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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.

Through funding from the Hewlett Foundation, the American Educational Research Association Fellowship Program on the Study of Deeper Learning (AERA-SDL) supports postdoctoral and early career scholars in education research and thereby fosters excellence and rigor in the next generation of faculty members, research scientists, and scholars examining education topics and issues. Fellows collaborate with research scientists at the American Institutes for Research (AIR) to develop studies and analyze the Deeper Learning data.

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.