

UtahStateUniversity



USU Welcomes New Mathematics Education Doctoral Cohort

In Fall 2014, Utah State University welcomed a new cohort of eight mathematics education doctoral students. This group brings a wealth of expertise to their doctoral studies at USU. Jennifer Throndsen, who works for the Utah State Office of Education as the State Coordinator of Literacy and Library Media, chose USU because "There are great tools, resources, and publications that come out of the Math Program." Kami Dupree, a mathematics lecturer at USU, says: "I had heard good things about the program and it was convenient, allowing pursuit of doctoral studies while staying employed." Sam Gedeberg, an instructional designer at Utah Valley University with a great love of mathematics says: "The Doctoral Program allows me to combine both my love of math and passion for teaching."

Christina Watts was in a doctoral program in Kansas and decided to make the move to Utah because of the "well-designed program with involved faculty and the virtual manipulatives program." Melanie Durfee, a seventh-grade mathematics teacher at Cedar Middle School in Iron School District, believes USU "has a reputation of producing well-qualified, competent scholars." Melanie Arp, Vicki Lyons and Lauren Burton, all come from the Alpine School District. Melanie says USU was the right choice for her because of the many great teachers she works

with that have graduated from USU. Vicki picked USU because she can earn her doctorate at a well-respected and well-qualified university while still teaching. Lauren chose USU because she wanted "to deepen my understanding of mathematics as well as the foundations of learning and educational development... I found USU to have the perfect blend." WELCOME Students!



Front: Melanie Arp, Melanie Durfee, Lauren Burton, Kami Dupree Back: Jennifer Throndsen, Vicki Lyons, Christina Watts, Sam Gedeberg

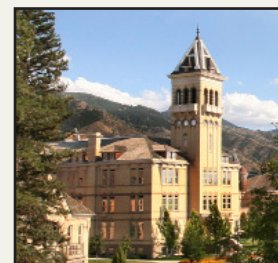
Elementary Mathematics Teacher Academy Director Named

During the summer of 2014, Jennifer Boyer-Thurgood was named the Director of the Elementary Mathematics Teachers Academy (<https://online.usu.edu/teachmath>). The Academy development began during the previous summer as a unique and innovative collaboration among Distance Education, the Center for Innovative Design and Instruction (CIDI), and the Teacher Education and Leadership Elementary Mathematics Education group. The Academy provides customizable, on-line, K-6 professional development for teachers nationwide. In the Academy, teachers and mathematics leaders select from over 100 standards-based modules to create a 1-, 2-, or 3-credit master's course unique to their needs. As the EMTA Director, Jennifer works directly with the Distance Education marketing teams to sustain marketing efforts. On a national level, marketing is carried out through national e-mail and search engine optimization efforts. On a local level, Jennifer works with school districts to provide Academy professional development as an option for Utah teachers. Jennifer continually assists the CIDI department in improving and refining

the one-of-a-kind technical environment that makes the Academy flexibility and customization possible. As the Academy continues to expand, Jennifer oversees and participates in Academy module development and maintenance. An additional 43 modules, representing each grade level and addressing the mathematical practice standards will be developed during the 2014-2015 school year. Participants from all over the country have benefited from professional development through the Academy. Jennifer especially enjoys reviewing their work, implementing their feedback, and hearing of their classroom successes.



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New PhDs Accept University Faculty Positions



Left to Right: Drs. Jim Dorward, Sheryl Rushton, Katie Anderson-Pence and Patricia Moyer-Packenham

In Spring 2014, two graduating doctoral students from the Mathematics Education and Leadership program accepted university faculty positions.

Dr. Katie Anderson-Pence's dissertation was titled: *Examining the Impact of Different Virtual Manipulative Types on the Nature of Students' Small-Group Discussions: An Ex-*

ploratory Mixed Methods Case Study of Techno-Mathematical Discourse. Dr. Anderson-Pence began her first faculty position in Fall 2014 as an Assistant Professor of Curriculum and Instruction in the Department of Curriculum and Instruction, College of Education at the University of Colorado Colorado Springs. As a new Assistant Professor, Dr. Anderson-Pence is supervising student teachers and teaching Mathematics and Cognition, a course for Masters students pursuing certification in Special Education. She has

found that her experiences in the doctoral program at Utah State University taught her to design quality research projects, think critically about interpreting research data, and have enhanced her skills in writing and presenting for national audiences.

Dr. Sheryl Rushton's dissertation was titled: *The Impact of Computer-Adaptive*

Benchmark Data and Assessment Literacy on Student Achievement and Motivation in Mathematics. Dr. Rushton also began her first faculty position in Fall 2014 as an Assistant Professor of Teacher Education in the Department of Teacher Education, College of Education at Weber State University in Ogden, Utah. As a new Assistant Professor, Dr. Rushton is teaching Elementary Math Methods, Master's Instructional Strategies, Supervising Student Teachers, and teaching other education courses as needed. Her experiences in the doctoral program at Utah State University taught her best practices for education and prepared her to teach preservice and in-service teachers using research-based strategies. Her experiences in the doctoral program helped her to give presentations and instruction with confidence and conduct research. She says that all of the many responsibilities she has now as a first-year faculty member would not have been possible without her experiences in the doctoral program at Utah State University.

TIME Clinic and Logan City School District Collaboration

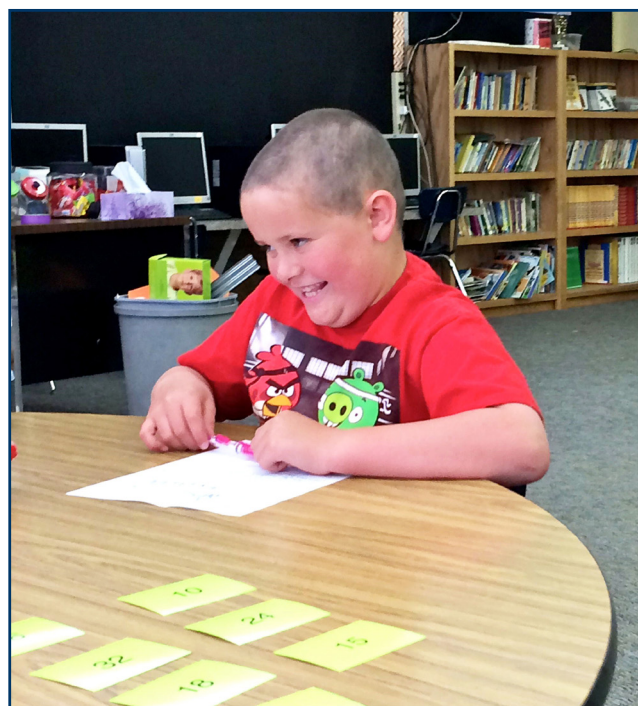
During the past two years, USU's Tutoring Intervention and Mathematics Enrichment (TIME) Clinic and the Logan City School District (LCSD) have been collaborating in the development of mathematics intervention materials and programs. Intervention assessments and methods originally developed through the research projects of the TIME Clinic are being further developed and made available to teachers in the classroom. Using an Iceberg intervention model developed in the TIME Clinic's research, Barbara Child (LCSD Math Specialist) and Arla Westenskow (TIME Clinic Director) wrote and implemented diagnostic and screening assessments to identify and monitor students' place value strengths and weaknesses. The assessments enable teachers to develop individualized intervention learning plans.

During the first year, Iceberg interventions were piloted in tutoring activities with forty students in the school setting. This was followed up with a pilot after-school program in which third, fourth

and fifth grade teachers successfully provided intervention support to students in their classrooms. In Summer 2014, fourteen third- and fourth-grade teachers participated in two days of professional development; then, each teacher tutored three rising fourth-grade students for two weeks. Pre-and post-testing results indicated significant gains for the students, and teachers reported that the tutoring experience helped them understand how to better support students who struggle with mathematics.

During the 2014–2015 school year, a cohort of third, fourth and fifth grade teachers will participate in eight sessions of professional development focusing on the implementation of the interventions in their classrooms. One of the most exciting re-

sults of this project is that the students who have participated in the tutoring are developing a love of mathematics and confidence in their mathematics abilities.



Logan/Cache Cohort Completes Elementary Mathematics Endorsement

During the summer of 2014, eighteen elementary teachers in Logan City and Cache County School Districts completed Utah State University's Elementary Mathematics Endorsement Program. The program was launched in 2011 and is currently in its fourth year serving the teachers in the state with broadcast courses. A grant from the Utah State Office of Education supported the teachers in Logan and Cache School Districts

with tuition and instructional materials.

Teachers from grades K through 6 participated in the program and gained an enhanced understanding of mathematics content and concepts and how to teach mathematics in their classrooms. When asked to comment on their experiences in the USU Elementary Mathematics Endorsement Program, teachers shared their enthusiasm. First-grade teacher Tami Bill reported: "This opportunity has given me a

deeper understanding of how to teach math in multiple ways to young children." Sixth-grade teacher Kirby Haslam agreed saying, "These math endorsement classes have shown me how to teach with a more hands-on and fun approach." Brynn Dutson, a second grade teacher wrote, "The juice was worth the squeeze!" And Sally Bair, a fourth grade teacher noted, "Knowing the 'why' helps to understand the 'how.'" A fourth-grade teacher, Kristina Brown wrote: "At-

tending these classes has opened my eyes to how students learn and how I can improve my teaching of math concepts. There will be more discussion, hands on, and sharing in my classroom." The grant funds provided by the USOE for this program have advanced teaching and learning mathematics for the teachers and children in these schools.



Mathematics Education Students Receive Prestigious Funding Awards

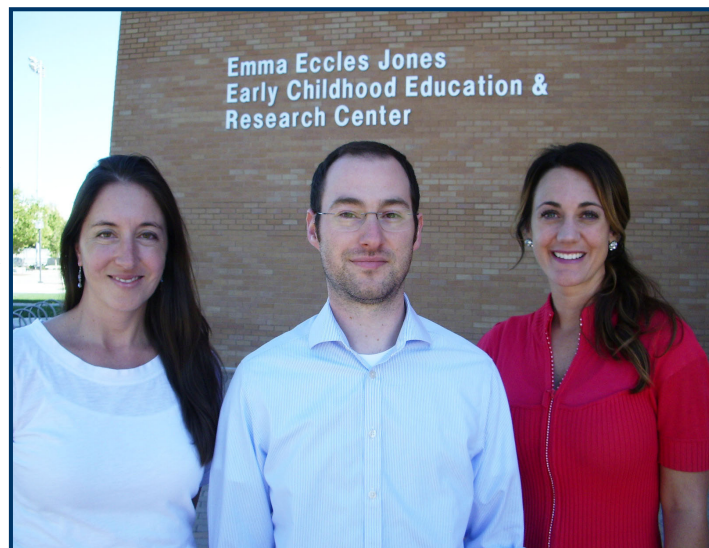
In spring 2014, graduate students from all over Utah State University's campus competed for the prestigious Graduate Student Senate Enhancement Awards. This selection process was highly competitive. From the 109 applications, only 20 awards were given. Of those 20 awards, a record of 3 awards were given to doctoral students in Mathematics Education in the School of Teacher Education and Leadership. The award winning students were Jennifer Boyer-Thurgood, Jessica Shumway, and Stephen Tucker.

Jennifer Boyer-Thurgood was recognized for her innovative accomplishments that led to the development of the Elementary Mathematics Teachers Academy. Jennifer serves as academy director, instructor, curriculum developer, technical expert, link with RCDE, course designer, recruiter, marketing and webpage expert and researcher. She conducted research on the Academy and has presented and published articles about this work.

Jessica Shumway was recognized for the publication of her book, *Number Sense Routines*, published by Stenhouse. This book is significantly impacting the field of early number development in young children; Stenhouse shot video footage of Jessica in classrooms to accompany the number sense routines in the book and better assist teachers in their early childhood classrooms.

Stephen Tucker was recognized for his research leadership for the Virtual Manipulatives Research Group. As coordinator, he organizes the articles in Zotero, identifies the latest articles on virtual manipulatives, and assigns the articles to group members to read

and code. This makes the group's research more efficient allowing team members easy access to the articles through search codes.



Left to Right: Jessica Shumway, Stephen Tucker, Jennifer Boyer-Thurgood



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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 program, the Elementary Mathematics Endorsement emphasis in the Master of Education Degree in Elementary Education, professional development credit in the online Elementary Mathematics Teachers Academy, 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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