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# **Intersection Points**

# The Newsletter of the Research Council on Mathematics Learning

#### April 2013

#### Volume 38, No.1

The Research Council on Mathematics Learning seeks to stimulate, generate, coordinate, and disseminate research efforts designed to understand and/or influence factors that affect mathematics learning.

Visit us on the Web at: web.unlv.edu/RCML

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# PRESIDENT'S COLUMN



The Texas Two-Step by Mary Swarthout

Last week I watched my students in a historical perspectives of mathematics class taking an assessment over computation methods - methods like the Russian Peasant Method, using Babylonian multiplication tables, and using logarithms to multiply and divide. Here we are in 2013 – but remembering and seeing connections within mathematics topics continues to be important. We can learn from the past – even as we are confronted by current conditions and expectations.

Many of you are engaged in the move to Common Core State Standards (CCSS) and the associated high-stakes assessments for school students that are on the way. Here we go again?! While Texas (my state of work and residence) is not a CCSS state – we have standards changes on our landscape, too. Or maybe I want to say the changes are on our dance floor? As we do our work as mathematics educators and researchers, do you sometimes feel like we move two steps forward just to move one step (or more) back? I have been having this forward-back feeling this spring as I read education news updates and hear about legislative actions in education in my state and beyond.

One of the wonderful things I experienced when I moved to Texas was the role of the dance hall in community and social life. My first trip to a dance hall in West, Texas – the Czech capital of Texas – was an evening of live music and everybody dancing – from young to old. What fun to watch a mother teaching a young son to lead a partner, or my favorite, watching a couple that you knew had been dancing together for a long time. They seemed to glide through the crowd and always be together on a turn or move.

I want to think about this dance floor metaphor to consider what we as members of RCML can do when we find ourselves in this move forward – wait, move back – no, hold on – we need to change that – this is the way...dance we have underway. I have been giving this some thought - from a personal point of view - what can I do that is going to contribute and be of value in improving mathematics teaching and learning? I still want to know how to do instruction better – for my students and yours - and be able to share what I have learned by providing the evidence of my work. I saw, heard, and experienced the work of RCML members at our recent conference in Tulsa and was invigorated, challenged, and delighted by the research results, ideas, and developments that were shared. I think there were some new dance steps being shared and valuable additions to known patterns of mathematics learning. And, perhaps, we can envision RCML as that seasoned couple making the rounds of the dance floor. We're

continuing to learn more about our partner – mathematics education. The music we hear as we move through our work may change – but the rhythm underlying the steps is steady.

So, what do I do when I feel like things are moving backward rather than in the circular motion of a dance floor – when my state legislature is moving to take the teeth out of the expectation that students complete Algebra II? When your state is moving back to memorization of multiplication facts? When numerous cheating scandals related to high-stakes testing are being revealed and even prosecuted?

This is a great time to remember who we are and what our RCML mission reminds us that we are to do: to stimulate, generate, coordinate, and disseminate research efforts designed to understand and/or influence factors that affect mathematics learning. So let's take the lead on the floor – and use our work to provide support and evidence for what it takes to improve mathematics learning. Don't be distracted by sudden spins, turns, and extra steps thrown into the dance pattern – focus on good research that helps to uncover and support the dance of mathematics learning - and connects to the partners we have in our work. So, don't be dazzled by the size of the hat, the snazzy cowboy boots or fancy belt buckle - focus on the person under the outfit – we can make a difference! I'll meet you on the RCML dance floor – looking forward to learning new steps to move me forward in my research work and interests. Think about how you can share your dance skills – submit to our journal, speak at the 2014 conference, share an article for the newsletter, and invite your colleagues and others you meet to join us as members of RCML.

# **ELECTION: Call for Nominations**



Please consider running for office! Self-nominate or nominate someone else for the RCML elections in 2013. <u>Open positions</u> include:

President-Elect VP of Conference Treasurer Conference Member (two positions)

## **Triangle Coalition for Science and Technology Education Membership** Submitted by Kay A. Wohlhuter

The Triangle Coalition is a nonprofit organization that promotes and supports STEM education through communication, advocacy, and programmatic efforts. The coalition's membership consists of businesses, educational organizations, and STEM societies. In a recent meeting, the board members realized that the membership may not be aware that we are Triangle Coalition members. We receive updates of their work and conference invitations. In addition, we are recognized as a supporter on their website. Although we do not presently have an active role in the coalition, we voted to continue our membership to be supportive of their mission. More information about the Triangle Coalition can be found at <u>www.trianglecoalition.org</u>.

## **RCML Memorial Scholarship**

The RCML Board approved and funded the RCML Memorial Scholarship Award to support early career faculty travel to the annunal conference. This scholarship award is being established in honor and memory of the organization's longtime members - living or deceased. Each year one award will be given in the amount of \$1,200 to offset the cost of attending the RCML conference. The recipient of the scholarship will be chosen on a competitive basis. To qualify, one must meet the following criteria: be a non-tenured faculty member in a tenure-track position at a college/university, have attended at least one RCML conference, and be a current RCML member. Further details about the scholarship award and the application form providing details for submission will be posted on the website by May 15, 2013. In addition, the evaluation rubric that will be used by the review panel will be available for applicants to consider as they prepare their materials. Applications will be due by November 1, 2013 for consideration and review by Sheryl Maxwell, Bill Speer, and Alan Zollman.

# 40<sup>th</sup> Annual Conference of the Research Council on Mathematics learning

By Patricia Jordan and Juliana Utley

February 28 – March 1, 2013 Tulsa, Oklahoma

The 2013 RCML conference was held at the Doubletree Downtown in Tulsa, Oklahoma. Conference registrations included 110 paid registrants, including graduate students and faculty. 82 presentations were offered during Friday and Saturday break-out sessions.

Three plenary sessions were offered over the course of the conference, beginning with the Wilson Memorial Lecture, delivered on Thursday, February 28 by Dr. Douglas B. Aichele, Professor of Mathematics at Oklahoma State University and followed by a reception. Kudos to Gumbie and his side kick, Doug Aichele, who regaled us with their adventures on the Iditarod trail. Friday closed with the Founders Lecture, presented by Melfried and Judy Olson, University of Hawaii. We appreciate the insights presented by Melfred and Judy Olson chronicling their work in mathematics education and as Founders of RCML. Although their reminisces reminded us that some of our members represent 3<sup>rd</sup> *generation* RCMLers having been advised by folks who had been advised by founding members. NCTM's President, Linda Gojak presented the closing session. Linda Gojak's talk reminded us of ways we, as mathematics educators, can enhance the reasoning and sense-making skills of our students and their future classroom students.

A warm round of thanks to everyone who participated in the 2013 Conference held in Tulsa. Without the tireless help of doctoral students, members, and Conference Committee members, we would not have had such a successful conference. Thanks again to Keith Adolphson and Dan Sisk for taking care technology, Diana Early for checking on all the rooms and gathering equipment, all those who volunteered throughout the conference, and especially Will Faulkenberry who kept all of us smiling. A thank you to OSU's College of Education for donating the cost of printing the programs and loan of the projectors for the conference. Finally, a big THANK YOU to the over 100 speakers who brought us thoughtful presentations that set the stage for new collaborations and extended discussions that lasted well into the night.

The 110 paid registrations generated a total of \$16,040. The hotel bill and name tags totaled a cost of approximately \$12,843.35. Additionally, approximately 43 memberships were picked up during the process of registration. A few were renewals but many were new memberships.

# **RCML** Conference Proceedings

The conference proceedings for the 40<sup>th</sup> Annual Meeting of the Research Council on Mathematics Learning (2013) were edited by Stacy Reeder and co-edited by Gabe Matney. The conference proceedings can be accessed via the RCML website. We would like to thank all the reviewers for their time and willingness to serve RCML. Watch for information regarding submission of papers for the proceedings for the 41st Annual Meeting of the Research Council on Mathematics Learning (2014).

# **Conference Highlights**



**Linda M. Gojack**, President, National Council of Teachers of Mathematics will provided the closing keynote talk on Saturday. Her talk was entitled, *"Preparing teachers for the* CCSS: Looking towards the future."

Description: The content standards and mathematical practices of the Common Core State Standards support the learning of mathematics through providing students with opportunities to reason and make sense of the mathematics they are learning. Strategies comparable to those used with

students can help teachers to develop a deeper understanding of the content of the common core while encouraging development of the mathematical practices. Let's look at some specific examples.



**Melfried and Judith K. Olson,** University of Hawaii at MĀNOA, provided the Founders Lecture on Friday afternoon. Mel and Judy are long-time members and supporters of RCML. Their talk was entitled, "Firm foundations forged by founders and those that follow."

Description: The lens through which we view our profession is shaped during our graduate studies and our early professional

experiences, which hopefully includes RCML. We will provide examples showing how the early mission of RCML (aka RCDPM) to stimulate, generate, coordinate and disseminate research efforts that focus on the learning of mathematics with particular emphasis on those factors which inhibit maximal learning is currently exemplified in many standard practices in mathematics education. What foundations can we establish so RCML's mission can influence future directions in mathematics education?



**Douglas B. Aichele**, Oklahoma State University, provided the Wilson Lecture on Thursday afternoon. Douglas is a Professor of Mathematics. His talk was entitled, "Mathematics and sled dog racing – It's all about the dogs."

Description: Alaskan Huskies are amazing canine athletes capable of surviving in extremely cold temperatures for long periods of time and maintaining their racing strength throughout. Aichele and his Husky, Gumbie, shared some of the fundamentals of sled dog racing, recent

research findings related to their endurance capabilities, and their school-related experiences with young children.



# PHOTOS FROM THE CONFERENCE







## **RCML Business Meeting Minutes**

March 1, 2013

Doubletree Hilton

Tulsa, OK

Kay Wohlhuter, RCML President, called the general business meeting to order at 12:20 pm and welcomed all in attendance.

First time attendees were recognized and given 2 years of the Investigations Journal.

Proceedings editor is Stacy Reeder and co-editor is Gabriel Matney.

They reported that the process for reviewing papers worked well. Twenty six papers were published in the proceedings. This was the 4<sup>th</sup> year for the proceedings. People volunteered to review 26 plus papers. Reviewers were limited to 2 reviews so we did not over burden anyone. Stacy and Gabriel recognized and thanked all reviewers present. Stacy recognized her graduate student who assisted with the processes of getting articles to reviewers, sending e-mails, and collecting reviewers' comments. She also recognized and thanked Gabriel, co-editor, for the help and support he gave through the review process. Stacy announced that CDs were available for people to pick up at registration desk.

Kay mentioned that reviewer papers were on tables. Please volunteer. "My mentors say that it is free to get in but you must fill out a pink paper to get out." We have openings; please nominate yourself or someone you think will do a good job. RCML cannot do it without you!

<u>Recognition</u>-Kay said thanks to all the work Pat Jordan, program chair, and Juliana Utley, conference chair, did to pull the conference together.

Two conference committee members completing their 2 year terms were Eileen Faulkenberry and Gabriel Matney.

New editor is Vickie Shell; Jean Schmittau has done it for many years.

Introduction of New Officers:

President- Mary Swarthout

Secretary-Darlinda Cassel

2 conference committee members- Kansas and Travis

Approval of Minutes-the minutes were in the newsletter and online. Are there any corrections?

Bob moved to accept and seconded by Melfried. No discussion. Motion carried.

<u>Treasurer's Report</u>-Jean McGehee presented the budget report for 2012. The transfer from paypal to the regular account took place in January. The cost for paypal is \$342.11 and the total for 2 years is \$600. We withdrew \$1000 and placed the money into the regular account. The check in December did not get credited until January. The publication account broke even. In 2011 we lost \$6000 and for 2012 we are down about the same. As of December 31 it shows we lost a little bit of money. RCML has a history of both, yearly nets and yearly losses, so this is not unusual. Michael moved to accept the report, Eileen seconded the motion. No discussion. Motion carried.

<u>Membership</u>-Mary said we began with 99 members (looking for Juliana). Juliana said that we added a few more and now have 105 members. Things seem to be moving in the right direction. We will keep working on membership and discuss it in more detail at the board meeting.

<u>Publication's Report</u>-Sheryl, VP of publications said this was her 5<sup>th</sup> year as publisher reported that we broke even. Your membership cost \$35 and \$29 goes towards publication costs. The costs are always around \$3000-\$3500 to produce journal. Sheryl stated that we are a national and international journal. Jean Schmittau had been editor for 24 years! She took the opportunity to facilitate more or unusual research that would not be published in other journals. She thought about what would "not" go into NCTM and then publish that research in Focus. We changed to "Investigations" 5 years ago. Elaine announced that she had a website that ranked the journals. Investigations was ranked 6<sup>th</sup>. Elaine, please send the website link to us.

The reviewer form online does not work. The correct address is rcmleditor@cox.net

Many people are involved in helping with the journal and its publication. Alan Z. and Anne R. are both on editorial board. Others have been VP of publications like Judy, Anne, Alan, -any others? Thank you.

Sheryl explained that we are on an academic calendar so Investigations is published 3 times per year. New one comes out in April. Sheryl told new members that they could grab issue 1 and 2 and that their membership will give them #6.

Sheryl introduced Vickie Shell as the new editor. Vickie said that Jean is a hard act to follow. She encouraged members to send manuscripts. She announced a meeting at 3:30 to talk about special issues and any ideas members have that will enhance Investigations. She reiterated that "This is your journal, not mine." Thanks for your patience.

Mary- If you fill out forms, please state if you are a graduate student. Another thing I need from you - your new addresses. I need new addresses and e-mails. The next person I will introduce is the newsletter person and that is Summer Bateiha. The newsletter comes out 3 times/year, October, January, and April.

Mary recognized the past secretary, Megan. Mary presented plaque to outgoing president, Kay.

## New Business-

1-establish RCML memorial conference award \$1200 to fund early career award for a person to come to RCML. The person must have attended at least 1 conference previous to the award. This is a way for us to mentor the person. We will finalize details for criteria. If you are stepping into new positions in the fall, consider submitting for the award. Mary recognized and thanked the committee that worked on the award; Sheryl M, Bill M, and Alan Z. More information will come in the newsletters.

2. Dues- Regular member dues will increase from \$35 to \$40 and student dues moves from \$39 to \$35. The \$5 increase goes to publication support due to increase cost of postage. Our goal is to support one issue going forward and we had \$3300 to do the one issue but need to think ahead. We are moving into a new chapter into our journal-we have a new editor. We are trying to think about the future. Do we move from 3 issues to 4 issues? We will need the support for those future decisions. I hope you agree that it is well worth having the journals. Some of you are the only math ed and need the support and connections. Others may need to be rejuvenated. Tom stated that it is only \$5 increase and is still only 1/3 of any other membership cost.

There is discussion of the journal going electronic-stay tuned.

Meeting adjourned at 1:10pm.

# Announcing the 2014 Research Council on Mathematics Learning (RCML)

# **Call for Proposals!**

Dear Mathematics Educator,

The conference planning committee is pleased to announce that the 41st annual conference of RCML will be in **San Antonio**, **Texas** from February 27 to March 1, 2014! We are now accepting proposals to speak, and to publish your paper in the *RCML Proceedings*.

As always, the purpose of our conference is to share current research regarding mathematics education through presentations and publication by the membership of RCML. To submit your proposal, you must complete the forms on the RCML web site.

*Proceedings* are <u>not</u> automatically accepted for publication. Speaking proposals and papers submitted to the *RCML Proceedings* are <u>peer reviewed</u>. This is an excellent opportunity for faculty and advanced graduate students to share their ideas for research, and receive constructive comments on their finished studies or preliminary findings.

Speaking proposals must be submitted by **September 10, 2013**, and papers for the *RCML Proceedings* must be submitted by **October 28, 2013**.

Guidelines for both the speaking proposals and papers will soon be available at the **RCML 2014 Conference** website: <u>http://web.unlv.edu/RCML/conference2014</u>.

Notification of acceptance for <u>speakers</u> will be made by December 1, 2013.

Notification for acceptance of <u>papers</u> for the *RCML Proceedings* will be made by November 26, 2013.

Additional important dates and criteria are listed in the information on the appropriate RCML Conference 2014 web pages. If you have specific questions for either the speaking proposal or *RCML Proceedings*, contact information is provided on the form.

Thank you in advance for your proposal to this conference, and we look forward to receiving your proposal and paper at your earliest convenience!

Sincerely,

Bob M. Drake, RCML VP for Conferences bob.drake@uc.edu

Browning@UHCL.edu

Sandra Browning, Conference Chair

Eileen Faulkenberry, Program Chair <u>Eileen.Faulkenberry@tamuc.edu</u>

## The Menger Hotel

Enjoy the 2014 RCML meeting in San Antonio at the Menger Hotel, located one block from the Alamo and on the Riverwalk!

This area is filled with restaurants and entertainment venues. You'll love it!







IS THERE COMMON GROUND BETWEEN THE CCSS FOR MATHEMATICS AND THE ENGLISH LANGUAGE ARTS?

by Kansas Conrady, Ph.D. Assistant Professor in the Department of Instructional Leadership and Academic Curriculum at the University of Oklahoma

As full implementation of the Common Core State Standards (CCSS) grows near, the quest for quality information and resources is growing. Personal searches have resulted in a variety of texts and web resources; however, I have been disappointed in my struggle to identify information explaining how CCSS English Language Arts Standards and Mathematics Standards can be integrated, especially in regards to the Eight Mathematical Practices.

The desire to find this information was sparked while sitting in a large banquet hall at a recent conference designed to introduce CCSS to a large group of educators. During the lecture by a wellknown researcher I stood face to face with my own practice of separating the two documents and started to tune out the lecture that was very focused on the changes in ELA. As I found myself getting frustrated and upset with only the occasional reference to the Eight Mathematical Practices, it was the speaker's comment that "we need to teach children how to think and reason" that grabbed my attention and forced me to refocus. As I continued to listen, I realized there truly are many similarities in the battle to transform classroom instruction. Ultimately, we all have an underlying goal for students to make an argument, defend that argument, and effectively communicate their process and explanation both verbally and in writing. We also want students to process the information that has been communicated to them, evaluate this information, and respond effectively.

Rather than falling in line with many of the other now disengaged non-language arts people in the room, I decided to open up the Common Core App and explore the ELA Standards while listening to the remainder of the presentation. I found that major strands in the CCSS ELA not only include the typical reading of literature and expository writing many of us experienced in our English classes, but also reading informational text, understanding the structure of a variety of writings types, learning effective speaking and listening skills, as well as the mastery of more general language skills. The latter are also all necessary for developing the Eight Mathematical Practices. As ELA teachers spread their wings and stretch into the less comfortable areas of teaching writing and communication about different types of information, everyone can come together and work towards the goal of developing the underlying thinking, reasoning, and communication skills.

While I in no way suggest that I have a complete and thorough understanding of the Language Arts Standards, I do suggest that much could be gained by a more complete comparison of how the two sets of standards and supporting documents can work together to continue reshaping education and ease this transition. Rather than continuing to talk about CCSSM as something unique and different, fluency in the ELA Standards may help to ease some feelings of anxiety related to the implementation of CCSS in general. Focusing on what the CCSS ELA and CCSSM documents have in common and identifying underlying goals of the different content areas allows educators to make

connection across content areas thus leading to more effective cross-curricular collaborations. Information about best practices from within the silos can be shared with other subject areas so that all students become better thinkers and consumers of information. By using common language and unifying ideas across all subjects, students will start to identify a bigger picture of their learning that will allow for greater transfer of knowledge. A closer look at the overlap between the two may provide guidance and direction for supporting teachers during this time of transition while also providing a vision for an effective mathematics classroom that develops and nurtures the CCSS Eight Mathematical Practices.

## References:

National Governors Association Center for Best Practices & Council of Chief Sate School Officers. (2010) Common Core State Standards. Washington, DC: Authors.

## The PULSE of INVESTIGATIONS

Sheryl A. Maxwell VP for RCML Publications April 2013

It is hard to believe that we have been publishing our official Journal for five years. We officially greeted our new editor, Dr. Vicki J. Schell, at the RCML Annual Conference in Tulsa, Oklahoma. It was GREAT to see so many new members and exciting to introduce our journal to more professionals. The Volume 5, Number 3 issue of **INVESTIGATIONS** IN MATHEMATICS LEARNING, our official RCML Journal, will soon be mailed to all subscribers and members of RCML. With your continued membership in RCML, you will receive a steady stream of issues.

Please check to see if you have renewed your membership to the RCML organization that was increased to \$40.00 at the March 2013 Annual Conference. Your membership is tied to you

receiving **INVESTIGATIONS** in a timely manner. Dr. Jean McGehee is our RCML Treasurer, so simply contact her at jeanm@uca.edu to arrange payment. A copy of the membership application is located on the back cover of each journal issue. Upon receipt of payment she will process the information and let me know of your renewal. When you pay for membership, this will entitle you to receive **INVESTIGATIONS** for the Academic Year 2013-2014 with issues mailed to you starting in Fall 2013. If you attended the 2013 Annual Conference in Tulsa and became a member there, you will receive Volume 5, No. 3 issue also. As a member you will receive the three issues of Volume 6: Fall 2013, Winter 2013-14, and Spring 2014.

Check with your college and/or university to see that they are receiving the official RCML journal, **INVESTIGATIONS** IN MATHEMATICS LEARNING, so others can be introduced to it. If your college/university does not receive our journal, here is the information that you can share with them.

An **Institutional** subscription to **INVESTIGATIONS** IN MATHEMATICS LEARNING is \$80.00 per Academic Year for an institution located in the United States and \$95.00 per Academic Year for an institution located outside the United States. The remittance is due in June of the previous Academic Year. Currently, RCML has institutional subscriptions from colleges/universities throughout the United States and even mail 35 journals to institutions in other parts of the world.

Send payment to:

**INVESTIGATIONS** IN MATHEMATICS LEARNING c/o Dr. Sheryl Maxwell, RCML VP for Publications 289 Crestmont Cove, Cordova, TN 38018-6904

This information is repeated on the inside cover of each issue in case you misplace this newsletter.

We hope that you will consider writing a manuscript for the upcoming issues of **INVESTIGATIONS** IN MATHEMATICS LEARNING. You can contact the editor at <u>rcmleditor@cox.net</u> and even submit your manuscript electronically as an attachment. The table of contents of past issues are available at <u>http://web.unlv.edu/RCML</u>, our website.

# 2013 MEMBERSHIP

Membership payment was due on 1 January for the calendar year 2013. To renew your membership please send **\$35** to the treasurer, Jean McGehee at the address below. Please note that the conference registration fee is **\$160**. If you are attending the conference and paying for membership, you should pay a total of **\$195**. Also, notify Mary Swarthout, Membership Chair, at <a href="mailto:swarthout@shsu.edu">swarthout@shsu.edu</a> that you are becoming a member by filling out the form located at our website <a href="http://web.unlv.edu/RCML/memberform.html">http://web.unlv.edu/RCML/memberform.html</a> and mailing this to her address:

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