

# MOMATYC

*Missouri Mathematical Association of Two-Year Colleges*

## 2015 Spring Conference



**Moberly Area Community College**

Columbia, Missouri

# Keynote Address

## ***Removing the Dev Math Roadblock***

It's not a secret that students in STEM and non-STEM paths have different academic needs. And yet we've spent the better part of 50 years trying to squeeze these pegs of varying shapes into the same round hole known as "Beginning and Intermediate Algebra". And as Dr. Phil would say, "How's that working out for you?". There is a growing nationwide movement to develop alternatives to the traditional developmental math curriculum to improve retention and completion rates, but more importantly to meet the needs of students in modern society. If designed and implemented correctly, **it's a win-win-win: students benefit** by having the most significant roadblock to their degree aspirations (the traditional developmental math sequence) removed. Better still, the new pathway provides a much richer experience in terms of contextual learning and critical thinking, one that benefits them in the college-bearing math courses they will end up in, as well as in any other course that requires thinking (i.e. ALL OF THEM.) **For instructors, it's a win for two reasons:** the new course is a whole lot more fun to teach, and the traditional dev math courses become a much more robust experience for students that will continue on a STEM path when the students that have zero interest in math and science fields are steered to a different path. Finally, **it's a HUGE win for administration:** higher completion rates, and more students getting to credit-bearing math courses in a single semester

*In my talk, I'll provide an overview of why math literacy is important, what the goals of the course are, and what a day in the life of a math literacy student looks like. Of course, there will be plenty of time for questions and interaction, and some good old-fashioned fun as well.*

### ***Dave Sobecki***

Dave was born and raised in Cleveland, and started college majoring in creative writing. Eleven years later, he walked. Dave has written or co-authored either eight or fourteen textbooks, depending on how you count them, as well as several solutions manuals and interactive CD-ROMS. He maintains a ridiculously active speaking and travel schedule, and in recent years has been a consultant for the Arkansas Department of Higher Education.

Dave is in a very happy place right now: his love of writing. (Behind his publisher's back, Dave is working on his first novel in the limited spare time that he has). Dave lives in Fairfield, Ohio with his lovely wife Cat (seriously, she's pretty hot), and fuzzy dogs Macleod and Tessa. When not teaching or writing, his passions include Ohio State football, Cleveland Indians baseball, heavy metal music, travel, golf, collecting fine art, and home improvement.

# Thank you to our Sponsors!

## **McGraw-Hill Higher Education**

Keynote Speaker and Thursday Reception

## **Pearson Higher Education**

Corporate Sponsor

## **Moberly Area Community College**

Conference Facilities and Free Wi-Fi

## **Missouri Pork Association**

No fee for the use of their Reception Hall

## **Audrain Pork Producers**

Preparing and Serving Friday's BBQ dinner

## **Missouri Wine & Grape Board**

Complimentary Wine for Friday's BBQ dinner

# Conference at a Glance

Thursday, April 9, 2015		
When	What	Where
6:00 – 10:00pm	Reception and Conference Check-In <i>Join us for snacks, drinks, and conversation</i>	Comfort Suites Columbia - University Area
Friday, April 10, 2015		
When	What	Where
6:00 – 8:30am	Breakfast at the Hotel (included with hotel registration)	Comfort Suites Columbia - University Area
8:45 – 10:15am	Opening Session: <i>Removing the Dev Math Roadblock</i>	Room 146
10:30 – 11:20am	Breakout Session 1	Rooms 132, 133, 134
11:30 – 12:45am	General Session: <i>Missouri Mathematics Pathways Taskforce Update</i>	Room 146
12:45 – 1:45pm	Lunch (ticket required)	Room 146
1:45 – 2:15pm	Visit with Vendors and enter drawing	Room 132
2:15 – 3:05pm	Breakout Session 2	Rooms 132, 133, 134
3:15– 5:30pm	General Session and Business Meeting Attendance Prizes	Room 146
6:00 – 10:00pm	Dinner (ticket required)	Missouri Pork Association Reception Hall 6235 West Cunningham Drive, Columbia 65202
Saturday, April 11, 2015		
When	What	Where
6:00 – 9:00am	Breakfast at the Hotel (included with hotel registration)	Comfort Suites Columbia - University Area
9:00 – 9:50am	Breakout Session 3	Rooms 133, 134
10:00 – 10:50am	Breakout Session 4	Rooms 133, 134
11:00 – 12:30pm	Closing Session Attendance Prizes	Rooms 146

# Breakout Session Schedule

<b>Breakout Session 1: Friday 10:30 – 11:20am</b>				
<b>Title</b>	<b>Presenter</b>	<b>Category</b>	<b>Room</b>	<b>Notes</b>
Q & A after the Keynote Presentation	Dave Sobecki	General Interest	133	
Teaching Online: Tips, Tools and QM Standards	Teri Graville Pat Suess Christine Lewis	Distance Learning Instructional Technology	134	
Math Explorations Day: Supporting STEM Students	Lola Swint	General Interest Recruiting STEM students	137	
<b>Breakout Session 2: Friday 2:15 – 3:05pm</b>				
<b>Title</b>	<b>Presenter</b>	<b>Category</b>	<b>Room</b>	<b>Notes</b>
Using Technology to Teach Statistics	James Adair	Instructional Technology Statistics	133	
Your Mama's Math Gene: The Legacy and Future of Women in Mathematics	Debbie Char	General Interest	137	
Getting the Most out of My Math Lab	Tim Wilson	Instructional Technology Instructional Strategies	134	
<b>Breakout Session 3: Saturday 9:00am – 9:50am</b>				
<b>Title</b>	<b>Presenter</b>	<b>Category</b>	<b>Room</b>	<b>Notes</b>
Intermediate Algebra: <i>The Right Prerequisite for College Credit Courses?</i>	Wanda Long	Curriculum Mathematics for Gen Ed	133	
Southeast Missouri State University Redesign	Tammy Randolph	Instructional Technology Instructional Strategies	134	
<b>Breakout Session 4: Saturday 10:00am – 10:50am</b>				
<b>Title</b>	<b>Presenter</b>	<b>Category</b>	<b>Room</b>	<b>Notes</b>
Markers Motivating Minds	Debbie Char	General Interest Instructional Strategies	133	
Using Writing In Online Courses	H. Michael Lueke	Distance Learning, Instructional Strategies	134	

## Breakout Session Speaker Contact Information

James Adair <i>adair@dsc.edu</i>	Associate Professor of Mathematics Dyersburg State Community College
Debbie Char <i>dchar@stlcc.edu</i>	Assistant Professor of Mathematics St Louis Community College – Forest Park
Teri Graville <i>tgraville@stlcc.edu</i>	Associate Professor of Mathematics St Louis Community College – Wildwood
Wanda Long, PhD <i>wlong@stchas.edu</i>	Professor of Mathematics St. Charles Community College
H. Michael Lueke, PhD <i>hlueke@stlcc.edu</i>	Assistant Professor of Mathematics St Louis Community College – Forest Park
Tammy Randolph <i>trandolph@semo.edu</i>	Chairperson and Professor of Mathematics Southeast Missouri State University
Dave Sobecki <i>davesobecki@gmail.com</i>	Professor of Mathematics Miami University
Lola Swint <i>lswint@mail.ncmissouri.edu</i>	Chair of Mathematics North Central Missouri College
Tim Wilson <i>Tim.Wilson@Pearson.com</i>	Learning Technology Specialist Pearson Higher Education

# Breakout Session Descriptions and Speaker Contact Information

## Breakout Session 1

### ***Teaching Online: Tips, Tools and QM Standards***

Teri Graville, Pat Suess, and Christine Lewis                      Distance Learning / Instructional Technology

Whether you are considering teaching mathematics online or a seasoned online instructor, this presentation is for you! This session will include the following: a preview of a Quality Matters approved online course, a course with instructor created materials in an online textbook, an opportunity for participants to share a glimpse at their online course, a discussion of successful strategies and a sharing of difficulties and concerns.

### ***Math Explorations Day: Supporting STEM Students***

Lola Swint                      General Interest / Recruiting STEM students

The presenter will share the organization and activities that occur annually at North Central Missouri College's Math Explorations Day. High school juniors and seniors are invited to participate in a day of STEM experiences and competitions.

## **NOTES:**

## **Breakout Session 2**

### ***Using Technology to Teach Statistics***

James Adair      Instructional Technology / Statistics

This presentation will demonstrate how Camtasia Studio Videos along with guided notes and other technology were used to create a "flipped" classroom and an online course for Elementary Probability and Statistics.

### ***Your Mama's Math Gene: The Legacy and Future of Women in Mathematics***

Debbie Char      General Interest

How does a mathematician's mind work? Do most of us lack some necessary 'math gene'? What role does society play in our attitudes about math and gender? Meet some of our most famous female mathematicians, past and present, and find out how YOU can affect the future! In the talk described above for Women's History Month in March, I intended to offer students a sense of what math is about, and that we are all hard-wired at some level to be mathematicians. What emerged were some important reminders to myself as an educator!

### ***Getting the Most out of My Math Lab***

Tim Wilson      Instructional Strategies / Instructional Technology

Do you always copy your course from semester to semester? Have you used MyMathLab the same way for many semesters? MyMathLab has so many ways it can be customized to fit specific needs, we thought we would go through the features you can use to address the following needs:

- Readiness
- Concept & Skill Development
- Motivation
- Personalized Learning Data & Analytics

### **Breakout Session 3**

#### ***Intermediate Algebra: The Right Prerequisite for College Credit Courses?***

Wanda Long          Curriculum / Mathematics for Gen Ed

Much discussion in TYC math circles these days concerns the role of Intermediate Algebra in the curriculum. Advocates for supplanting College Algebra as the Gen Ed math requirement with a "pathways" course appropriate for non-STEM majors see other possibilities as prerequisites. A summary of current approaches will be followed by group discussion to perhaps develop a consensus among participants.

#### ***Southeast Missouri State University Redesign***

Tammy Randolph          Instructional Strategies / Instructional Technology

This last fall SEMO moved to a Co-Req/Pathways redesign. Dr. Randolph will be sharing their experiences and results from this past fall.

### **Breakout Session 4**

#### ***Markers Motivating Minds***

Debbie Char          General Interest / Instructional Strategies

Looking for ways to develop problem-solving flexibility, differentiate instruction, encourage practice, assess comprehension, reduce anxiety, and engage your entire class quickly, cheaply, and with minimal preparation? All you need are dry erase surfaces and markers!

#### ***Using Writing In Online Courses***

H. Michael Lueke          Distance Learning / Instructional Strategies

Tools like MyMathLab and Aleks make administering online math courses possible, but there are important aspects of learning and assessment that these tools have a hard time capturing. Getting students to show work is one thing, but getting them to explain their work, justify their thinking, and otherwise lay bare their problem solving processes are critical goals for instructors in the teaching and learning process. This presentation is an opportunity to share and collect ideas about how to engage students in tasks that lie outside online tutorial software packages.