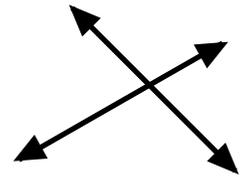




# Intersection Points

“where research and practice meet”



*The Newsletter of the Research Council on Mathematics Learning*

Visit us on the Web at: <http://www.unlv.edu/RCML/>

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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.

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## PRESIDENT'S COLUMN

Sheryl Maxwell, President

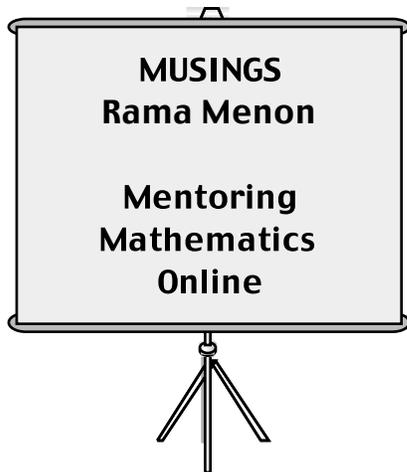
### UNWRITTEN/UNSPOKEN EXPECTATIONS

Recently, I was part of a committee where knowledge of established traditions was supposed to be affirmed. I'm puzzled, though, as I am not sure how I was to learn about these customs. When I realized that I had breached the established norms, violating the spirit and intent of the process that was somehow recognized by the others in attendance, I apologized profusely. I judged I showed my ignorance, but proceeded on with other aspects of the meeting. Later, upon investigating the written policy, I could not find the information that could have provided me the necessary input to clarify the situation, saving me much embarrassment. As a member of a university committee, I experience similar situations – ways that things are done, with no written policies or procedures relating to clarify the process. Do you suppose that unwritten or unspoken procedures permeate our mathematics education organization called RCML?

Although I experienced some of these unwritten norms when I served on the Conference Committee and when the RCML conference was held in Memphis, I continue to bump into some other traditions as the president. As I learn about the

presidency and read the handbook, I've discovered some items are in writing; however, many traditions are not. Unfortunately, you just acquire knowledge as you make a mistake. Although I've never been shy about asking questions, somehow, I hope to spare others that embarrassment of making mistakes. With the new officers being elected to serve on the Executive Committee and with new members attending the upcoming annual conference, more individuals may experience the uncomfortable awareness of unspoken or unwritten expectations. Perhaps we all can help alleviate this perplexity by fairly simple means – through communication.

The new faces at the annual RCML Conference increase yearly, with a decreasing percentage of us that recall the RCDPM days. Although there has been a change in the name of the organization, other unspoken and unwritten aspects have developed over the years and remain fairly constant. As a member becomes more involved one learns about these ways. For example, here are some things I have learned. (1) Active members are beacons of friendly helpfulness. They will share the RCML known ways with some even admitting his/her embarrassing moments. (2) RCML members actively seek (continued on page 3)



In the summer of 2003, I took part in an Online Mentoring Project (OMP), based at [mathforum.org](http://mathforum.org), at Drexel University. I had to go through a number of lessons, try some problems, submit some solutions, get "mentored" on my comments, go through an "approver" session (lasting about 2 hours) using AIM (AOL Instant Messenger), so that I could get an "approver" status. Based on that experience, I agreed to let one of my Fall 2003 math methods sections participate in it. I believe my experience in helping my pre-service students mentor mathematics online, is worth sharing, hence, the title of this article.

OMP is an NSF funded project, where each week, a "Problem of the Week" (PoW) is put up at <http://webct.drexel.edu>, (accessible only with a user name and password). These problems cover mostly topics up to middle school level, such as Pre-algebra, Algebra, and Fundamental Mathematics (such as fractions, percent, etc.) Students from all over the country, and sometimes from different parts of the world, would submit solutions online. My pre-service students (the "mentors") would read through the submissions assigned to them, and send comments, also online, back to the submitters. However, before the mentors' comments are sent to the submitters, it is first seen by an "approver," who has already gone through some training, on how to improve comments, and scores given to submitters.

Initially, I was asked whether my students would like to do the Pre-algebra PoWs, but I declined, because I felt that most of my pre-service students would not be able to solve the Pre-algebra PoWs themselves. So, I

chose, for my students, the Fundamental Math PoWs (called funpow) to mentor. We planned for a two- to three-week project duration, with my students going through all the seven lessons online – lessons that would help them mentor better. By the time they completed the 4th and 5th lesson, they were supposed to be ready to mentor submissions of the funpow.

Each of my 25 students was initially assigned three submissions to mentor, followed by an additional two, after successful approval of the initial submissions. Hence, there were a total of 125 submissions to "approve." (Note that before final approval was given to send the mentors' comments to the submitters, the mentors had to revise their comments, and send them back for approval.) I had a graduate assistant help me with the approvals, and the coordinators of the OMP also helped me quite a bit. Even so, it was a very time-intensive task. Sometimes, it took me over an hour to "approve" one of my mentor's three submissions. Then, after the "approving," I oftentimes had to suggest further changes, which meant another round of "approvals." So, in effect, editing, and suggesting changes in the comments my students (mentors) made, meant that each of the three submissions had to be looked at and commented upon at least two times. Hence, the total workload (for my assistant, and me) effectively became 250 submissions to approve!

So, given approximately 20 minutes per approval, my load (about 125 submissions, including revisions by mentors) for approving the mentors' comments, worked out to be over 40 hours at the computer, for a period about two weeks. And, that did not include the time spent in reading the comments posted on the discussion board and tracking students (how many times the lessons had been accessed, how many times discussions were posted, etc.)

In spite of the time-intensive nature of the OMP, some technical glitches, and some initial frustrations, my students were unanimous that the online mentoring project was a worthwhile experience. Among the benefits mentioned were:

1. Learning to look at the process – how the submitter arrived at the answer – rather than just the answer itself.

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## THE VOTES ARE IN!

Virginia Usnick

By the time you receive this newsletter, the 2003 elections will have closed, and ballots will have been counted. Due to the lateness of the deadline for voting, President Sheryl Maxwell will not have enough time to notify the candidates of the election outcomes prior to the printing of this newsletter. Check the RCML Web site right after New Year's for results.

## 'President's Message' continued

participation of graduate students. (3) Although the conference participants delight in learning about completed research, a session can also be designed to share "seed ideas" and/or hunches the presenter has been investigating. (4) A member can discover at least one other person who is as passionate about a mathematics education area in which you, a participant and/or member, are interested. (5) All questions can and will be answered, even those you believe might be frivolous. (6) There is a consistent thread characterizing the Wilson Memorial Lecture.

I ask that each of us think about and ask the questions we have about RCML. Who knows, some of these may stem from unwritten expectations. I look forward to answering any of your questions about RCML both the written and unwritten expectations. You can send an email to me at [smaxwell@memphis.edu](mailto:smaxwell@memphis.edu). I hope we can visit together at the upcoming Annual Conference in Oklahoma City. See you in February, if not before.

**Check out RCML and renew  
your membership on the  
Web at:  
<http://www.unlv.edu/RCML>**

## 'Musings,' continued

2. Learning to begin with positive and encouraging comments.
3. Learning to give specific, guiding questions, to help the submitter improve the explanation of the solution.
4. Learning to score both for the math computation, as well as the explanation and justification.
5. Learning to write using short, simple sentences, that could be understood by children whose ages generally range from 8 to 14 years of age.
6. Getting more confidence in helping children learn mathematics.

As for me, I realized that I needed to monitor very closely that my students were keeping strictly to the schedule of online lessons. If they missed any lessons, they could not only be unable to mentor effectively, but could not even access some of the pages to write comments to their submitters. Their not completing the online lessons made my "approving" job that much more difficult. Another difficulty I had was that I had to suggest modifications to their rather frequent language errors, as English was the 2nd language for most of my students. I guess one of the biggest difficulties was that I had to conduct my usual in-class sessions on mathematics methods, and could not afford to spend too much of class time for discussing online mentoring-related issues. If I ever get involved in the OMP again, I will:

1. Make sure that I monitor that each lesson has been completed, by assigning the readings and giving grades for having completed the lessons in a timely fashion.
2. Go over some of the common difficulties in online mentoring during in-class discussions, so that time could be saved during "approving."
3. Request that I get assistance in approving, so that each approver has only to be responsible for no more than eight mentors.

Overall, however, I would urge the readers to get involved in the OMP (if you have not already done so), by accessing <http://www.mathforum.org/pow/>. Even if you don't want to have your whole class of students to get involved in it, you, yourself, will find it a lot of fun (and educational) to mentor students of different ages, from different parts of the country, and possibly, from different parts of the world.

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# Research Council on Mathematics Learning Thirty-First Annual Conference Oklahoma City, Oklahoma 19-21 February 2004

We have a great program and many activities planned for the annual conference this year. We hope you are as excited about coming and sharing your expertise and perspectives as we are. A brief outline of the program in this issue of *IntersectionPoints* will give you a glimpse of the exciting opportunities that await you in Oklahoma City! Also, below are some deadlines and information that will help you prepare for your visit.

In addition to the intellectual activities of the conference, we have arranged for a "command performance" by the Byrone Berline Band in Guthrie, Oklahoma on Friday night. For those of you not familiar with bluegrass, Byrone has a long and distinguished career as a three-time national fiddling champion. He has spent many years appearing in a variety of films, movies, and TV shows (including the Andy Griffith Show) as well as the Grand Ole Opry. His DoubleStop Fiddle Shop and Music Hall is located about 30 minutes from downtown Oklahoma City in the first territorial capitol of Oklahoma. The town of Guthrie itself is worth the trip! Even if you are not familiar with bluegrass, I think you will enjoy the Byrone Berline Band.

**In order to make the trip to Guthrie possible, we need at least 40 people at \$25 each to register, in advance, by 15 January 2004. The \$25 will pay for transportation (we're considering the "Party Bus" – an adventure in itself) as well as admission to the concert. He is offering the concert exclusively for us, so this is a great opportunity to see his music hall and talk with a legend! Please join us!!**

The registration form for the Byrone Berline performance can be found at our conference Web site. Other forms and deadlines can also be found there. Below are some reminders of deadlines and places to find important information about the conference. We look forward to making this another great RCML community event. See you in Oklahoma City in February!

#### *Deadlines:*

- Registration for the conference: NOW DUE
- Hotel reservations at conference rates: by 19 January 2004
- Papers submitted for consideration for an award: by 5 January 2004
- Byrone Berline trip to Guthrie, OK: by 15 January 2004

#### *Web Sites with important information:*

- Conference Web Site: <http://students.ou.edu/R/Kerri.D.Richardson-1/>
- Hotel Web Site: <http://www.westinokc.com/>
- RCML Web Site: <http://www.unlv.edu/RCML/>
- Membership Form: <http://www.unlv.edu/RCML/memberform.html>

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# RCML 2004 Conference Outline of Schedule of Presentations

Thursday, 19 February 2004

**Registration 1:00 PM - 5:00 PM**

**Board Meeting 12:30 PM - 2:30 PM**

**Session I 3:00 PM - 4:15 PM**

**Birds-of-a-Feather Discussions**

The three Birds-of-a-feather sessions will provide opportunities for newcomers to meet in an open forum with other RCML members, discuss issues of interest, and share research and ideas. In addition, the BOFs should set the tone for on-going conversations along these themes throughout the conference.

**Session II 4:30 PM - 5:30 PM**

**Round-table Discussions**

**Reception – PLAZA BALLROOM 5:30 PM – 6:30 PM**

Light hors d'oeuvres will be served. Conference staff will facilitate groups gathering together to go to dinner in Bricktown.

**Dinner on your own: Bricktown**

(See <http://www.bricktownokc.com> for details)

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## Friday, February 20, 2004

**Registration & Information      8:00 AM - 6:00 PM**  
**Open in the morning and between sessions**

**Continental Breakfast – Cherokee Room    8:00 AM - 8:30 AM**

**Session III      8:30 AM - 9:15 AM**

**Session IV      9:30 AM - 10:15 AM**

**Session V      10:30 AM - 11:15 AM**

**Lunch and Annual Business Meeting      11:30 PM - 1:15 PM**  
**Foyer – Bottom Floor**

**Session VI      1:30 PM - 2:30 PM**

**Session VII      2:45 PM - 3:45 PM**

**Session VIII      3:45 PM - 4:30 PM**

**VIII.1 Room: Pavillion Lower Level**  
**Oklahoma City Student Robotics Demonstration**

Students from Santa Fe South High School, a charter school in Oklahoma City, will demonstrate their robotics projects. Teacher, Gabriel Matney, will discuss their participation in the national Botball competition and extensions to botball activities, including hover crafts and flight academies.

**VIII.2 BREAK: Cherokee Lounge**

**Session IX      4:45 PM – 5:45 PM**  
**PROBLEM CENTERED LEARNING SYMPOSIUM**

**Session X      DINNER and KEYNOTE – PLAZA BALLROOM**  
**6:00 PM - 8:00 PM**  
**SPEAKER: Grayson Wheatley**

**OPTIONAL EXCURSION – GUTHRIE, OKLAHOMA**  
**DOUBLESTOP SHOP – BYRONE BERLINE BAND (BUSES LEAVE AT 8:20)**

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# **RCML 2004 Conference Outline of Schedule of Presentations**

Saturday, February 21, 2004

**Registration      8:00 AM - 11:00 AM**

**Continental Breakfast      8:00 AM - 8:30 AM**

**Session XI      8:30 AM - 9:15 AM**

**Session XII      9:30 AM - 10:15 AM**

**Session XIII      10:30 AM – 11:15 AM**

**Session XIV      11:30 AM – 12:30 PM**

**WILSON LECTURE: Cathryne Stein**

*Mathematics Futures in Practical Robotics*

**Conference Ends – Travel Safely**

**(For those staying over, you are invited to go to the OmniPlex and watch the afternoon sessions of the Botball competition)**

**BOARD MEETING AND LUNCH**

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