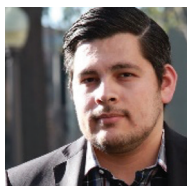


Meet the First Cohort of the AERA-Deeper Learning Fellows



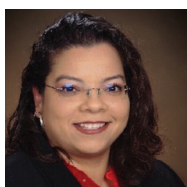
Dr. Charlotte Agger, Assistant Professor of Human Development, School of Education, Indiana University Bloomington

Despite the importance of deeper learning competencies, such as critical thinking and collaboration skills, little work has examined the motivational mechanisms through which deeper learning predicts essential academic outcomes. My project used an ethnically diverse sample of students to explore self-efficacy and mastery goal orientation as potential mediators of the relationship between enrollment in a deeper learning school and academic engagement, perseverance, and mathematics achievement.



Dr. Stephen Aguilar, Assistant Professor of Education, USC Rossier School of Education

Using data from the Study of Deeper Learning, we examined locus of control as a potential mitigator against low college enrollment and hypothesize that Hispanic students' capability to enroll in postsecondary institutions (e.g., community college, 4-year colleges), in the face of personal, academic, and financial challenges, is likely predicated on their belief that they control their academic futures.



Dr. Lucy Arellano, Assistant Professor of Adult Education and Higher Education Leadership, Oregon State University

I am leading a study that incorporates multiple sources of data along the educational pathway. Math and English test scores from eighth-grade students are followed up with California High School Exit Exam scores, high school completion, collegiate enrollment, and degree attainment, culminating in institutional-level data from the Integrated Postsecondary Education Data System. Two primary research questions guided the study: What influence does high-stakes testing have on student's educational pathways? What type of institutional environment (i.e., college and university characteristics) helps to foster degree attainment?



Dr. Denis Dumas, Assistant Professor of Research Methods and Statistics, Morgridge College of Education, University of Denver

As a deeper learning fellow, I conducted a series of investigations into the reliable and valid measurement of student opportunities for deeper learning, including measurement invariance and latent means tests across language background, sex, and race/ethnicity groups. I also examined the possibility of using student self-reported learning opportunities to quantify school contextual or climate attributes. The results indicated a multidimensional structure for student learning opportunities for deeper learning, with that structure being invariant across salient subgroups of students. Significant latent mean differences among subgroups were identified, and the within-school latent heterogeneity among students was too great (and the between-school latent variance too small) to validly quantify opportunities for deeper learning as a school-level climate attribute.



Dr. Megan Kuhfeld, Research Scientist 2, NWEA

Promoting students' social and emotional skills is a high priority for teachers and principals, but little is known about which competencies have the largest effect on students' academic success. We tend to refer to these skills using large bucket terms (such as intrapersonal and interpersonal competencies), and yet a great deal of the predictive research on these competencies focuses on a single competency (e.g., perseverance, self-efficacy) at a time. The disconnect between our terminology and research practices makes it difficult to determine (a) whether the competencies are measuring unique domains or reflect components of a higher-order skill and (b) whether a specific competency provides added value over and beyond a more broadly defined noncognitive measure in predicting student outcomes. My study contributes to the field by focusing on the interrelationships between seven intrapersonal and interpersonal competencies to understand whether these measures capture unique aspects of students' noncognitive ability and whether these unique aspects differentially predicted educational attainment.



Dr. Erin Ottmar, Assistant Professor of Learning Sciences and Psychology, Worcester Polytechnic Institute

My study used multigroup structural equation modeling to examine the direct and indirect relationships among cognitive, interpersonal, and intrapersonal opportunities; noncognitive outcomes; and student achievement. Similar patterns were found in both deeper learning and control schools. Cognitive and intrapersonal opportunities were related to both interpersonal and intrapersonal outcomes. Further, cognitive opportunities were indirectly related to student achievement through interpersonal outcomes.



Dr. Meihua Qian, Assistant Professor of Educational Psychology, College of Education, Clemson University

Deeper learning has become increasingly important, yet the understanding of deeper learning remains limited. For example, although the ordered logit Rasch model was used to examine students' key competencies such as creative thinking skills, interpersonal skills, and intrapersonal skills, Rasch models only focus on item difficulty, and item discrimination was left unexamined. In the present study, I used the graded response model to further examine all the student survey item properties. Also, multilevel explanatory item response theory models with person-by-item predictors were employed to detect differential item functioning in hopes of providing rigorous evidence of whether the survey items measure each construct equally well for all subgroups of students.



Dr. Jenna Sablan, Assistant Research Professor, Georgetown University

While academic content knowledge is thought to be a part of college readiness, a range of noncognitive skills, such as self-management, persistence, or study skills, are also considered essential to college transition. However, few studies parse out the full determinants of college readiness including noncognitive traits, while also considering students' school and social context. I am leading a study to examine the role of noncognitive college readiness indicators in models of college outcomes. This project examines how noncognitive indicators of college readiness differ in their prediction of college outcomes by postsecondary sector and explores policy implications.

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For further information about the AERA-SDL, see <https://www.aera.net/Professional-Opportunities-Funding/AERA-Funding-Opportunities/AERA-Fellowship-Program-on-the-Study-of-Deeper-Learning> or contact fellowships@aera.net.

Meet the Second Cohort of the AERA-Deeper Learning Fellows



Dr. Wendy Chan, Assistant Professor, University of Pennsylvania

Policymakers and practitioners are often interested in understanding the extent to which the results of a study generalize to an inference population. However, one limitation to generalization studies is that the sample size is typically much smaller than the population. In this study, I explore the application of small-area estimation methods to improve the generalizability of the results from the Study of Deeper Learning.

I examine both the role of sample size and assumptions on the effectiveness of small-area methods for generalizability.



Dr. Lanette Jimerson, Assistant Professor, University of Houston

Utilizing technology to enhance learning is a significant aspect of the 21st century—even more so in the current context of nationwide distance learning. The study “Deeper learning and technology integration: Implications for writing assignments and quality student work” examined the role of technology in teacher assignments that received a high rubric score for providing opportunities for deeper learning. Initial findings

evidence higher-scored assignments required students to utilize technology to (a) craft writing for an expanded audience, (b) reflect on their own learning/perspective and communicate their reflection to others, and/or (c) collaborate with a peer.



Dr. Ting Shen, Assistant Professor in Psychological Science, Missouri S&T

My study adopts a multilevel propensity score method using different sets of covariates representing the characteristics of students, teachers, and schools, which reduces systematic differences between network schools and comparison schools on these covariates. The research objective is not only to examine the overall deeper learning (DL) effects across individual students and school sites but also to investigate

the heterogeneity of the program effectiveness. Findings from this study may have implications on how, where, and for whom DL works, and what conditions may increase DL effectiveness.



Dr. Abigail Todhunter-Reid, Consultant, Reid Education Research

Using data from the Study of Deeper Learning, I examined how deeper learning instructional practices reinforce the postsecondary pathways of low-income students and students with disabilities. I used the coarsened exact matching approach to closely match students in network schools with students in non-network schools and examined differences in college enrollment outcomes. I then used path analysis to examine the extent

to which instructional rigor, social support, and exposure to college experiences mediate the primary association.

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Meet the Third Cohort of the AERA–Deeper Learning Fellows



Carlton Fong, Assistant Professor, College of Education,
Texas State University

Using a person-centered approach and latent profile analysis, this study centers on identifying distinct patterns of intrapersonal competencies consisting of students' motivation, self-regulation, and engagement. Furthermore, to examine how these intrapersonal competencies develop in context, this study measures the degree to which teachers' beliefs and students' opportunities for deeper learning predict latent profile membership. Finally, this study assesses whether these profiles differ regarding important educational outcomes such as academic achievement, postsecondary enrollment, and degree attainment.



Maithreyi Gopalan, Assistant Professor, College of Education,
The Pennsylvania State University

Recent empirical research has highlighted the important role that academic mindsets play in helping students become deep learners and succeed academically. We know far less about which teacher beliefs or pedagogical practices are most important when it comes to fostering students' academic mindsets and/or creating deeper learning environments. This study connects students' academic mindsets, opportunities for deeper learning, and teacher mindsets and practices underlying learning environments. The findings will have implications for designing optimal deeper learning environments that can help all students thrive and succeed.



Karen Moran Jackson, Assistant Professor of Educational Psychology and
Assessment, Soka University

Teachers often are asked to balance competing assessment demands: either wrestling useful data from assessments decontextualized from classroom climates or standardizing classroom assessments for use in a high-stakes matter such as graduation requirements. The focus of this qualitatively driven, mixed-methods research is how teachers balance these demands and implement assessments in schools dedicated to teaching complex student competencies through collaboration and communication. The study will document teacher perceptions of assessment use in these schools and the implications of various assessment practices and policies.



**Jonté Myers, Assistant Professor,
Georgia State University**

This study examines associations between nine measures of opportunities for deeper learning and students' assessment scores and on-time graduation. It also investigates the mediating effect of students' self-efficacy and motivation. Further, it explores whether associations between deeper learning opportunity measures and student outcomes vary across samples of students living in poverty and students at risk for academic difficulties. This research has the potential to guide stakeholders' thinking as they consider ways to support positive student outcomes, especially for students most at risk of school failure.



**Sarah Olsen, Research Associate, Lawrence Hall of Science,
University of California, Berkeley**

This study uses data from the Study of Deeper Learning to identify critical teacher-level supports that focus on student engagement, and whether those supports are particularly relevant based on student race/ethnicity and gender. It builds upon evidence that personalized instruction and support can lead to higher levels of academic engagement and achievement. This work aims to contribute to our understanding of the types of learning environments that support all students to engage academically.

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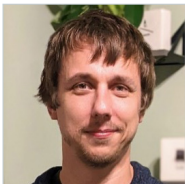
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Meet the Fourth Cohort of the AERA–Deeper Learning Fellows



Sally Drew, Associate Professor of Teacher Education and Special Education,
Sacred Heart University

This study explores the role of educator mindsets to foster deeper learning environments within deeper learning network high schools. Previous work on teacher mindsets and professional learning have underestimated the network of beliefs that comprise educator mindsets and integrate content knowledge, pedagogical content knowledge, and dispositions within mindsets. Furthermore, the role of collective educator mindsets and the mindset ecosystem within schools has yet to be explored in depth. Using a mixed-methods design prioritizing situational analysis, this study will share an emerging theory of the role of educator mindsets to shape motivation and professional commitment within educator professional learning communities.



D. Jake Follmer, Assistant Professor, College of Education and Applied Human Sciences,
West Virginia University

Using data from the Study of Deeper Learning, I examined the intrapersonal, regulatory competencies that may mediate associations between first-generation students' deeper learning opportunities and their postsecondary enrollment, persistence, and degree attainment. Using a matched sample of first- and continuing-generation students, I tested latent moderated mediation models to understand whether the mediating roles of these regulatory competencies—self-efficacy, motivation to learn, and self-management—varied for first- and continuing-generation students.



Jihee Hwang, Clinical Assistant Professor of Educational Administration & Human
Resource Development, Texas A&M University

For the research under the AERA-SDL fellowship program, I examined the effects of attending a deeper learning network school on high-achieving, low-income students' college matching and degree completion. Guided by a conceptual framework that addresses the importance of high school conditions for building equitable postsecondary pathways, this study uses data drawn from the Study of Deeper Learning, the National Center for Education Statistics Integrated Postsecondary Education Data System, and the National Student Clearinghouse. This study's findings can provide evidence on how a rigorous curriculum and supportive learning experience in high school can reduce the gaps in college access and success for traditionally underserved populations.



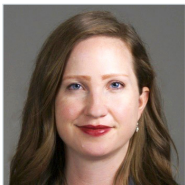
**Karyn Miller, Assistant Professor of Curriculum and Instruction,
Texas A&M University–Commerce**

This study explores the overarching question, Is care central to deeper learning? Although preliminary data analysis indicates that secondary students in deeper learning network schools experience a stronger sense of belonging than their counterparts in non-network schools, little research has examined whether an ethos of care informs the culture of deeper learning schools. Taking a qualitative approach to data analysis, I explore school leaders' philosophy of care, the care practices of leaders and teachers both within and beyond the school, and students' perceptions of care and belonging. Further, this study includes a comparative analysis of care practices across schools with different student demographics and seeks to contribute to the literature on culturally relevant caring.



**Anahid Modrek, Assistant Professor, Department of Psychology,
Thomas Jefferson University**

I am leading a study to both test and inform the “explore–exploit trade-off” theory—that assignments provide learners opportunities to either explore and think freely or to report on prior knowledge. This study examines whether an assignment can effectively provide both types of opportunities. In an effort to inform instructional change toward a more explorative (and less exploitative) approach, this study focuses on teacher prompts provided to students, and the quality of student responses to these prompts, across matched pairs of deeper learning network schools and traditional, comparison schools. This study is guided by the hypothesis that teachers at deeper learning network schools may offer more opportunities for exploratory, imaginative thinking—the type of learning commonly retired by adolescence—alongside the type of evidence-based, argumentative learning that is more common in traditional schooling. Also, I will look at the effects these differences in assignments have on students' writing and explanatory skill. Finally, this work provides new rubrics, which we test for reliability and validity, for teachers and researchers alike. Implications for curriculum, pedagogy, and public policy are discussed.



**Kristy Robinson, Assistant Professor of Educational and Counselling Psychology,
McGill University.**

Opportunities for students to develop confidence, motivation to learn, and self-regulatory behaviors in school provide essential building blocks for academic success. Understanding students' varying perceptions of opportunities for deeper learning is essential for effectively implementing such opportunities. This study examines the nature and correlates of students' heterogeneous perceptions of opportunities by (1) examining the factor structure of student perceptions, then (2) using a person-oriented analytic approach to identify groups of students defined by distinct patterns (profiles) of perceptions. To contribute a novel understanding of how students' individual characteristics shape their perceptions, I examine gender, bilingual status, and prior achievement as predictors of profile membership, then assess relationships between profile membership and both proximal and distal outcomes.

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