

PROJECT SUMMARY

Overview:

The Mission Meaning Making (M3) research project will take a cross-college approach to creating an authentic and scalable educational model for innovation-focused undergraduate education and examine the related institutional change processes. We propose a working theory of change to study and address institutional barriers (i.e. academic hierarchy, faculty loading, instructor evaluations, course credit, and bureaucratic hurdles to decision-making) for a critical paradigm shift in this highly timely area. Our long-term goal is institutional transformation towards more transdisciplinary undergraduate learning generally, and for comprehensive innovation-focused undergraduate education specifically. The overall objective of our project, which is a key step towards attainment of our long-term goal, is to determine the obstacles and enablers to implementing a new transdisciplinary educational model. This model will involve an undergraduate-focused community of practice (CoP) in innovation, co-teaching and co-learning from faculty and students in different academic units, and enriching experiences spanning multiple semesters. As a collaborative initiative, the M3 project is designed to synergize key strengths of partnering academic units (Purdue University's Polytechnic Institute, College of Liberal Arts, and Krannert School of Management) to create a leading-edge undergraduate experience. Our central hypothesis is that a cross-college approach to educational transformation, one that centers on democratizing the practice of innovation across campus boundaries, will effectively prepare next generation innovators; and, that the current global crisis and need for rapid/profound changes in higher education make conditions favorable for institutional transformation. As such, this project will characterize what different academic units, working together in a top-down supported (dean level support) and bottom-up (faculty/student level engagement) approach, can achieve toward profound change in undergraduate education.

Intellectual Merit:

As an Institutional and Community Transformation Level I initiative, we will first (Objective 1) create, test, and refine an educational model to guide the transformation of traditional undergraduate learning experiences to span across disciplines and minimize the silo effect of academic departments/individual courses. This model will integrate learning in the context of innovation through a focus on transdisciplinarity, co-teaching, co-learning, and blended team projects within an engaged CoP. The educational model will provide the institutional structure and processes to enable transformative learning through the implementation of evidence-based practices, while the CoP will provide the environment to nourish student learning and their innovative ideas. Objective 1 will be achieved using a design-based research approach to co-design and implement the educational model with faculty across academic units while identifying and addressing the institutional barriers to a transformative learning experience. Second (Objective 2), we will use ethnography to examine university change processes, identify best practices to guide this institutional transformation, develop teaching evaluation methods for courses co-taught across units, and examine ways in which to scale via online/summer environments in order to reach larger audiences and sustain learning over time. Data sources will include observations, stakeholder interviews and surveys, and learner assessments. Using a mixed methods design, we will combine quantitative data with qualitative data to better understand what are the enablers and obstacles to the colleges working together on developing the joint undergraduate educational model.

Broader Impacts:

The work embedded in this project will yield key insights and purposeful next steps that universities can take to develop, implement, and assess new ways to teach the art of innovation while addressing institutional barriers to bring authentic learning to the broader campus community and beyond. Our transferrable and scalable model will include a high-quality co-learning sequence, a co-teaching evaluation method, student exemplars of innovations for people, faculty co-thinking innovation workshop, recommendations for scaling through online/summer delivery, and research results describing how institutions can better democratize innovation education through institutional transformation.