



MichMATYC Sum-Times

Two-Year College Mathematics in Michigan

May 2014

Edited by Khadija Ahmed, Monroe CCC, kahmed@monroeccc.edu

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Update from your MichMATYC President – Jack Rotman, Lansing CC

I hope that the first few months of 2014 have been positive for you, and that the end of this semester brings pleasant surprises your way.

We are looking forward to our next MichMATYC conference, to be held at Lake Michigan College (October 3 and 4, 2014). The call for presenters has gone out, and is posted on the MichMATYC Facebook page. The LMC planning team will have a web site available, as well. Preceding that conference will be our “Michigan Summit on Developmental Mathematics” (Friday afternoon, October 3). Several people are helping me plan this event; I hope that every college will send a team to the Michigan Summit!

(Continued on page 2)

A Message from the Midwest Vice President of AMATYC – Jim Ham, Delta CC

My daughter is attending Lake Forest College in Illinois and recently took a statistics class from a seasoned part time instructor who is a long-time AMATYC member, Marvin Johnson. She enjoyed Marv’s humor and the statistics class. Here is one of Marv’s gems:

Q: *Why was 0.2 so stressed?*

A: *Because it was two tenths!* 😊

Humor in the mathematics classroom is always a good idea; perhaps even more so in the waning days of the semester.

Planning for this fall’s AMATYC conference is continuing. We will convene in Nashville, Tennessee at the Grand Ole Opry Hotel on November 13-16, 2014. There will be a special celebration to commemorate AMATYC’s 40th anniversary. Each of AMATYC 44 affiliates will be asked to create a tri-fold poster for the celebration. The poster will contain the affiliate’s logo and any other information provided by the affiliates. *(Continued on page 3)*

Where are they now!



Remembering Dawn Schmidt

Dawn Schmidt was a longtime educator at Delta College who passed away in 2008. She taught in the Math and Computer Science Division for 30 years, and was valued for her dedication to the shared governance process. A recipient of the Bergstein Award for Teaching Excellence, Delta’s top teaching award, she served the faculty in many positions, including Chair of the Division, Chair of the Faculty Executive Committee, Chair of the Council of Chairs, and Chair of the Faculty Salary Committee. Her first interest was always students, especially those interested in education.

We lost Dawn Schmidt to colon cancer in 2008. An endowment was established in her name with the Delta College Foundation to support an annual student award given to a student who plans to pursue a career in math education.

Submitted by Jim Ham – Delta College

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Enjoy the Summer!

President (continued from page 1)

I have been working at improving our connections to other organizations in the state. At about the same time that you are reading this, I will be at the joint spring meeting (MichMAA and MichMATYC) at U-M Flint. Hopefully, I will see lots of community college math faculty! We have always had a strong connection with MichMAA; this year, the meeting features a session by a team – one from community colleges, one from universities (this is about the MTA, done by Kirk Weller of Ferris and myself). The other organization we are networking with is “MDEC” – the Michigan Developmental Education Consortium; I met with their Board last month, and they are helping with the planning for the Summit on Developmental Mathematics.

Besides our conference this fall, I encourage you to consider attending the AMATYC conference in Nashville. This conference is closer to Michigan than usual, which is a plus; it’s the 40th conference – and will feature some celebrations and special speakers. MichMATYC, as has been our practice for many years, has contributed funds to support the hospitality room at the AMATYC conference. [MichMATYC also donates money to the AMATYC Foundation based on the number of Michigan faculty in the AMATYC Project ACCESS.]

MichMATYC is well-served by many volunteers. The nominating team (Jan Roy, Tim Kane, and Brianne Lodholtz) has done a great job this year; the Teaching Excellence committee (Laura Wicklund, Anna Cox, and Frances Lichtman) and Karen Sharp Student Scholarship committee (David Tannor, Brianne Lodholtz, and Adam Cloutier) have developed forms and processes for this year’s awards. You can honor their work by nominating a colleague or student; the forms are on the MichMATYC web site.

Khadija Ahmed continues her outstanding work on our newsletter. We do have a new web master – David Tannor. I don’t know if it really takes a village to raise a child; however, I do know that it takes all of us to make MichMATYC a strong organization.

The MichMATYC officers are considering a change in how we operate our email list. (The officers are myself as President, Bernard Cunningham as Past-President, Sam Bazzi as Secretary/Treasurer, and Doug Mace as Affiliate Delegate.) Our email list (“MichMATYC-L”) has been hosted on a server at Delta College since we started, and they have always been very helpful to us. However, we now have a professional-grade internet service provider, and have the option of moving our email list to their server. If this change is made, we will communicate with members and current subscribers so that people do not miss out on desired emails.

Your college has likely finished the process of identifying courses for the “MTA Pathways” (Michigan Transfer Agreement). I’ve posted an updated presentation about the MTA processes and courses for the pathways; you can see it at my blog http://www.devmathrevival.net/?page_id=1840

I hope that you will be thinking about how you can help MichMATYC, and about how MichMATYC can help you. Got ideas? Let me know, or contact one of the other officers! Thanks.

~~ Jack

MichMATYC Fall Conference – 2014

Lake Michigan College

October 3 – 4, 2014

Submit for Presentation: June 27, 2014

MAA/Michmatyc section meeting UM-Flint

May 2-3, 2014

Registration and information

www.umflint.edu/math/2014-annual-meetings-maa

Call for Nominations for MichMATYC Sponsored Awards

Teaching Excellence Award - Established in 1999 to recognize high quality of instruction occurring at Michigan's two-year colleges.

Karen Sharp Student Scholarship Award - Established in 2000 to recognize outstanding mathematics students at Michigan community colleges. In 2012, this scholarship was named in honor of Karen Sharp, a founding member of MichMATYC.

The selection criteria, requirements and application process can be found at: <http://michmatyc.org/awards.html>

Midwest VP of AMATYC (continued from page 1)

Speaking of posters, AMATYC will again this year host a poster session at the conference. Have you tried something new in your classroom? Are you working on a grant project? Have you conducted exciting research? Think about what energizes you and offer to share it with others through a poster. Presenters will receive all the materials to create their poster at the conference site and will display their posters for 2 hours on Friday during the conference. **The deadline to submit a poster proposal is May 1, 2014.**

The draft position statement on *The Academic Preparation of Mathematics Faculty at Two-Year Colleges* was recently reviewed and revised by an AMATYC ad hoc committee. This position statement will continue to be reviewed in the coming months and, if acceptable, approved at this year's conference. Please review the statement (http://www.amatyc.org/resource/resmgr/guidelines_and_positions/amatyc_position_paper_on_aca.pdf) and send your comments to me or to the committee chair, Jim Roznowski (jimroznowski@gmail.com).

You can see more details about the 2014 conference at <http://www.amatyc.org/?page=2014ConfHome>. **We hope you are able to attend!**

AMATYC's *Project ACCESS* is currently accepting applications for the next cohort of fellows. Project ACCESS "is a mentoring and professional development initiative for two-year college mathematics faculty. The project's goal is to provide experiences that will help new faculty become more effective teachers and active members of the broader mathematical community." Please encourage one of your newer colleagues to apply for this worthwhile professional development experience. **The deadline to submit an application for Cohort 11 is May 1, 2014.**

If you are already a member of AMATYC, you are well aware of what AMATYC has to offer. If you are not yet a member, I encourage you to visit the website at <http://www.amatyc.org> and become a member. While there, join a committee. AMATYC committees are special interest groups that share ideas related to *developmental education, innovative technology, statistics education, teacher preparation*, and many other topics. AMATYC committees are open to anyone and require no membership fee.

Finally, there are, occasionally, volunteer or leadership opportunities that become available in AMATYC. If you would like to become more involved in AMATYC please let me know; we are always looking for motivated colleagues who want to become more involved at the national level. Below are two new opportunities:

1. AMATYC Newsletter Editor
2. Midwest Regional Representative for the *Mathematics for the AAS programs* committee

I can provide more details of these positions upon request.

For more information on recent AMATYC events and activities, download the most recent edition of the *AMATYC News* at <http://www.amatyc.org/?page=AMATYCNews>.

I thank you for your support of AMATYC and look forward to seeing many of you at the MichMATYC/MAA-Michigan Section meeting in Flint in early May, or at the annual AMATYC conference in November. Have an enjoyable end to your semester and a relaxing summer.

Jim Ham

jaham@delta.edu

April 12, 2014

Call for Articles for the MichMATYC Sum-Times

I am pleased that several articles were submitted for this issue of MichMATYC newsletter. I have included two in this issue. Please continue to send articles (1-2 pages in length) and share ideas and information with MichMATYC members. Enjoy!

QR Codes

Julie A. Gunkelman – Oakland CC

A QR code or quick response code is a two-dimensional code made of black and white squares. You may have seen these in stores or as part of an advertisement. Because QR codes can be read with smartphone apps, the information it holds is readily accessible to a large number of people. Additionally, anyone can create a QR code via smartphone app or by using free QR creators on the web. ([Continued on page 5](#))

Alpena Community College - Dan Rothe

Happy Easter from Alpena Community College. As the semester winds down, we are busy writing exams and registering students for fall and summer classes. We have adopted new textbooks for our Arithmetic, Elementary Algebra, and Intermediate Algebra classes. We choose to go with texts from XYZ publishing to save our students some money. So far the Elementary Algebra seems to be working well. The others will be implemented in the fall. Online classes in Precalc (Meghan Cameron) and Intermediate Algebra (Kristin Berles) continue to be popular. Jim Berles' GIS class also went well. We will be expanding the number of students serviced by dual enrollment at Hillman High School in addition to those in Alpena and Rogers City that we have been offering.

The ACC math requirement for the MTA has been determined to be Mth 121 College Algebra (Finite Math in most labeling schemes) Mth 123 (Precalc), Mth 223 (Statistics), or higher. We have changed the statistics prerequisite to intermediate algebra since in recent years we have seen more students in statistics who are not business majors needing finite math for their program.

Sigma Zeta Math/Science Honor Society inducted 9 new student members this spring. The group enjoyed helping with the Science Olympiad, running their own event as all faculty advisors were busy running other events. It went very well. An end of the semester trip is being planned to the Ford Rouge Factory tour in Dearborn. This year's officers were Andrew Delekta (President), Erin Wright (Vice President), and Amanda McConnell (Secretary).

Delta College – Frances Lichtman

The Mathematics Division congratulates Natascha Rivet, who received Delta College's Bergstein Award for Teaching Excellence in the math/science area. In addition to teaching, the criteria for this annual award include scholarly attainment and community service. Students, alumni, and faculty provided input for selection of the winner.

On March 22, the Mathematics Division welcomed about 450 students to campus for the Middle School Mathematics Competition. This year's theme was Math in the Arts. There were activities (origami, drawing, string art, and dance) during the math test for family members and teachers and after the test for all attendees.

Grand Rapids CC – John Dersch

Andrea Hayes, who has taught for us as a temporary full-time faculty member for three years, was the top candidate in our efforts to replace this temporary position with a tenure-track full-time position to begin Fall 2014. Andrea's responsibilities will include teaching courses up to the level of Pre-Algebra,

and assisting with the coordination of these courses and Intermediate Algebra.

Betsy McKinney, who has also been with us for three years, earned tenure in March 2014. She is our coordinator for Elementary Algebra, and will continue to teach courses closely related to this.

Also in March we successfully ended our search for another tenure-track position. Meghan VanderMale will begin teaching at GRCC in August 2014. Meghan comes to us with a B.A. in Mathematics from GVSU, with minors in French and Dance, followed by an M.S. in Mathematics from Western Washington University. Her experience includes working at an orphanage in Mexico, teaching Pre-Algebra through Business Calculus at WWU, teaching Linear Algebra and Differential Equations in Rwanda, and most recently teaching College Algebra, Pre-Calculus, Calc 1 and 2 at the Russ College of Engineering at Ohio University.

On September 21, 2014 GRJC/CC will have been open for exactly 100 years. We started on the top floor of Grand Rapids Central High School (still in use by Grand Rapids Public Schools) with seven math students in a class called "College Algebra and Geometry". It's been quite a journey. I have been compiling a "History of Mathematics at GRJC/CC" and will share it when it's complete.

Jackson CC – Steven Tuckey

Sara Main is a new full-time faculty member in the Mathematics and Engineering Department. She comes to us with experience from Grand Rapids Community College and Western Michigan University, and we're very excited about having her work at both our Central Campus location, as well as our satellite campus at the Lenawee Intermediate School District in Adrian.

Lansing CC - Leslie Mohnke

Lansing Community College has just completed their first year as a participant in the Gateways to Completion (G2C) initiative. Math 112 – Intermediate Algebra was selected as one of 5 Gateway courses across campus. After collecting data, administering the SALG survey, examining Principles and Key Performance Indicators; the course committee is in the process of writing their final summary with recommendations. There are 4 course specific recommendations that the department will be addressing during Fall 2014. The entire college will be involved in numerous initiatives and recommendations taking place across campus as a result of the work done with the Gardner Institute.

In addition to the renovations that were completed during Fall 2013 to the new Arts & Science building; another project, BUILD FORWARD, is underway with the completion slated to be done before the start of Fall semester. (continued on next page).

(LCC) The renovation of the Gannon Building will create welcoming and inspiring spaces for students that connect them with the resources and support what they need to achieve their learning goals. Upon completion, the Gannon Building will not only serve as an attractive and comfortable place for new and current students, but as a landmark for our Capital city.

Macomb CC, South Campus – Jon Oaks

Recently our department was chosen to be part of an iPad pilot at our college. We received 30 iPads, which are stored in a Bretford cart within the department. The iPads are currently being used with a Math for Education course. So far we are just testing the water by using the iPads to logon to the Learning Management System (LMS) and to research various items on the internet during class, such as strategies to encourage intuitive reasoning in elementary school children. Upon successful completion of the pilot this semester, the iPads should be available for use in all of our classes.

During the Fall 2013 Semester, a group of students formed M.A.C.O.M.B. – the Macomb Amazing Club of Mathematics Brilliance. This is a math club that is open to students in all classes. So far the club has organized several unofficial outings as a group, such as to the Detroit Institute of Arts and to volunteer at Gleaner’s Food Bank of Southeast Michigan. The group hopes to continue into the future and to be able

to register as an official Registered Student Organization (RSO) soon.

The Learning Resources Advisory Committee at our college is currently working on a plan to get a few scientific and graphing calculators on reserve for student use while at the campus library. We believe that this will be a great benefit to our students as many of our students work on homework at the library and the Learning Center, which provides free peer tutoring for our students - also housed at the library. Our hope is that this will become a great service that students will take advantage of when they may want to work on their homework, but may have forgotten their calculator at home.

Montcalm CC – Jan Roy

At Montcalm CC, we are creating or revising courses to match those at the Charles A Dana Center at the University of Texas at Austin. These will assist us in aligning our curricula with the Quantitative Reasoning, Statistical Reasoning, and STEM pathways that have been developed for the new Michigan Transfer Agreement. We will be using materials developed at the Dana Center and participating in workshops giving us professional development for the use of the materials.

QR Codes (continued from page 3)

QR codes can hold text, a phone number, an email address, business cards, web address or connect you to a WiFi network. In the classroom, QR codes can be used to link to a video, an answer key or text. This can be helpful because every student doesn’t work at the same pace. Answers or next tasks can be distributed via QR code as needed instead of to the whole class all at once.

Websites that make QR codes are:

QR Stuff <http://www.qrstuff.com/>

QR Code Generator <https://www.the-qrcode-generator.com/>

If you use Google Chrome, the extension ShortenMe will create a short URL (goo.gl) and a QR code to link to content on the internet. An example is shown to the right to link to a droid app.

Apps

QR Droid can read and create QR codes <http://goo.gl/GD4wZ>

The Top10 QR code readers for iPhone and iPad <http://goo.gl/7ElzDk>

<http://goo.gl/DL4ZcL>
Copied link to clipboard



For more information about using QR codes in the classroom, please see Richard Byrne’s blog post on his site Free Technology for Teachers via the short URL <http://goo.gl/DL4ZcL> or use your smartphone and the QR code.



Lesson Study: A Format for On-going Professional Growth

Rheta Rubenstein – University of Michigan-Dearborn

Kristen Bieda – Michigan State University

Research indicates that the most productive professional development for educators is

- Sustained, intensive, and centered on student learning,
- Collaborative and systemic, focusing on more than individual classrooms,
- On-going, connected to practice, related to specific academic content, and
- Supported within the educational institution in which the classrooms exist. (Darling-Hammond et al. 2009).

Instructors at all levels (early childhood, K-12, community college, university), are eager to learn more effective ways to support student learning and recognize that collaboration is a key element in such improvements. Unfortunately, many existing formats for professional learning (e.g., conferences, institutional-led initiatives, technology sessions) are short-term, top-down, not content-specific, disjoint from classroom practice, and not the most effective uses of precious professional time. Kennedy (1999) reviewed 93 studies comparing the effectiveness of science and mathematics professional development and found that the ones with the strongest effects on student achievement were those that helped teachers understand more about students' thinking and reasoning, among other factors.

How do we wed what we know about effective professional development with the needs and concerns of teachers? One format for on-going, systemic, intensive, collaborative professional development that has been developed in Japan and used successfully in many places in the U.S. over the last 20 years is "Lesson Study." Lesson Study provides a cycle of learning in which teams of teachers work together to

- Consider long-term goals for student learning,
- Contrast goals and realities to identify gaps to fill,
- Identify an issue, practice, or topic of student learning that needs attention and agree to collaboratively design a 'research lesson' so they may study the issue and advance their understanding and practice,
- Conduct the research lesson, by one team member teaching it and others observing to gather data on student thinking and how the lesson worked,
- Share and discuss data gathered from the lesson with an eye on what may be learned about student thinking as well as the design and orchestration of other lessons,
- Possibly, revise and reteach the lesson in another classroom to continue the cycle of learning. (Lewis & Hurd, 2011)

Ideally these teacher teams are in the same workplace. In a modified version they are teaching the same content and at the same level (e.g., grade 8 or 9 beginning algebra or community college pre-calculus).

One of the sources of information about Lesson Study is *The Teaching Gap* (Hiebert & Stigler, 1999). It is an excellent book for all audiences who are interested in improving schools, but a real page-turner for mathematics teachers because the specific examples are drawn from the Third International Mathematics and Science Study (TIMSS) video study in eighth grade mathematics classrooms. Among other things, *The Teaching Gap* helps us think about attributes of teaching that we don't 'see' when we are in our own culture and it helps us learn about differences in approaches to teacher professional development and teacher professional life. It makes the case that schools are cultural and we need to work within them and in systemic ways to create a cycle of on-going improvement. For more recent and specific guides to Lesson Study, per se, there are many more recent publications (Fernandez and Yoshida, 2004; Gorman et al., 2010; Hurd and Lewis, 2011; Wang and Yoshida, 2005). There is also a Chicago Lesson Study Group that convenes excellent annual conferences with international speakers and public research lessons (<http://www.lessonstudygroup.net/index.php>), one in early May, 2014.

The translation of the Japanese phrase into the English words "Lesson Study" suggests that the goal is polished lessons on particular topics. No. The real goal is the learning that teachers gain in the entire process (the 'study' more than the 'lesson.')

Another way to think about this is that although Lesson Study is done by teachERS, the real goal is for teachING to grow, for our *profession* to have a sustained, systemic, on-going format for improvement. When done well, instructors at all levels can learn

together – pre-teachers, novice teachers, experienced teachers, administrators, counselors, etc. and together we can build a community of learners and grow our profession by creating a system for on-going improvement, not just improve ourselves individually.

One of the challenges about starting Lesson Study is to find common time for collaboration, goal analysis, planning, implementing a lesson, and post-lesson reflection. Ideally, our schedules would be designed with common preparation time, at some point in the week, at least for those who want to initiate LS teams. Otherwise we back-fit our time, e.g. revising office hours or using lunchtimes or ‘after school’ time. The other scheduling issue is to figure out when a lesson might be observed jointly. It may be that observers are given a substitute teacher so they may be released to observe in a colleague’s classroom, or that their own students are taking an exam proctored by other faculty. Motivated pioneers find and take advantage of available time and/or convince schedulers to build shared planning time into our schedules.

In Michigan, some of us are beginning to develop a network of teachers, administrators, and teacher educators from around the state to foster LS in many educational institutions and to learn with and from one another. At this point our new organization, Michigan Institute for Lesson Study (MILES), is still getting organized, but those who are interested can let Rheta Rubenstein know and we will add you to our mailing list (rrubens@umich.edu).

Here are a few implementations known to us.

- Jennifer Lewis at Wayne State is supporting teachers in their Lesson Study work in a few local and some out-of-state elementary schools. She is also working to prepare graduate students to support Lesson Study.
- Rheta Rubenstein at UM-Dearborn teaches a graduate course where elementary, middle school, high school, and community college instructors have worked on Lesson Study teams through the entire cycle of goal-setting, identifying a critical learning topic, researching how students learn the topic and how different authors approach it, conducting the research lesson with guest- as well as team-observers, holding a formal debriefing of the research, and writing detailed reports on what was learned. A subset of these educators is continuing to work on further research lessons with one at Hamtramck High School late April, 2014.
- Kristen Bieda at Michigan State University is incorporating modified Lesson Study strategies into pre-student teaching experiences for future secondary teachers.
- Rama Chidambaram at Henry Ford Community College has led Lesson Study teams in past years around intermediate algebra.
- Roger Verhey (retired) and Angela Krebs at UM-Dearborn are working with teams of teachers from Wayne County high schools on research lessons.
- Macomb County, spear-headed by Debbie Ferry, had an active group of Lesson Study teams in the early 2000s that produced a video about their work.
- Holt High School has done Lesson Study work over the past five years, particularly in mathematics. Marty Schnepf can share more.

In August, 2014 MILES will be making two presentations at Michigan Council of Teachers of Mathematics Annual Conference at Hope College in Holland, MI Aug. 5-7, 2014. At the conference pre-session on the 5th there will be a 3-hour session to learn about Lesson Study and hear from people who are doing it. During the regular session (Aug 6 or 7) there will be a session focusing on logistics and how to make time for Lesson Study. We hope some MichMATYC members will attend these sessions.

References

Darling- Hammond, Linda, Ruth Chung Wei, Alethea Andree, Nikole Richardson, & Stelios Orphanos; School Redesign Network at Stanford University. 2009. *A Status Report on Teacher Development in the United States and Abroad*. Stanford, CA: National Staff Development Council at Stanford University.

Fernandez, Clea & Makoto Yoshida. 2004. *Lesson Study: A Japanese Approach To Improving Mathematics Teaching and Learning*. Mahwah, NJ: Lawrence Erlbaum Associates.

Gorman, Jane, June Mark, & Johannah Nikula. 2010. *Mathematics Leader's Guide to Lesson Study in Practice Book Bundle*. Portsmouth, NH: Heinemann.

Hurd, Jacqueline and Catherine Lewis. *Lesson Study Step by Step: How Teacher Learning Communities Improve Instruction*.
Portsmouth, NH: Heinemann.

Lewis, Catherine & Jacqueline Hurd. 2011. *Lesson Study Step by Step: How Teacher Learning Communities Improve Instruction*. .
Portsmouth, NH: Heinemann.

Kennedy, M. M. (1999). Form and substance in mathematics and science professional development. *National Institute for Science Education Brief*, 3(2), 1-7.

Stigler, James W. and Hiebert, James. 1999. *The Teaching Gap: Best Ideas from the World's Teachers for Improving Education in the Classroom*. New York: The Free Press.

Wang-Iverson, Patsy, Makoto Yoshida (Eds.) 2005. *Building Our Understanding of Lesson Study*. Philadelphia, PA: Research for Better Schools.

Beautiful Equations

<http://www.youtube.com/watch?v=erUQhXjY9ic>

I recommended this video for my College Algebra students. To their surprise, they enjoyed it. One student commented that he chose to watch this video instead of studying for his chemistry test. That was certainly not my intent. If you haven't seen it yet, I hope you all find an hour to view this video – perhaps instead of grading student papers. In any case, I hope you will enjoy it. Have a wonderful summer. KHA

MichMATYC Officers

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