Chapter 13

Embracing Non-Traditional Partnerships in Design Education: Breaking Down Myths and Stereotypes

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ABSTRACT

This chapter reviews the outline, process, and structure of the LEED Lab course at North Carolina State University (NCSU), which has engaged students from multiple colleges across the University. This chapter will specifically address NCSU’s particular approach to teamwork in design education, using an existing building on NCSU’s campus and an established assessment framework to provide context. With the LEED for Existing Buildings Operations and Maintenance as a guide, interdisciplinary teams of students worked together to establish recommendations for future operations. Additional teamwork opportunities included the engagement of a number of NCSU facilities departments, including Repairs and Renovation, Energy Services, Waste Reduction and Recycling, and others. Using examples of team-building exercises, integration with NCSU’s Facilities Division, in-class hands-on exercises, and in-process photographs, this chapter will walk the reader through the opportunities and challenges of integrating non-traditional teamwork exercises into design education processes.

INTRODUCTION

One of the many challenges in design education, is providing opportunities for students to work meaningfully in interdisciplinary groups. Many design disciplines have historically been insulated in ivory towers, with the most likely possibility for integrated groups being limited to other design disciplines. These partnerships might include planning or landscape design students teamed with architecture stu-
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dents, or possibly the inclusion of interior design. However, beyond being in the same room for a large lecture, such as art history, which affords no means for a collaborative experience, opportunities rarely exist to develop meaningful inter-collegiate and interdisciplinary partnerships in design - either within or external to the studio context. With the prevalence of interdisciplinary teams and integrated processes growing in architecture and design fields, practicing and future designers are encouraged to expand their current dialogues and vocabularies to better collaborate with other disciplines (Keeler, 2009; Moe, 2008; Yudelson, 2009; Deutsch, 2011; Reed, 2009). It has been found that courses emphasizing teamwork with interdisciplinary groups in fact engage students in a simulation of communications and projects in the working world (Smit and Tremethick, 2013; Fixson, 2009; Rhee, 2010). These types of educational experiences can have implications for students past graduation, as most projects involving both new and existing construction - as well as in other design fields - are most likely to be interdisciplinary challenges.

One difficulty in engaging design disciplines in interdisciplinary and intercollegiate projects is rooted in the studio culture of design education. If there is a possible partner discipline that can address similar course topics, such as civil engineering, it would be preferred to engage engineering students in a studio setting for collaboration, where much of the meaningful connections are provided (Kurt, 2009; Schon, 1984). However, the credit hour structure in other disciplines, such as engineering, does not often translate, or provide allowance for, a 6-credit hour studio course that meets three times per week for multiple hours per day. If students from other disciplines do arrange their schedule to attend studio, they lack the experience and context to understand what actually happens in a studio space for those extended hours, without a lecture or structured exercise. While this can be overcome, it is a deterrent nonetheless.

Though some design programs are beginning to establish successful processes and methods for interdisciplinary learning in the studio setting, there are additional opportunities for design students to work with other disciplines on campus outside of studio. Using the campus as a living laboratory to provide real world experience while impacting the operations of the campus has the potential to create a particularly meaningful opportunity for design and non-design disciplines alike. The goals for this chapter include: reviewing one successful seminar format for an interdisciplinary course at a major university; mapping the possibilities for partnerships between diverse colleges and facilities divisions; and providing suggestions for building rapport between students of differing expertise and backgrounds.

Background

At North Carolina State University in Raleigh, North Carolina, United States, Fall semester 2015 marked the second semester of a LEED Lab course. This specific approach is based on a program of the U.S. Green Building Council (USGBC) called Leadership in Energy and Environmental Design (LEED). The LEED program is one of the most popular green building certification programs used worldwide. While the bulk of the projects are found in the United States, many countries around the globe are establishing parallel organizations, such as the Green Building Council of Australia (GBCA) and the Indian Green Building Council (IGBC), and as a result either adopting or adapting the LEED rating system.

The particular seminar reviewed in this chapter makes use of the LEED Lab course, which has been developed by the USGBC’s Center for Green Schools. As noted on the Center’s website, “LEED Lab is a multidisciplinary immersion course that utilizes the built environment to educate and prepare students to become green building leaders and sustainability-focused citizens.” USGBC’s goal for the course is to simultaneously provide hands-on, practical experience in green building operations and maintenance to future design professionals, while enabling campuses with large existing building portfolios to work
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