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**DR. RACHEL AROCHO**  
*Assistant Professor | Family Science*

Rachel Arocho, PhD, CFLE, FHEA is an Assistant Professor of Family Science at Utah Valley University and Faculty Consultant for the Stronger Families Project. Prior to joining UVU, she was a Postdoctoral Scholar at the Carolina Population Center of the University of North Carolina at Chapel Hill. Dr. Arocho earned her Doctorate in Human Development and Family Science, with specializations in Demography and Quantitative Research Methods, from The Ohio State University. She also holds a Master of Science degree in Human Development and Family Science from The Ohio State University and a Bachelor of Science degree in Family, Consumer, and Human Development from Utah State University, which she earned from the Uintah Basin Regional Campus. Dr. Arocho is a Certified Family Life Educator through the National Council on Family Relations.

At UVU, Dr. Arocho teaches introductory family science and research methods, and she is a Fellow of Advance HE. Her original research spans multiple areas of family science but tends to converge into three main themes: (1) expectations and experiences of marriage, cohabitation, and divorce; (2) the development of individuals conceived by and families formed using medically assisted reproduction; and (3) teaching and learning in family science classrooms, including family life education training. Her work has been funded by the National Science Foundation and National Institutes of Health. Most recently, Dr. Arocho has enjoyed introducing students to research through hands-on projects on game-based learning and donor conception utilizing content analysis, survey methods, and secondary data analysis.

**“Actually, you can have a lot of fun with it!”:  
Examining the development of attitudes in  
behavioral science research methods students.**

Research methods is sometimes considered one of the hardest social science courses to teach, but not because of the material per se – rather, it might be hard because students are often predisposed to negative attitudes towards the course. Attitudes can change, however, and instructor behavior can play a key role. In this study, I apply qualitative content analysis methods in a phonetic iterative framework to analyze undergraduate students’ self-reflective, metacognitive journals in a family science research methods course to look at attitude development over time and examine what factors students attribute these changes to.



### **DR. ANDRIA DISNEY**

*Assistant Professor |  
Elementary Education*

Dr. Andria Disney is an Assistant Professor of Elementary Education at Utah Valley University, where she teaches elementary mathematics methods and supports student teachers with their teacher performance assessment. Her research interests include supporting pre-service and in-service teachers in making mathematics instructional change and using sense-making tools with their students and examining how teachers analyze and use student work to inform their teaching.

### **DR. NICOLE GEARING**

*Associate Professor |  
Elementary Education*

Dr. Nicole Gearing is an Assistant Professor of Elementary Education at Utah Valley University. She teaches elementary mathematics methods courses to preservice elementary teachers. Her research interests include learning more about how young children talk and write about their mathematical thinking as well as exploring strategies for supporting her university students as they learn to analyze student work.

## **Exploring Elementary Preservice Teachers' Understanding of Mathematical Thinking**

We replicated and extended a STEM education study that suggests differences in academic self-concept based on gender. We used identical methods and analyses but expended both the sample size and the types of courses (lower and upper division biology, physics and neuroscience courses) being assessed. Further, we investigated how team-based learning mediates differences in academic self-concept. Results will be discussed in the context of creating equitable learning environments in STEM fields.



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## How To Improve Online Group Dynamic?

Due to the COVID-19 pandemic, a majority of face-to-face classes had to transition toward online teaching. This abrupt change profoundly impacted the way courses are delivered and much is yet to learn about how it impacted the quality of instruction and consequently students' retention and success. This is especially true for online asynchronous courses where direct students/teacher interactions are absent and where building a sense of community among students becomes a challenge. Numerous researches have established the benefit of peer-education and developing a sense of belonging in face-to-face setting especially through using collaborative group work. The purpose of this study is to investigate and explore how group dynamic could be improved in an online asynchronous class. In the study, students will be assigned to two groups, both groups will have the same guidance in terms of instructions. Group 1 will have a flexible format while group 2 will have a more structured format with each participant having a specific role in the group. The researcher will look at the difference in participation between the groups of students who are part of the flexible group 1 versus students who are in the structured group 2. In order to study students' perception of their group work, we will probe the following questions: i) What is students' perception of improvement in interpersonal skills as a result of engaging in collaborative work? ii) What is students' perception of improvement in metacognitive skills as a result of engaging in collaborative work? iii) What is students' perception of improvement in academic achievement as a result of engaging in collaborative work?



**DR. SEBASTIEN TAUZIN**  
*Assistant Professor | Biology/Biotech*

Sebastien Tauzin is assistant professor of biology/biotechnology at UVU since 2016. He has a biomedical science background and worked on cancer and inflammatory-related pathologies at UW-Madison and at the French NIH. Since his PhD at the University of Geneva, Switzerland, Sebastien was attracted by the complexity of Human diseases. At UVU, his students and he are exploring the mechanisms of the resolution of inflammation. They aim to better understand how the lack of proper resolution of inflammation can lead to chronic Human pathologies like cancer and cardiovascular diseases? Sebastien is also dedicated to improve student success. At UVU, he is investigating how to improve group dynamic of online students? Working in group is not easy for students and it is even more difficult online. With Dr. Aicha Rochdi and Chloe Childs, Sebastien is exploring strategies to facilitate students' interactions in the online environment. They are seeking to develop new online group guidance that could benefit students' success.

# Making Projects Meaningful: The Role of Cross-Departmental Collaboration

Utah Valley University faculty Emily Hedrick and Amber Smith-Johnson were in a peer observation course when they noticed a research opportunity. Within the Digital Media: Immersive Authoring II course, there is a gaping hole: Emily was asking her digital media students to create meaningful, rich web experiences that engage audiences; however, the written content was largely missing due to course constraints. In Amber's 2010 Advanced Writing course, she had students across university disciplines and majors writing papers without context: her students struggled to see the real-world application in writing a traditional research paper. These holes proved to be an innovative research space where collaboration between the art (digital media) and the copy (English) were born. Existing research suggests that very few of these kinds of interdisciplinary collaborations are taking place at the university; yet, Emily and Amber have found that it directly applies to corporate environments students will be joining after college and is therefore extremely valuable. Through two semesters of data collection, feedback from students, and completed final projects, it's clear that the group project is meaningful and exciting for students and that the cooperation also produces work that is of higher quality and caliber from prior non-collaborative courses. The research and observations from this study show how deeply important these kinds of collaborations can be, both for students who wish to create work that is elevated, personal, and applicable but also for students to feel prepared for team work as they enter the workplace.



## AMBER SMITH-JOHNSON

*Lecturer | English*

Originating in her undergraduate English courses and continuing as she has been a graduate instructor, adjunct professor, and lecturer, Amber Smith-Johnson has always been fascinated by student feelings about writing. Not only are students quick to judge themselves as either poor or gifted writers, they are also quick to express either love or hatred for writing. As an undergrad, her first published work, in *Young Scholars in Writing*, explored responses from over 600 high school seniors to try and identify the origins of student beliefs and self-assessments about writing. This fascination has led Amber into a career-long focus on increasing student confidence and interest in writing through engaged learning strategies and innovative teaching methodologies through real-world scenarios and applications. Amber's collaboration with Emily Hedrick in UVU's digital media department is an approach to teaching writing that extends and broadens her work in exciting ways that is bringing student work to new levels of excellence. Amber has presented at CWPA, PCA, and other conferences and is a lecturer of English at Utah Valley University.



## EMILY HEDRICK

*Assistant Professor | Digital Media*

Emily Hedrick is an Assistant Professor in the Digital Media Web Developer and Design program. She is also a proud Wolverine and graduated in 2009 as one of the first graduates of the newly created Digital Media department. During her undergraduate degree she had the opportunity to work on many exciting projects that included a capstone in Namibia, Africa. During her junior year, she was recruited by the Church of Jesus Christ of Latter-day Saints to become an assistant producer in the Digital Media division of the Audiovisual Department. Emily worked on numerous projects from developing the first podcasts to online streaming of video of all broadcasts. For over a decade at the Church of Jesus Christ of Latter-day Saints, Emily continued looking ahead at technology developments and changes in the industry. During this time, Emily returned for a graduate degree in American Media and Popular Culture at Arizona State University to help broaden her understanding of how messaging across media platforms impacts audiences. In 2018, Emily graduated with a Masters of Advanced study from Arizona State University. In fall 2018 Emily accepted a full-time tenure track position at her beloved alma mater UVU Digital Media department. She continues to follow industry shifts in technology and emerging markets to help prepare students for ever-changing digital media world. Emily is currently focused on developing mixed reality experiences for audiences that include partnerships with the Iditarod organization and the National Park Service.



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## DR. ASHLEY NADEAU

*Assistant Professor |  
English Language & Literature*

Ashley Nadeau is an Assistant Professor of English Language and Literature at Utah Valley University, in Orem, UT. She earned her PhD in English at the University of Massachusetts, Amherst in September of 2018. Her dissertation, "Novel Buildings: Architectural and Narrative Form in Victorian Fiction," explores the relationship between the social and architectural histories of built public space and the Victorian literary imagination. Ashley's publications, "Mary Barton's Undoing: Affect, Architecture, and the Victorian Courthouse" (*The Gaskell Journal*, 2017) and "Exploring Women: Virginia Woolf's Imperial Revisions from *The Voyage Out* to *Mrs. Dalloway*" (*Modern Language Studies*, Summer 2014), reflect her interests in architectural history, critical spatial studies, and feminist theory. She has previously presented work at the Dickens Society Symposium, NAVSA, INCS, VISAWUS, and NEMLA conferences.



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## Audiobooks and the Unsettled Text in the Victorian Literature Classroom

Teaching that "loose, baggy monster," the Victorian novel, can be challenging in any context. However, at a dual-mission university, where over a quarter of students identify as non-traditional, and as many work full-time, it can be especially difficult to ask undergraduates to read a long novel on top of an already long workweek. Unsurprisingly, many of these students turn to digital audiobooks, the medium best suited for multi-tasking, in lieu of sitting down with a physical text. While some scholars have celebrated audiobooks for their ability to mimic the aural experience of those Victorians who attended public readings, or who listened with their family as they gathered around a hearth, Victorianist scholarship on audiobooks often fails to fully assess the impact of this (no longer) new medium on student learning. Alternatively, the vast majority of research on digital audiobooks, pedagogical practices, and reading comprehension is focused solely on K-12 education and second language learners. This interdisciplinary, classroom-based, pedagogical research project on the use of audiobooks in the college literature classroom engages my undergraduate students as research partners as we attempt to address this scholarly lacuna. As part of the project, students are invited to listen to audiobook editions of our assigned course texts and complete a series of surveys reflecting on their experience. Future stages of the project will explore various in-class activities and best practices for teaching with audiobooks.



**ROXANNE  
BRINKERHOFF**

*Faculty | Developmental Math*

Roxanne Brinkerhoff is a faculty member in the Developmental Math Department. She works primarily as an instructor in Quantitative Literacy and is always looking for new and interesting ways to bring math into the lives of her students. Her recent passion has become making online learning as effective as classroom learning.



**Supporting Elementary Pre-Service Teachers' Analysis of Student Work to Reflect on Teaching Effectiveness, Cultural Competence, and Cultural Humility**

Online group work is beginning to take hold in many asynchronous courses. Group work in a traditional in person setting has been shown to be an highly effective pedagogy to increase retention and course satisfaction, as well as improve student learning outcomes (Carney & Rouse, 2006). By incorporating collaborative technology and providing group projects, asynchronous group work is now possible as a tool in online learning. With the adoption of team-based learning in the online sections of a quantitative reasoning course, researchers are interested in the effect that this practice and the resulting student collaboration will have on the learning and success of the participants. In particular, does asynchronous team learning increase student outcomes and improve course metrics (such as retention rates, scores on assessments, etc.)?

Although group work has a long history of increasing collaboration among students, do asynchronous groups behave in a similar manner? Do the teams formed in an asynchronous courses transition beyond superficial peer interaction (or social presence) and use collaboration and teamwork to solve problems, learn content, and support team members through the course? Finally, does working in groups improve course satisfaction and support individual wellbeing?

Supporting the idea that team-based learning is highly advantageous for students, understanding of the same practice in an asynchronous environment can improve online pedagogies and improve learning.