

UtahStateUniversity



USU Welcomes New Faculty with Math Expertise



Dr. Jessica Hunt & Dr. Taylor Martin

In Fall 2012, two new researchers with mathematics education expertise joined the faculty in the College of Education and Human Services: Dr. Jessica Hunt joined the Department of Special Education and Rehabilitation as an Assistant Professor, and Dr. Taylor Martin joined the Department of Instructional Technology and Learning Sciences as an Associate Professor. Dr. Hunt earned her PhD

from the University of Central Florida. She is a former middle school mathematics teacher and intervention teacher for elementary school students at risk for mathematics failure. Dr. Hunt's research focuses on the explication of elementary and middle school students' development of mathematics concepts. Particularly, she is interested in how individualized Tier III interventions grounded in the diagnosis of conceptual understanding can move students with learning disabilities toward proficiency in rational number applications. Dr. Hunt enjoys spending time with her family, hiking, singing, and biking.

Dr. Martin earned her PhD from Stanford University, and was most recently an Associate Professor at the University of Texas at Austin. Dr. Martin's research examines how people learn from doing, or active participation, both physical and social. Currently, Dr. Martin is examining how mobile and social learning environments provided online and in person influence content learning in mathematics, engineering and computational thinking. Dr. Martin plays the mandolin and the ukulele and enjoys hiking, biking, camping, and skiing. WELCOME, Dr. Hunt and Dr. Martin!

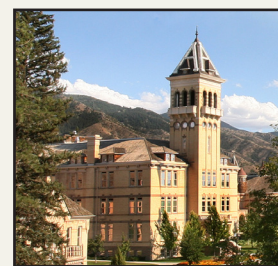
New Math Tutoring Clinic Supported by Donor

Dr. Patricia Moyer-Packenham and Dr. Arla Westenskow (a graduate of the TEAL Mathematics Education and Leadership PhD program) established the Tutoring Intervention & Mathematics Enrichment (TIME) Clinic, a mathematics tutoring clinic specializing in providing instructional support in mathematics for elementary-aged children. The TIME Clinic is a research clinic housed in the Early Childhood Education and Research Center of the Emma Eccles Jones College of Education and Human Services at Utah State University. Tutors in the clinic use research-based strategies and individualized tutoring to help elementary-aged children strengthen their understanding of mathematics. Tutors provide one-on-one instruction and are specialists in helping children reach their academic goals. Services begin with a diagnostic test to determine a child's level of mathematics understanding. Instruction includes targeted concept development using hands-on materials and technology. Children's progress is measured by performance on tutoring assessments and attitudes towards mathematics. Tutors conduct ongoing evaluations to inform parents

of their child's progress and suggest ways to support the child's progress at home. Data collected from the tutoring sessions is being analyzed to identify effective intervention methods and to develop a greater understanding of the needs of students with mathematics learning difficulties. Activities, assessments, and teaching techniques developed in the clinic will be published and made available for use in school settings. During the summer of 2012, over 400 hours of tutoring services were provided for local children thanks to a generous donation to the College in the name of Linda Ann Weeshoff. For more information, contact the TIME Clinic Director, Dr. Arla Westenskow, at arla.westenskow@aggiemail.usu.edu.



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Award Winning Faculty and Doctoral Students



(pictured, L to R) Kerry Jordan, Jessica Shumway, Arla Westenskow, and Patricia Moyer-Packenham

In 2012, four members of the Virtual Manipulatives Research Group earned prestigious awards for their accomplishments in teaching and research. Dr. Kerry Jordan won the award for Undergraduate Research Mentor of the Year for the College of Education and Human Services. This award is given to a faculty member who demonstrates excellence in mentoring undergraduate student research. Dr. Jordan earned this award

for mentoring multiple undergraduate students in her psychology lab. Jessica Shumway won the Graduate Research Assistant of the Year award. This award is given to a graduate student in the School of Teacher Education and Leadership who has demonstrated excellence in research productivity during the year in assisting faculty members. Jessica was recognized for her publication of a book on number sense routines, a single-authored article in press

at *Teaching Children Mathematics*, and her contributions to the Virtual Manipulatives Research Group (including a paper that she is leading). Drs. Arla Westenskow and Patricia Moyer-Packenham won the Best Paper Award at the American Educational Research Association annual meeting in Vancouver, Canada. The award was presented for their paper titled: Effects of Virtual Manipulatives on Student Achievement and Mathematics Learning, a paper recently accepted at the International Journal of Virtual and Personal Learning Environments. The paper is the first synthesis of the research on the past 20 years of studies on virtual manipulatives. Dr. Patricia Moyer-Packenham won the award for Teacher of the Year for the College of Education and Human Services. This award is given to one faculty member in the College to recognize and emphasize excellence in teaching. Moyer-Packenham was recognized for her dedication to teaching and mentoring graduate students and her development of the mathematics education programs in the College.

iMe Gusta Aprender Matemáticas! I Like Learning Mathematics!



Dr. Jim Barta and his students studying horizontal and vertical lines!

As mathematics educators we have wonderful opportunities to enhance the teaching of mathematics not only locally but internationally as well. Dr. Jim Barta spent two weeks this summer teaching teachers to enhance mathematics instruction in Asuncion, Paraguay. His students teach at several elementary and high schools in the city and are currently working to complete their Masters degrees in Education through coursework offered at the University of Alabama. In the class,

teachers focused on improving their instruction as they learned to incorporate problem-based and hands-on learning. They discovered the value of teaching conceptually before teaching procedurally, implementing more technology (e.g., virtual manipulatives), and integrating their curriculum and instruction focused on culturally creative pedagogy. Students shared that one of their favorite assignments was to conduct a mathematical cultural interview of a cultural representative of a profession, culture, or involved in a specific activity. Kevin van Rensburg, a high school principal (taking his last graduate class), provided this reflection following his interview,

This interview was exceptionally rich as both the interviewer and interviewee learned many things about one another that they had not known previously. The person I interviewed explained a few concepts both she and I did not realize were part of math; rather they seemed to be a natural part of life. This ties in so well with what we are learning in this course. Math should be an interesting and integral part of our everyday lives, and it actually is, we just need to open our eyes to see it.

van Rensburg and his peers developed new perceptions of mathematics and their ability to teach their students. As they became more confident of their skills, they expressed the joy they found in teaching and learning mathematics. Barta concluded, "When students see the joy we express in teaching mathematics, that joy in learning becomes contagious. How delightful it is as a teacher to hear our students say, 'I like learning mathematics!'"

Current and New Math Education Doctoral Students Meet at Campus Events

In 2010, the first cohort of doctoral students with an emphasis in Mathematics Education and Leadership began their doctoral program. At that time, mathematics education was a brand new emphasis area in doctoral study. In Fall 2012, a second cohort of doctoral students in Mathematics Education and Leadership began their doctoral program. Two events connected the 2010 and 2012 cohorts: a spring pizza party and a Fall picnic. Both gatherings provided students with the opportunity to meet each other and talk about their experiences in mathematics education. For the 2010 cohort, this was a great opportunity to pass on insights about their experiences to the incoming group. For example, students in the first cohort shared the many opportunities they had to collaborate with faculty members, both on campus and at the regional campuses across the state. Their words of advice to the incoming students: "Try to tailor every class paper to your dissertation topic. Even if you're not sure what your topic is going to be, use those papers to explore what is of interest to you, and use them

as a jumping-off point." 2010 and 2012 cohort members discussed detailed aspects of the program, such as what reading load to expect and how best to take notes so that early readings are of value later in the program. 2010 cohort members enjoyed hearing about the interests of the new cohort and making suggestions of USU faculty with similar interests. The Mathematics Education and Leadership Emphasis in the Doctoral Program in the College of Education and Human Services is an advanced program designed to prepare mathematics leaders for a variety of positions in mathematics education. The emphasis includes 18-credits of coursework that integrate opportunities for students in university teaching, scholarly research, and mathematics leadership at all levels. The program is designed for working professionals, with courses offered in the evenings and summers in Logan and through the RCDE broadcast system. Contact the program director for more information: Dr. Patricia Moyer-Packenham, patricia.moyer-packenham@usu.edu.



Fall Picnic
(front) Katie Anderson, Jennifer Boyer-Thurgood, Emma Bullock, Arla Westenskow; (back) Ian Sorensen, Stephen Tucker, Don Busenbark



Spring Pizza Party
Janiece Edgington, Jennifer Boyer-Thurgood, Stephen Tucker, Katie Anderson, Arla Westenskow, Andrew Glaze, Jessica Shumway

Mentoring Students at a Distance

The Regional Campuses and Distance Education (RCDE) network at Utah State University allows students from all over the state to participate in educational coursework by going to a local broadcast site and receiving classes sent from different sites across the network. But how does this work for faculty working with doctoral students on research projects and teaching? Dr. Amy Brown is one faculty member who knows how to make this work for her students. Although she is located at the Tooele broadcast site, with students all over the state, she has found a way to connect with students and to establish mentoring relationships. In Spring 2012, two of her doctoral students located in Orem co-taught an undergraduate mathematics education course as part their internship experience, all through the distance system. They scheduled a face-to-face meeting first to set the goals

and the timetable for the internship. From that point forward, they held regular meetings through Skype and were usually able to schedule these immediately after classes when Sheryl and Jodi were together. Since Dr. Brown's undergraduate course was partially online, Sheryl and Jodi received training in assessing and mentoring pre-service teachers using online modules related to students' problem solving. Sheryl and Jodi also selected, planned, and taught one of the broadcast class sessions over the system, and they received positive, constructive feedback from the students.

The three collaborators submitted a proposal to speak about their experience to the Association of Mathematics Teacher Educators (AMTE) conference, and are writing a manuscript describing their experiences from both the professor and doctoral student perspectives to be submitted to a peer-reviewed journal. Dr. Brown said, "It was amazing to provide such rich doctoral experiences for students. When I reflect on the fact that we only met ONCE in person, and did the rest through technology, that really is a unique accomplishment!"



Dr. Amy Brown, Sheryl Rushton, and Jodi Mantilla



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About Us

The Mathematics Education and Leadership Programs in the School of Teacher Education and Leadership in the Emma Eccles Jones College of Education and Human Services provide students with a variety of advanced study options in mathematics education at the graduate level. Students can select the Mathematics Education and Leadership Emphasis in the PhD or EdD doctoral programs, the Elementary Mathematics Endorsement emphasis in the Master of Education Degree in Elementary Education, or the Secondary Mathematics Emphasis in the Master of Education Degree in Secondary Education. The Mathematics Education and Leadership Programs at Utah State University provide students with opportunities to focus on enhancing their mathematics education expertise and develop leadership skills for positions at all levels of mathematics teaching, learning, supervision, and research. Contact the director today to begin your graduate work in Mathematics Education and Leadership at Utah State University!



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