuk & Fran Arbaugh

Nominations sought for the AMTE's 2015 Award for Excellence in Teaching in Mathematics Teacher Education

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The Board of Directors of the Association of Mathematics Teacher Educators has established an Award for Recognition of Excellence in Mathematics Teacher Education, to be awarded annually to a mathematics teacher educator of national recognition at the Annual Meeting of the AMTE. The purpose of this award is to recognize excellence in each area of mathematics teacher education (teaching, service, scholarship). The recipient will give a featured presentation at the AMTE Annual Conference in the year they receive the award.

The 2015 Excellence in Teaching in Mathematics Teacher Education Award is intended to recognize a colleague for a unique contribution in teaching that has made a significant and lasting contribution to the pedagogy of mathematics teacher education. The nominee shall have demonstrated innovative practices in teaching and commitment to mathematics preservice and/or inservice teacher education through one or more of the following areas:

- a. Implementation of effective and innovative teaching practices;
- b. Demonstration of innovative teaching methods (e.g. publications, materials, video);
- c. Recipient of awards in teaching.

Criteria for Excellence in Teaching Award

The nominee of the Excellence in Teaching Award should be an active member of AMTE and have at least five years of commitment to mathematics teacher education. He/she should have made unique contributions to the field of mathematics teacher education. Unique contributions should be considered in the broadest sense possible.

Documentation required for Excellence in Teaching Award:

- a. A current vita of the nominee, focused on excellence in teaching in mathematics teacher education (5 page limit);
- b. A letter of nomination documenting the nominee's eligibility for the award, related to the criteria listed above;
- c. Additional letters of support (no more than four) for the nomination from individuals knowledgeable of the nominee's contributions relative to one or more of the criteria stated above.

Nomination Process

AMTE members can nominate a mathematics teacher educator who meets the criteria for the particular focus area (service, teaching, scholarship). Self-nominations will not be considered. Nomination materials should include those stated in each section above.

Deadline: September 30, 2014

The committee will review applications in an electronic format; all application materials should be submitted as a single PDF file using the AMTE Award Nomination Form. More information and the online nomination form can be found at: <http://amte.net/about/awards>.

Please be sure that the nomination materials are clearly labeled with the name of the nominee.

2015 Conference Program Update

Thank you AMTE members for your conference proposal submissions and willingness to review. We received 470 proposals this year—A record-breaking amount! The program committee members, along with many member reviewers, are currently in the process of reviewing proposals. Notification of proposal acceptance will be sent mid August.

Dusty Jones, 2015 Program Chair, DLJones@shsu.edu

AMTE's 2015
Award for
Excellence in
Teaching
application
deadline
September 30,
2014.

Highlights from Recent *CITE-Math* Journal Articles

2015 AMTE
Annual
Conference!

See pages [2](#)
and [13](#) for
more
information.

The *Contemporary Issues in Technology and Mathematics Teacher Education (CITE-Math)* Journal is an online, open-access publication that provides teacher educators with a forum for sharing best practices surrounding the use of technology in the teaching of mathematics, with particular emphasis on the preparation of mathematics teachers. The journal welcomes submissions addressing any area of research dealing with the use of technology in mathematics teacher education programs at both preservice and inservice levels. A wide range of formats and approaches to scholarship are accepted, including qualitative research, quantitative research, theoretical pieces, and innovative practice papers. Papers will be reviewed on the following criteria: relevance to technology and mathematics teacher education research, originality, clarity of expression, and literature support. As an online journal, CITE-Math welcomes the inclusion of various media in submissions. Authors are encouraged to include applets, color graphics, photographs, video in their submitted work. Manuscripts may be submitted online through the journal website <http://site.aace.org/newpubs>. Inquiries about potential manuscript topics are welcomed by emailing journal Co-Editors, Doug Lapp (lapp1da@cmich.edu) and Todd Edwards (edwardm2@miamioh.edu). Listed below are three recent papers and their annotated abstracts from *CITE-Math 2013*. Submit a formal commentary online to promote a dialog between you, the authors, and other readers!

Handal, B., Campbell, C., Cavanagh, M., Petocz, P., & Kelly, N. (2013). Technological pedagogical content knowledge of secondary mathematics teachers. *Contemporary Issues in Technology and Teacher Education*, 13(1). Retrieved from <http://www.citejournal.org/vol13/iss1/mathematics/article1.cfm>

The authors of this article explore ways in which 280 Australian mathematics teachers integrate technology, pedagogy, and content in their secondary school classrooms. Through the administration TPCK-M, a 30-item instrument, the authors explored three major theoretically based constructs - namely, technological content knowledge (TCK), technological pedagogical knowledge (TPK) and technological pedagogical content knowledge (TPCK). Results suggest that teachers had significant experience with office suite software (e.g., spreadsheets, presentation tools) but also revealed a lower capacity for addressing general instructional goals related to communication such as creating digital assessment formats. While the TPCK-M scores indicate teachers possess technological skills across a variety of mathematics education goals, the authors question the influence of this skill in practice, pointing out that the study identified a number of instructional, curricular, and organizational factors that seriously inhibit the integration of technology into actual teaching and learning settings.

McGuire, P. (2013). Using online error analysis items to support preservice teachers' pedagogical content knowledge in mathematics. *Contemporary Issues in Technology and Teacher Education*, 13(3). Retrieved from <http://www.citejournal.org/vol13/iss3/mathematics/article1.cfm>

This article introduces the role that technology, specifically ASSISTment, can play in helping preservice elementary and secondary teachers to improve their pedagogical content knowledge. To do so, preservice teachers analyzed K-12 students' mathematical errors and misconceptions and created remediation strategies. The author highlights the wide use of the ASSISTment system by middle and secondary level students in mathematics. However, ASSISTment also offers opportunities for teacher education. A three-level error analysis was developed based on the TEFA framework (Beatty & Gerace, 2009). It included three tasks for the preservice teachers: (1) identify students' error patterns, (2) "think like a student," and (3) describe remediation strategies. During the process of analyzing student errors, the ASSISTment system automatically tracked their responses at each level of the task. This resulted in a store house of preservice teacher responses from different semesters. Participants valued the access to current and past remediation strategies as the most useful and relevant portion of the error analysis exercises. They were exposed to a variety of instructional strategies and improved their pedagogical content knowledge.

(Continued on page 11)

Highlights from Recent *CITE-Math* Journal Articles (continued from page 10)

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Tyminski, A. M., Haltiwanger, L., Zambak, V.S., Horton, R., & Hedetniemi, T. (2013). **Developing inquiry practices in middle grades mathematics teachers: Examining the introduction of technology.** *Contemporary Issues in Technology and Teacher Education*, 13(4), 325-359. Retrieved from <http://www.citejournal.org/vol13/iss4/mathematics/article1.cfm>.

This study looked at a small group of middle school mathematics teachers engaged in learning inquiry-based mathematics pedagogy, and how to facilitate this inquiry with the use of color graphics calculators. The specific interests of the study included how the technology should be introduced to be most effective for these teachers. The first was to introduce the inquiry-based pedagogy in the context of mathematics they will be teaching, and second introduce the use of the calculators at the same time the teachers were learning the inquiry-based pedagogy. In addition, these authors were interested in how teacher attitudes toward the use of graphing calculators changed over the 3 years of the study. The results of the study indicated that the path to transforming teaching practices and beliefs is unique to the individual teachers. That is, some participants indicated that they would have been overwhelmed if they had been required to both consider the inquiry-based approach to teaching mathematics and integrating the use of the graphing calculators at the same time. Other participants indicated that they wouldn't have been able to understand how to implement the inquiry approach without the introduction of the graphing calculators. The common finding for all participants was that continued local support was essential in helping these teachers to continue to make this transition. The implications for professional development of mathematics teachers is that there is no one-size fits all approach and that formative assessment of the participants and continue support of the transition efforts is essential for any significant change to occur.

Doug Lapp, CITE Co-Editor

Michael Todd Edwards, CITE Co-Editor

Michael Mikusa, AMTE Technology Committee Member

S. Asli Ozgun-Koca, AMTE Technology Committee Chair

AMTE Connections Newsletter! Call for Submissions

The *Connections* Newsletter has a special column entitled "Resources for Mathematics Teacher Educators" that appears periodically. All submissions are blind reviewed by the Editorial Panel. The Panel will consider a wide variety of types of submissions including essays addressing questions related to theory and practice, reviews of resources for mathematics teacher educators, research summaries, and news articles related to mathematics teacher education. Manuscripts should be no longer than 6 double-spaced pages (~1,400 words) and will be reviewed for relevance to the AMTE membership and quality of work. Additional information can be found on the AMTE website, www.amte.net. Please send your submission electronically as a Word File to the *Connections* Editor, Babette M. Benken (babette.benken@csulb.edu). I hope to receive a submission from you soon!

*Babette M. Benken, AMTE Connections Editor
California State University, Long Beach*



Babette Benken & Fran Arbaugh

Manuscripts currently accepted to the *CITE-Math* Journal; click [here](#)

Visit the [AMTE website](#) for submission information for all publications!

Nominations Sought for AMTE's 2015 Early Career Award

Deadline:
Nominations
for the **Early
Career
Award** must
be received
by **October
15, 2014.**

The Board of Directors of the Association of Mathematics Teacher Educators (AMTE) has established an **Early Career Award**. The Early Career Award will be given on an annual basis, and the recipient recognized at the annual meeting of the AMTE. The purpose of this award is to recognize a mathematics teacher educator who, while early in their career, has made distinguished contributions and shows exceptional potential for leadership in one or more areas of teaching, service, and/or scholarship.

Criteria for Early Career Award

The nominee for the Early Career Award should be a mathematics teacher educator serving in the field no later than 10 years after receipt of a doctoral degree. The Early Career Award is intended to recognize a colleague's contributions in a program of teaching, service, and/or scholarship within the first decade after receiving a doctoral degree. We invite nominations that highlight an individual's innovative contributions in one or more areas of teaching, service, and/or scholarship.

Teaching: Contributions in the area of teaching preservice or inservice mathematics teachers may include one or more of the following areas:

- a. Implementation of effective and innovative teaching practices.
- b. Demonstration of innovative teaching methods (e.g. publications, materials, video).
- c. Recipient of awards in teaching from department, college, university and/or national entities.

Service: Contributions in the area of service to mathematics teacher education may include one or more of the following areas:

- a. Active participation in advancing the development and improvement of mathematics teacher education (e.g., membership and leadership roles in state, national, and international organizations).
- b. Active promotion and participation in activities promoting quality mathematics teacher education (e.g., creator of programs, coordinator of programs, author of and participant in grants, conferences, symposia, academies).
- c. Active participation in the governmental and political areas to promote and protect beneficial legislation, to promote better awareness, and/or to build better communication.
- d. Active promotion and participation in school-university-community-government partnerships that have advanced mathematics teacher education at the local, state, and/or national level.
- e. An unusual commitment to the support of mathematics teachers in the field (e.g., distinctive mentoring experiences).

Scholarship: Contributions in the area of scholarship to mathematics teacher education may include one or more of the following areas:

- a. Dissemination of research findings offering unique perspectives on the preparation or professional development of mathematics teachers.
- b. Publication of materials useful in the preparation or continuing professional development of mathematics teachers.
- c. Design of innovative preservice or inservice programs.
- d. Contribution of theoretical perspectives that have pushed the field forward.

Documentation required for Early Career Award:

- a. A current vita of the nominee.
- b. A letter of nomination from an established colleague documenting evidence that supports nominee's contributions in the particular focus area (service, teaching, scholarship) for which they are nominated.
- c. Additional letters of support (no more than **two**) from individuals (e.g., colleagues within and outside of the individual's institution, recent doctoral graduates mentored by the nominee) knowledgeable of the nominee's contributions relative to the focus area. Multiple authored letters are accepted.

Nomination Process

AMTE members can nominate a mathematics teacher educator who meets the criteria for eligibility. Self-nominations will not be considered. The three areas of teaching, service, and scholarship shall be weighted equally in the evaluation of the nomination materials. Nominees do not need to demonstrate exceptional work in every area, and may be considered for exemplary work in only one area.

The committee will review applications in an electronic format; all application materials should be submitted as a single PDF file using the AMTE Award Nomination Form. More information and the online nomination form can be found at: <http://amte.net/about/awards>. Deadline is **October 15, 2014!**

Be sure all
items in the
nomination
materials are
clearly labeled
with the name
of the
nominee!

**2015 AMTE Annual Conference
February 12-14
Orlando, Florida**

Make your plans now to attend the **2015 AMTE Annual Conference** in Orlando, Florida on February 12-14, 2015.

The conference will begin on Thursday morning with sessions starting at 9:00 a.m. Lunch on Thursday will be provided. Dinner on Thursday is on your own. Other meals provided during the conference and included in your registration fee are Friday's breakfast, lunch, and dinner and Saturday's breakfast and lunch.

Some details for the conference have been finalized. The keynote speakers for the 2015 conference have been selected and we are excited to announce the following:

Thursday's General Session will feature **Margaret (Peg) Smith**, Professor of Mathematics Education in the School of Education and Senior Scientist at the Learning Research and Development Center, both at the University of Pittsburgh.

Friday's Judith E. Jacobs Lecture will be given by **Nadine Bezuk**, Qualcomm Endowed Professor of Mathematics Education in the School of Teacher Education at San Diego State University.

The AMTE Business Meeting will occur during Saturday's lunch. The conference will end approximately at 1:15 p.m. on Saturday.

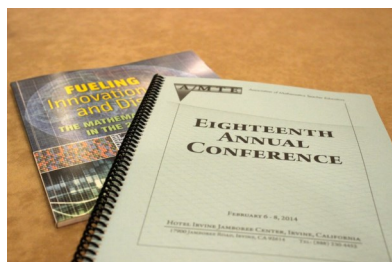
The conference site is the **Rosen Plaza Hotel** in Orlando, FL. The hotel room rate is \$164 for a single or double room. The deadline for reservations is November 30, 2014 or when the room block is full. Filling the rooms in our block at the conference hotel helps to reduce some of the conference expenses paid by AMTE, so please help support AMTE by staying at the conference hotel. Information about hotel reservations will be on the AMTE website in early August.



Information on the registration rates for the 2015 AMTE Conference is available on the AMTE website. These rates are **not different** from the rates for the 2014 conference! Beginning in early August, the conference registration process will open on the AMTE website. The registration deadline is November 30, 2014. Early registration at reduced rates is available through September 30. Check the AMTE Conference Information page, <http://www.amte.net/conferences/conf2015>, for the latest updates.

We hope to see you in Orlando in February!

Susan Gay, AMTE Conference Director
sgay@ku.edu
University of Kansas



Speakers
must
register by
September
15th!

AMTE is the Home for the STaR Program

Service, Teaching and Research (STaR) is a program to support early career mathematics educators in institutions of higher education. The 5th cohort of STaR Fellows met in June for a week in Park City, UT under the leadership of new co-directors, Denise Spangler, University of Georgia and Jeff Wanko, Miami University. This year 28 STaR Fellows from 27 different institutions in 17 states participated. Other members of the 2014 STaR Summer Institute Staff are: Sandra Crespo, Michigan State University; Karen Hollebrands, North Carolina State University; and Jeff Shih, UNLV. Fran Arbaugh also participated in the Institute.

The STaR Program was initiated in 2010 with a grant from the National Science Foundation under the direction of Barbara and Robert Reys, University of Missouri. The first four STaR Institutes provided opportunities for 148 STaR Fellows from 113 different institutions across 40 states. About half of the STaR Fellows hold appointments in mathematics departments and the other half in education colleges/departments. A complete list of STaR Fellows is available at <http://matheddb.missouri.edu/star/>.

The STaR Program has been successful in helping early career mathematics educators transition to their faculty positions in institutions of higher education and establish networks. The STaR Program is now operating under the auspices of the AMTE, and its continuation is dependent on support from contributors.

Anyone wishing to contribute to supporting the program may go to:
<http://amte.net/civircrm/contribute/transact?reset=1&id=13>.

AMTE is a not-for-profit organization so your contribution is tax deductible.

Barbara Reys, Chair STaR Program Sub-Committee and Former Institute Co-Director

Soliciting Ideas for AMTE Membership Committee

The AMTE Membership Committee is soliciting ideas for engaging our members year-round and for broadening the perception of AMTE's mission to potential members. Please send your ideas for consideration to Travis K. Miller, Committee Chair, at tmiller@uindy.edu.

2015 AMTE Annual Conference—Orlando, Florida Deadlines to Remember!

- * **Registration for Speakers:** September 15, 2014
- * **Early Registration:** September 30, 2014
- * **Regular Registration:** November 30, 2014
- * **Deadline for Hotel Reservations:** November 30, 2014
- * **Conference Dates:** February 12-14, 2015



Important Dates to Remember

2014

October 29-31	NCTM Regional Conference, Indianapolis, IN
November 6-8	SSMA Annual Convention, Jacksonville, FL
November 12-14	NCTM Regional Conference, Richmond, VA
November 13-16	AMATYC Annual Conference, Nashville, TN
November 19-21	NCTM Regional Conference, Houston, TX

2015

January 10-13	Joint Mathematics Meeting, San Antonio, TX
February 12-14	AMTE Annual Conference, Orlando, FL
April 13-15	NCTM Research Conference, Boston, MA
April 13-15	NCSM Annual Conference, Boston, MA
April 15-18	NCTM Annual Meeting, Boston, MA
July 13-18	PME Annual Conference, Tasmania, Australia
October 21-23	NCTM Regional Conference, Atlantic City, NJ
October 29-31	SSMA Annual Convention, Oklahoma City, OK
November 5-8	PME-NA Annual Conference, East Lansing, MI
November 11-13	NCTM Regional Conference, Minneapolis, MN
November 18-20	NCTM Regional Conference, Nashville, TN
November 19-22	AMATYC Annual Conference, New Orleans, LA

Online at
www.amte.net

**Membership/
 Renewal Forms**

**2015 Conference
 Information**

Position Papers

**Award & Election
 Information**

**STaR Program
 Information**

Webinars

**Other
 Opportunities**

Comments, questions, and submissions for AMTE *Connections* should be directed to:

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