

ABSTRACT

Science, Technology, Engineering and Math in Art and Design Education: An investigation of the Makerspace in the Art + Design Department.

KT Duffy, Nate Matthews and Vida Sačić

This research investigates ways in which the new Art + Design Department's MakeSpace+ can incubate hybrid forms of making, teach technical competencies, and foster creative community amongst the various disciplines within the Art + Design Department. The definition of what constitutes a makerspace is broad and expanding, but always involves three key components: people, place, and making. Inherent within this model is community building and collaboration.

The underlying methodology of the preliminary investigation focuses on creative collaboration between faculty within the department, specifically KT Duffy, Nate Matthews and Vida Sačić. These faculty believe that an Art and Design education incubated through a makerspace model will empower students to create lasting impacts on their communities through creative enterprise.

The Art + Design Department has recently undergone major changes which have encouraged faculty to look at ways of engaging students with technology in order to support post graduate success. The mission of the three faculty members involved in the ongoing examination of the MakeSpace+ and the makerspace model is to provide technical assets and training to Art + Design Students. These competencies are essential to graduating creatives entering the job market. However, without engagement, inclusive practices, and community making, the MakeSpace+ is just a room full of technology. It is the creative application of these technologies and their fusion into individual practices and interests which activate its potential as a deep learning tool.

Professors KT Duffy, Nate Matthews and Vida Sačić, have designed a series of collaborative experiments in order to explore the full range of potential the makerspace model can offer students. Not unlike their students, each professor brings with them a wide range of personal experiences and skills. These need not specifically be technologically oriented as there should be no barrier for participation within this model. The experiments focus heavily on processes and problem solving. The outcomes of each experiment are intentionally not set, but rather, are fluid and unexpected by design. Build into the methodology of the experimentation process is skill sharing, collaborative problem solving, and making to learn. The experiments heavily rely on learning STEM concepts on the fly through hands on experimentation and open ended play. The various steps, from ideation to creation, setbacks, problem solving strategies, STEM competencies, and final products will be documented and catalogued with the intention of using them as models of instruction for a variety of art department courses and workshops.