UCI Next Generation Undergraduate Success Measurement Project

The University of California, Irvine (UCI) will serve as a pilot demonstration site to develop and implement a state-of-the-art measurement project to improve our understanding of the value of undergraduate educational experiences and promote evidence-based models of undergraduate student success. The project is supported by the Andrew W. Mellon Foundation and is designed to inform the development of a large-scale longitudinal study of colleges and universities (College and Beyond II) coordinated by the Inter-university Consortium for Political and Social Research (ICPSR) at the University of Michigan.

In the initial planning stage of the project, UCI researchers will draw on expertise from the field to identify the feasibility and utility of collecting, analyzing and sharing innovative new forms of data for documenting the value of the undergraduate experience and improving undergraduate student outcomes. The data strands in this project include the following:

Administrative, Student Affairs, Course Taking Trajectories: This strand includes institutional data on social background, secondary academic preparation, and collegiate course performance. This data already is routinely collected and placed in a "data warehouse" at UCI for research focused on institutional improvement efforts. In addition to this existing data resource, we intend potentially to incorporate new forms of administrative data gathered on student interactions with campus services and in advisement software platforms that have recently been utilized in Predicative Analytical Reporting systems.

Learning Management System: This strand includes all click events of students in the Canvas Learning Management System (LMS), the platform used for most courses at UCI, as well as all student submissions to the LMS. This data allows us to create new generalizable measures capturing student educational experiences utilizing authentic evidence of student learning. For instance, we intend to use this data to track student engagement and to measure progress, particularly in writing (a core competency at the heart of undergraduate education) through analysis of submitted course work.

Survey, Experience Sampling, Performance Assessment: This strand includes survey instruments with items on educational attitudes, behavior and experiences (including social networks, extracurricular activities and on-campus support services). Experiential sampling methods will also be employed to identify student experiences, attitudes and dispositions in more authentic everyday contexts. In addition, we intend to implement standardized performance assessments (such as the Critical Thinking Assessment or the Collegiate Learning Assessment) to model generic learning gains and to identify the extent to which new forms of authentic assessment collected from Learning Management Systems can effectively capture this variation.

In the data collection stage of the project, researchers will collect administrative data of all freshman and continuing/incoming juniors at UCI. Additional data will be collected from a random sample of 1,000 UCI students comprising 500 incoming freshmen, 250 incoming junior transfer students (the UC system mandates a 2:1 incoming freshman to junior transfer ratio), and 250 continuing juniors. In addition, we will oversample an additional 50 freshman enrolled in the Honors Program.

The project team includes Principal Investigator Richard Arum (Dean of the UCI School of Education and Professor of Education, Sociology, Criminology and Law and Society) and Co-PI Michael Dennin (Professor of Physics and Astronomy, Dean of the Division of Undergraduate Education and Vice Provost for Teaching and Learning at UCI). Senior Personnel include Mark Warschauer (Professor of Education and Informatics, Director of the Digital Learning Lab, and Director of the UCI Teaching and Learning Research Center), Jacquelynne Eccles (Distinguished Professor of Education and Psychology), Rachel Baker (Assistant Professor of Education), and Di Xu (Assistant Professor of Education).