2014 Annual

UMATYC Fall Conference

Saturday, September 20, 2014

Time		Location
8:30 – 9:30 am	Breakfast Sponsored by Pearson Presentation	SC 213a
9:30 – 10:30 am	Welcome, Introductions, and UMATYC business	SC 213a
10:30 – 11:30 am	Breakout Session A	
11:30 – 12:00 pm	Breakout Session B	
12:00 –1:00 pm	Lunch Sponsored by McGraw-Hill Presentation	SC 213a
1:00 – 2:00 pm	Breakout Session C	
2:00 – 2:30 pm	Breakout Session D	

Lunch Presentation

Transform Your Math Course Using Real Time Analytics

Andrea Hendricks, MS

Do you ever wish you could know exactly what your students know or do not know at any point during the semester? Have you ever wondered exactly what skills and topics are causing your students to struggle? If you answered yes to either of these questions, then come hear how the presenter uses powerful, real time analytics provided by ALEKS to transform her class and lead her students to success.

Breakout Session A: (10:30 – 11:20 am)

SC 213a **Research-based Strategies of Online Developmental Mathematics Courses**

Ben Moulton, MS

This presentation will show preliminary results of a grounded theory approach that investigates research-based strategies of online developmental mathematics courses. The study will be grounded on the conceptual framework of Chickering and Bain as they discuss the best practices of instruction in undergraduate college courses.

SC 213b **Can Measures of Personal Persistence or "Grit" Predict Success in Developmental Mathematics?**

Charity Jones, MEd

For many Developmental Math students who have a history of being unsuccessful in mathematics, lack of persistence stands in the way of obtaining a college degree. Previous research has suggested that some measures of personal persistence (or grit) predict various achievement and retention outcomes. This presentation will share results of a study that investigated whether grit scores were predictive of success in developmental mathematics.

Breakout Session B: (11:30 – 11:55 am)

SC 213a **Student Directed Activities within Our Community: Crossing Disciplines, Engaging Students, and Changing Perspectives**

Colleen Bye, MA

When I taught for one year at junior high school, I realized many students had already formed seemingly deep-seated, unenthusiastic opinions regarding mathematics. As an instructor in the development mathematics department at Utah Valley University, I have found that these sentiments have persisted. As teachers, we answer the questions of, "When will I ever use this?" by coyly explaining the enhancement of critical thinking skills, improvement of analytical ability, and the sort. Still, while student debt is accumulating faster than credit card debt, colleges are trying to find ways to develop. One solution is to create meaningful student guided events that will cultivate these abilities. Additionally, we want to provide context and application for students studying math in the hopes of changing negative attitudes. My presentation will detail one such type event and explore the compelling reflection pieces offered by my students after their experience.

SC 213b **Flipping the Classroom - Integrating Videos, Online Instruction, and Classroom Lecturers**

Jonathan Anderson, MEE

This presentation will discuss how a MAT1010 (Intermediate Algebra course) used online videos, MyMathLab assignments (both before and after class), and classroom discussion to encourage students to master the material. It will discuss the philosophy behind the course design, the means of creating the online content, and the integration of technology into the class.

Breakout Session C: (1:00 – 1:50 pm)

SC 213a **Group learning activities in Developmental Mathematics**

Ian Sorensen, MS

Group work has a rich history in mathematics education literature. All of the major professional mathematics education organizations (NCTM, AMATYC, MAA) and the Common Core have recommendations that can be fulfilled using collaborative learning activities. My own evolution of incorporating group work in developmental mathematics began slowly, but gathered steam as I found students invigorated by the activities. Using my own experience as a lens, we will explore how group activities can meet many of the developmental mathematics course goals, discuss some group activities I have used in my curriculum, and discuss how we can help change the culture of our institution. The goals are to encourage instructors to use group learning activities, provide some ideas of useful activities, and inspire efforts to develop a culture of learner-centered teaching at our own institution.

SC 213b **Math Week Experiences**

Ellen Bacchus, MA

We have been holding Math Week (MW) at UVU since 2005. Kathy Van Wagoner began organizing and running the Math Week events at UVU in 2005 using MAA's Math Awareness campaign as a model for UVU's MW.

In Dec 2011, a committee was formed of Math Faculty from the Math Dept and the Dev Math Dept at UVU, and I was asked to chair the committee. We began organizing our first MW for 2012. We try to have activities that will help students learn about how important mathematics is in everyday life, as well as help students have fun with math.

Our students have positive experiences with the activities at MW (prizes, fun with math, etc). My purpose is to share with other institutions about the process of organizing and running Math Week so they can have their own Math Week for their students.

Breakout Session D: (2:00 – 2:25)

SC 213a **A Weighted Average Approach to Solving Mixture Problems**

Hazel McKenna, PhD; Tyler Olsen

In high school and college algebra classes, it is typical for mixture problems to be solved by setting up a system of linear equations in 2 variables. The most difficult part of solving a mixture problem for students is setting up the correct equations. This presentation explores the use of a weighted average to solve such problems, giving students an alternative formulaic approach to solving mixture problems.

SC 213b **Working Together to Create a Successful Flipped Classroom**

Ruth Trygstad, MS; Kristin Cartwright, MEd

Ruth and Kristin have been working together to create a successful hybrid "flipped" Math 1050 College Algebra course. They will be sharing results from their first semester teaching the "flipped" method in Spring 2014, and revisions they have made to improve the student outcomes this Fall 2014 semester. Mathematics faculty can use the ideas from this presentation to come up with course designs that reduce seat time while encouraging student accountability and achievement.