Blurring the Line: an Experiment in Interdisciplinary Design Education

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1. Introduction

There is a documented history of collaborative efforts in the design studios of disciplines such as engineering, industrial design, urban design, landscape architecture, architecture, and interior design. Group work, in various iterations, has been published over the past few decades and includes modes such as; intradisciplinary studios [5], interdisciplinary studios [4] and community based studios [12]. However, much of this work has occurred in small segments of curriculum or as minor 'units' within a larger studio structure. It is far less common to see collaboration (of any mode) utilized as a fully integrated pedagogical context for curriculums of design. This is particularly troubling because the functional structure of professional design and construction in the United States has evolved into an *inherently integrative process* whereby distinct (and often legally bound) specialized disciplines must interact and coordinate in order for a singular structure to be designed, approved, and constructed.

2. The Experiment

During the fall of 2009, the Authors engaged in a teaching experiment which sought to cross over traditionally held departmental boundaries in order to immerse students from complementary disciplines into a collaborative "comprehensive" design project. The experiment linked first year graduate students (5th year) studying architecture with undergraduate seniors (4th year) studying interior design. Both programs are housed within the same 'school' at a publicly funded research university located in the Midwestern region of the United States and both programs share a core selection of basic design courses for the first two years of undergraduate study. However, upper division design courses have a long history of program isolation, thus there was no recorded precedent for departmental interdisciplinary collaboration of this type within the school's archives. Additionally, both programs must adhere to separate accrediting bodies, the National Architecture Accrediting Board [NAAB] and the Council for Interior Design Accreditation [CIDA], which provides oversight to ensure that educational curriculum, meets professional practice requirements.

Although both entities promote collaborative and interdisciplinary learning, each has distinct rubrics for program assessment that do not always support the alignment of curriculum. Thus, the experiment needed to create a project exercise which met the accredited educational objectives for each discipline while allowing for the insertion of interdisciplinary learning experiences. To achieve this flexibility, a fictitiously generated design project was scheduled to be completed in phases over the course of sixteen weeks. The architecture students began first and were responsible for conceptual development, site selection and site layout, as well as building program, shell design, and basic floor plate blocking. This allowed for key interior design objectives to be met through the completion of a separate design project. It also allowed architectural portions of the project to progress to a point substantial enough to allow for detailed interior design work. The interior design students were then brought on as 'consultants' and paired (via self-selection process) with an architectural team mate. The interior design students were asked to work with their teammate's preliminary building design to generate detailed space layouts, lighting/ceiling designs, and selections of furnishings, fixtures, finishes, and artwork. Each group then worked to finalize the designs and produce professional quality presentation materials (images, models, etc). The completed project was presented verbally in team format to a jury of design professionals who served as the project 'client' and provided feedback to each student team.

3. Lessons Learned

This experiment was approached with enthusiasm by both parties; however, the reality of collaborative teaching across disciplines, even closely related disciplines, proved to be quite difficult. Although the experiment was ultimately viewed as a success based on the strength of student final presentations, feedback from professional reviewers, and feedback from the accrediting bodies NAAB and CIDA, the Author's developed a new respect for the complexities associated with collaborative teaching and the roadblocks which hinder its momentum in higher educational settings. The following summary sections have been compiled based on personal experience generated via the experimental course and additional published research related to collaborative and interdisciplinary pedagogy.

3.1 Anticipate Stigmas

Despite the acknowledgment of collaborative pedagogy's potential with the design studio [6, 8, 13], there are often many stigmas attached to its use. Collaborative work is often viewed as a process filled with either negative conflict or indecisive interaction. There is frequently a failure to understand (on the part of students *and* instructors) that working and designing with others is a skill that must be learned through experience and

repetition [3, 4, **5**]. "Students…will go through a learning curve...often focused heavily on the development of the interpersonal skills required for successful collaboration, including leadership, teamwork and communication" [11]. Collaborative work in educational settings is also frequently viewed with suspicion, even outright contempt, because of the difficulties associated with accurately assessing individual student learning, engagement, and productivity. "A primary consideration for any instructor choosing to incorporate the use of collaborative methods is to address issues of equity and accountability among the student groups…assessment often adds to the anxiety associated with grading because instructors try to use the same assessment tools used for individual efforts" [11].

3.2 Actively Engage the Structure of Learning

Collaborative, interdisciplinary pedagogy must navigate the debate in scholarly disciplines regarding the rigidity of knowledge [2]. Many instructors hold very distinct conceptions regarding their own discipline and the ways of knowing associated with their discipline which can be difficult to bridge in collaborative and/or interdisciplinary settings [9]. Author F. L. Hamel asks; "What disciplinary road maps, if any, do teachers employ for interdisciplinary work? How do they work through the subject matter differences that have, in fact, brought them together?" [9] (p. 75). The structure of learning at the university level further exacerbates this issue because it inherently encourages privacy and isolation. Even among educational practitioners engaged in teaching different sections of the *same course*, the established precedent for individuality and academic freedom is highly valued. This freedom often creates the opportunity for unique and complex learning experiences; however, it also means that most university level faculty possess little to no experience in working collaboratively to structure course work, present relevant material, or engage daily student learning as co-instructors.

3.3 Understand the Financial Pressures

In 2009, The Pew Center on the States, a division of the Pew Charitable Trust, sent out an Associated Press Release which summarized a larger report entitled, *Beyond California: States in Fiscal Peril* [7]. The Pew press release examined the fiscal solvency of 10 states, including California, and stressed that "…budget troubles can have significant repercussions…higher taxes or fees; layoffs or furloughs of state workers…more crowded classrooms; higher college tuition and less support for the poor or unemployed" (pg. 1). The stark financial climate in public higher education in the United States has generated a shift in the demands placed on university faculty. While scholarly advancement of their respective fields is a traditional goal of faculty in higher education, there is now significant pressure for faculty to support their institution's financial solvency through the private sector; primarily in the form of research grants and industry partnerships. In their text, *Collaborative Working in Higher Education: The Social Academy*, authors Walsh and Kahn suggest that this financial shift can have (and has had) a positive influence on collaborative efforts because "…the way in which research is funded…offers huge scope for…working across a range of otherwise insurmountable boundaries" [14] (p. 56). However, the fiscal emphasis on collaborative interdisciplinary research often fails to include interdisciplinary teaching; "…the institutional competition over the income streams associated with teaching make it difficult for colleagues to collaborate around teaching." (p. 56) Teaching is viewed as a *potential expense* rather than a strong source of financial support. Research related to the role of collaborative design pedagogy within the realm of architectural education [10] found that respondents queried on the topic overwhelmingly viewed collaborative teaching through a fiscal lens; "…whenever an administrator speaks to unifying and collaborating and going…to institutes across campus or whatever, the complexity begins, who should use the resources…" (p.77). "There's a threat in this system…schools become very much silos under themselves, protecting their income, and protecting their financial situation" (p.100).

4. Concluding thoughts

"More research on learning in small groups exists than on any other instructional method, including lecturing" [1] (p. 3). However, in sharp contrast to the significant data stores related to collaborative learning's effect on students, there is a distinct lack of research regarding the impact of such pedagogy on instructors [1]. Collaborative, interdisciplinary teaching faces stigmas based on traditional methodologies and a general resistance to change. Thus, many practitioners lack adequate experience and/or mentoring in the intricacies associated with co-teaching. Instructors also face fiscal issues that are often deeply embedded in administrative systems which are not easily influenced from the bottom up. Ultimately, collaboration requires a fundamental surrendering of individual ownership and an openness to input and conflicting concepts. Achieving an effective mixture of conceptual, discipline based knowledge with interdisciplinary understanding in a collaborative setting is difficult and time intensive, but it is worth the effort. "Collaboration is surely an idea whose time has come" [14] (Forward, xv). Nowhere is this more accurate than in contemporary schools of architecture and design.

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