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UCTM President Assumes New Leadership Role

Amy Kinder, a PhD student in the Mathematics Education and Leadership concentration in the PhD in Education program at Utah State University, was recently selected to serve as the K-12 Mathematics Administrator for the Jordan School District. In her first year of this new position, Amy is focusing on three specific areas: infusing collaboration time with meaningful data cycles, designing rich professional learning opportunities, and developing an instructional coaching district program. To achieve these goals, she will leverage the power of administrators, teacher leaders, and coaches by designing a range of professional learning opportunities that focus on enhancing pedagogy and teaching practices. All of the opportunities will emphasize equitable teaching practices and meaningful ways to use data to inform, enhance, and refine instruction to meet the needs of all students. To empower teachers and build teacher capacity, Amy and Ross Menlove, Technology Administrator, are developing a new district coaching program for 220 teachers called the Jordan Coaching Academy. Amy's experiences in the PhD program have supported her preparation for the new position. She is a better consumer of research methods, has expanded the depth and breadth of her knowledge, and possesses a deeper understanding of high-lever-

age teaching strategies and equitable practices. Amy is the current President of the Utah Council of Teachers of Mathematics (UCTM), where she leads the state in promoting high-quality mathematics education for all students in Utah. She is honored to be hosting two conferences in the coming year, the UCTM Leadership Conference (February), and the UCTM Conference (October). The UCTM Leadership Conference focuses on meeting the needs of administrators, mathematics supervisors, coaches, and teacher leaders. The UCTM Conference is for Utah's amazing mathematics educators. She is committed with the UCTM Board to using this forum to create a statewide network for teacher collaboration and multiple pathways for teachers to enhance their mathematics learning. As she always says, "Math Rocks!"



Amy Kinder (left) collaborates with veteran teacher leader, Patricia Gotberg.

Where Are They Now? Spotlight on Dr. Christina Lommatsch

This semester we spotlight Dr. Christina (Watts) Lommatsch, a 2018 graduate of the PhD in Education program, with a concentration in Mathematics Education and Leadership, at Utah State University. Dr. Lommatsch is an Assistant Professor of Learning Technologies in the Faculty of Education at the University of Canberra (UC) in Canberra, Australia. Her research focuses on the use of technology in mathematics education, with recent work on emerging technologies for representation. She is part of the STEM Education Research Centre (SERC) and works with the Early Learning STEM Australia (ELSA) project. ELSA is a play-based digital learning program where preschool children have opportunities to explore science, technology, engineering and mathematics practices both with and without technology. Dr. Lommatsch's dissertation was titled: *Learning Logic: A Mixed Methods Study to Examine the Effects of Context Ordering on Reasoning About Conditionals*. In the study, she designed and developed a logic app and analyzed data from students' use of the app. Dr. Lommatsch's mathematics and

technology skills, along with her rich experiences working with the USU Virtual Manipulatives Research Group under the direction of Dr. Patricia Moyer-Packenham, have enabled her to quickly integrate into the research team at UC. At the UC, Dr. Lommatsch has designed two new classes at the undergraduate and master's levels for teacher education with technology and currently supervises two doctoral students. The unique opportunity for engaging in research, teaching, and service activities at USU prepared her for the demands of academic life and the varied responsibilities she has as a new faculty member at an international university.



Dr. Christina Lommatsch on the campus of the University of Canberra, Australia, with a troop of kangaroos, who are campus residents.

Math Education Professor Invited to Speak in Two International Capital Cities

Patricia Moyer-Packenham, Professor and Director of the Mathematics Education and Leadership programs in the School of Teacher Education and Leadership at Utah State University, was recently invited to speak in two international capital cities. The first week in October, she traveled to Tangerang, Jakarta, Indonesia, where she was hosted by Udan Kas-mawan, Dean of Education at the Universitas Terbuka. Dr. Moyer-Packenham



Moyer-Packenham keynote speech at ICIEP, Jakarta, Indonesia

served as a keynote speaker at the 1st International Conference on Innovation in Education and Pedagogy (ICIEP). The title of her keynote address was: *Engagement and Convergence: Leadership for a World-Class Education in Mathematics and Technology*. Following the keynote, Moyer-Packenham participated in a panel discussion on innovative uses of technology for education. She was also interviewed by the media and appeared on Antara News.

During the second week in October, Moyer-Packenham traveled to the University of Canberra, Canberra, Australia, where she was hosted by Tom Lowrie, Centenary Professor and Director of the STEM Education Research Center (SERC). While visiting Canberra, Moyer-Packenham gave a research talk on representations to the univer-

sity community. The title of Moyer-Packenham's talk at UC was: *Concrete Manipulatives, Virtual Manipulatives, and Digital Games: Results from a Research Agenda on Mathematical Representations*. She also met with members of the SERC research team to discuss the Early Learning STEM Australia Project (ELSA) and consulted with faculty and students.



Moyer-Packenham meets with members of SERC at the University of Canberra, Australia. (L to R) Patricia Moyer-Packenham, Christina Lommatsch, Tom Lowrie, Tracy Logan, Garret Lommatsch, Ilyse Resnick, & Sitti Patahuddin

USU Math Educators Lead Multiple Presentations at National Conferences

Utah State University Mathematics Education and Leadership students and faculty attended and presented at the Regional National Council of Teachers of Mathematics (NCTM) conference and School Science and Mathematics Association (SSMA) convention in fall 2019 (both located in Salt Lake City). In total, faculty and students from Utah State University led 13 presentations at the NCTM conference and 8 presentations at the SSMA convention. Presentations included topics such as, early number development, mathematics discourse, STEM-related teaching and learning, student and teacher fraction understanding development, middle school students' algebraic reasoning development, and students' mathematical representations related to digital games. Students

included in the presentations ranged from the undergraduate level to the doctoral level and contributed to the research informing the presentations, presentation development, and presen-

tation leadership. Congratulations to all of the faculty and students on a successful set of presentations at two leading national conferences in mathematics education!



USU Math Educators pictured with NCTM President, Robert Berry
Top Row (L to R): Joseph Kozlowski, Lise Welch, Kent Hoffmam, Allison Roxburgh, Jessica Shumway, Amy Kinder, Jessica Hunt (faculty at NC State), Robert Berry (NCTM, President)
Bottom Row (L to R): Jenny Nehring, Danielle Divis, Diana Moss, Beth MacDonald

Moss Awarded an Excellence in Teaching and Learning Grant

Dr. Diana Moss was recently awarded an Excellence in Teaching and Learning Grant from Academic & Instructional Services at Utah State University. This grant will fund her project titled: *Exploring Prospective Teachers' Pedagogical Understandings in Mathematics Methods Courses*. Through funding from this grant, Dr. Diana Moss and Dr. Dov Zazkis (Arizona State University) are working together to study the use of lesson plays (i.e., scripts of imagined teacher-student interactions where pre-service teachers envision themselves as the teacher-character) in an online mathematics methods course. Funds from the grant enabled Dr. Moss to hire Danielle Davis, a doctoral student in the School of Teacher Education and Leadership's Mathematics Education and Leader-

ship concentration. The goal of the project is to acquire new insights about using pre-post lesson plays for examining pre-service teachers' understandings of teaching mathematics. By studying lesson play using a pre-post lens, the research team anticipates making significant contributions to pre-service teacher education by developing a tool for assessing elementary pre-service teachers' understandings of teaching mathematics and refining online and face-to-face methods courses. With support from the Excellence in Teaching and Learning Grant, the research team will be presenting preliminary results from the project at the Annual Conference of the Association of Mathematics Teacher Educators in February 2020.



Dr. Diana Moss



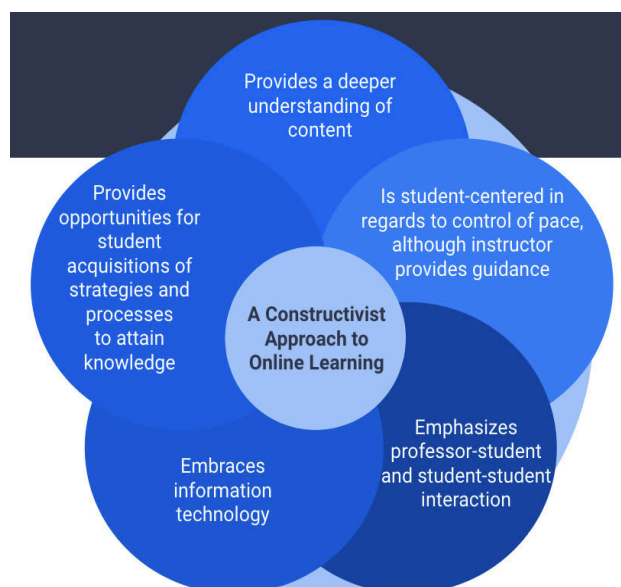
Danielle Davis

Math Educators Train Colleagues in Online Teaching Strategies

On August 14, 2019, Drs. Diana Moss and Beth MacDonald presented at the 6th Annual Empowering Teaching Excellence (ETE) Conference at the Utah State University campus in Logan, UT. The mantra of this conference was to “Learn, Discover, and Engage” by focusing on Innovative Teaching Strategies used and researched at Utah State University. Dr. Moss presented twice, once with Dr. MacDonald and once with Erin Wadsworth-Anderson, an Instructional Designer at Utah State University. The presenters showcased research proven methods and innovative approaches utilized in online asynchronous courses for prospective elementary teachers. The first presentation was titled: *A Constructivist Approach to Online Course Pedagogy*. The second presentation was titled: *The Online Course Development Process: The Role of Instructor vs. Instructional Designer*. This presentation provided meaningful designer

“moves” with course details and systemic course perspectives. Innovations included (but were not limited to) use of video blogging and management of 100+ students in meaningful discussions. The presenters used questions that required audience members to reflect on tenets of the constructivist

learning theory and online resources made available by instructional designers. Both presentations were well attended and show-cased the innovative approaches the faculty use when designing mathematics education courses for students at all levels.





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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 Concentration 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!

Patricia Moyer-Packenham, PhD

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