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OUT OF THE LECTURE AND INTO THE STUDIO: A NEW TAKE ON TEACHING DESIGN HISTORY

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ABSTRACT
Studio-based instructional models have been a central landmark of architecture and design education for nearly 100 years. However, studio models are typically found only in courses teaching design skills or practices, while design history and theory remain trapped in traditional, lecture-based formats. These traditional history courses offer little opportunity for active engagement and often fail to communicate appreciable values for young practicing designers who struggle with an instructional format that is so markedly different—and more passive—than the majority of their studio-based courses.
In this paper, we discuss the conversion of a traditional, lecture-based, design history course to a studio-based model, where students actively engage in researching designers and subsequently apply their newfound knowledge by creating class presentations and leading class discussions. We begin by defining studio-based instruction, contrast that with lecture-based approaches, and provide a rationale for changing the course's instructional approach. We then outline the basic structure of the new studio-based course format, including multiple phases of research, presentation development and execution, and evaluation. Finally, we discuss how student engagement and the quality of learning has improved under the studio-based model—as indicated by students' course and instructor evaluation scores—and reflect on the overall experience and future of the course.

Keywords: Design education, design history, studio-based instruction, lecture-based instruction

1 A CLEAR NEED FOR CHANGE

My first day on the job as a faculty member, I sat next to a freshly minted, young history professor at the university's new professor orientation meeting. As we made small talk, he learned that I was assigned to teach a 'history of design' class. He succinctly asked me how, as an industrial designer, I was qualified to teach a history class. At that moment, it dawned on me that, although I had an interest in design history, I was not a historian. My history training, comprising of a few required history courses and some elective art and design history courses, seemed woefully inadequate to qualify me as a professor of history. What if he was right?
For my first design history class, I imitated the approaches of the art and design history instruction I had received during my undergraduate training. I lectured, showed slide after slide of objects, discussed people, places, and styles, had the students read excellent books on design history, and quizzed them on what they read. We covered great people and great work. My passion for the topic was obvious and I believed that my students felt that same passion. However, my end-of-semester course evaluations provided evidence otherwise. The students provided scathing comments on the course and instructor. Overall, the course and professor were rated 25% lower than the university average. Clearly, imitation was not, in this case, a path to success. Additionally, this approach was neither authentic nor effective in establishing within the students a passion for the history of their chosen discipline. Apparently, just as the young historian assumed, I wasn't qualified to lecture on history of any sort.
This paper explores the transition of a design history course from primarily lecture- to a type of studio-based instruction. First, we will define what studio-based instruction is and examine why it may be an effective approach for improving design history education. The structure of the studio-based course is then laid out and the results of this instructional change are discussed. Finally, we explore implications for further improvement and research.

2 WHAT IS STUDIO- BASED INSTRUCTION?

Studio-based instruction has been a focal point of design education for over a century [1,2]. Adapted from the early training of artisans, the purpose of a studio is to support and build employable skills [3]. It is intended to draw together what is learned across curriculum and reinforce learning in the manner it will occur in the real world [2,4]. Today, most studio models in design education trace their roots to the approaches developed in the Bauhaus school, under the direction of Walter Gropius and Johannes Itten, who promoted learning to design by actually working on designs [1,3].

While the Bauhaus studio model let the activities of the workshop drive learning, contemporary studio courses are often characterized by four components: design problems or projects, periodic lectures, critiques, and a juried evaluation of the final product [3,5]. In these courses, the instructor presents learners with an authentic, real world-type task. Learners are then expected to approach the problem using knowledge and skills developed across the curriculum. Most often, learners work on the problem individually, parallel to their classmates, but they may occasionally work as teams on a project [6]. In a studio course, the majority of class time is spent working on the task, only interrupted by lectures on task-related issues or techniques and regular peer and instructor critiques. The end of the project is marked by a final, juried evaluation of the finished product by instructors, professionals, and experienced peers.

2.1 How does a studio-format course differ from lecture-format course?

Lecture-based instruction, consisting primarily of instructor-delivered recitation, is the historic approach to higher education. A remnant of the earliest medieval colleges, where content was delivered orally due to a lack of individual instructional materials, lectures have endured because they represent an archaic instructional assumption: that instructors, or those who know, are transferring knowledge to learners, who *do not know* and consequently cannot contribute much to the class [7]. It is important to note that lectures are not innately bad and can be an effective and efficient means of communicating new concepts. However, instruction that is primarily lecture-driven inhibits the active application of learners' developing understanding and skills.

While lecture- and studio-based instruction can vary in appearance and effect from case to case, they consistently reveal profound differences in three areas: use of time in-class, level of learner engagement, and methods for assessing learning [2,3,4,5,8]. First, in lecture-based courses, the majority of time in class is devoted to instructor recitation, possibly accompanied by a visual presentation. Studio-based class time may include brief lectures, but is largely spent developing the project, sharing progress and receiving one-on-one instructor and peer critique. Second, learner engagement, great or small, is a direct result of in-class activities. Consequently, student participation in a lecture is often confined to occasional questions or brief class discussions. Studios, on the other hand, are driven by student activity; whether reviewing their progress with peers or instructors, demonstrating their work, or critically reflecting on the work produced in class. Third, assessment approaches mirror in-class activities. Lectures, which disseminate large quantities of information at a time, frequently rely on equally efficient assessments, such as content-based quizzes and exams. While studios—which focus on skill and performance—incorporate performance-based assessments to evaluate student learning, such as project reviews or presentations.

2.2 Why a studio-based course?

Young industrial designers are trained in the skills needed to obtain employment in design studios around the world. The majority of university and art schools train and practice a studio-based method of teaching and learning and the students thrive in this environment. This is largely because students tend to learn design thinking and "skills more efficiently and incorporate them more readily into the [...] design process when [they] are acquired on an as-needed basis during ongoing design projects" [8]. Studio-style learning also yields experiences that are authentic, closely resembling the activities and demands of professional work, unlike the experience of sitting in a lecture [9].

In design education, the academic experience is founded in a Bauhaus'esque type studio-based training. Typically, design educators are more comfortable teaching in this type of environment, as this is how they were trained to think and create. Changing the design history course from lecture-based approach to a studio-based approach would be more authentic to the discipline's historic training methods, the personalities of the students, and the professor's personal experience.

3 A STUDIO-BASED DESIGN HISTORY COURSE

In the originally mentioned design history lectured course, students sat for an hour passively listening, occasionally taking notes, and too often dozing through the PowerPoint presentations, which covered key historic movements, designers, and their work. Though comments and insights into the topics where useful, they did not resonate with or become meaningful to the students. There was little class discussion, and those questions that were asked were shallow. The readings were an act of memorization for the quizzes that followed, not an acquired understanding that could be used in their personal design work. In the revised design history studio, students are placed "at the core of the teaching and learning experience" [10] with learning activities that encourage deeper involvement with the content and the total course experience. Just a Gropius strove at the Bauhaus to "bring together all creative effort into one whole, to reunify all the disciplines…as inseparable components of a new architecture" [11]; this course also strives to engage the students in multiple disciplines and learning activities to create a unified learning experience. The learning activities fall into one of three categories: projects, lectures, and feedback.

3.1 Projects

The structure of studio-based learning is "immersive where open problems are visited iteratively" and are centred on "hands-on, project-based" activities. The project is a "block of learning that explores: issues, context, theory, practical skills, design skills, personal communications skills, industry, technology, research and literature" [10]. In this studio course, the projects are to create presentations on contemporary or historical designers that student's research, prepare, and eventually present to the class. These projects are open to their interpretation and cover a variety of information and insights, depending on the specific designer. Students are provided with presentation guidelines, but they have the freedom to build their presentation, and resulting in-class lecture, as they see fit.

These guidelines define three components of the presentation: content, execution and a class handout. For presentations on historic designers, content guidelines include personal information, a timeline and period attributes of the work to be discussed, the designer's key influences and 15-20 quality images of key pieces of work. Students are also expected to be able to lead a discussion regarding the designer's point-of-view or the philosophy that drove their work.

The execution guidelines consist of (a) a presentation time limit of 15 minutes; (b) an electronic copy of the presentation, properly titled with the presenter's name and the name of the assigned designer, to be transferred to the professor's computer; and (c) most importantly, expectations for professional presentation delivery. Expectations for professional quality include evaluating questions, such as: did the narrative flow well, was it rehearsed, were notes prepared and used, were quality images selected and sources cited, were class questions and discussion managed well, and was the presenter engaging, thoughtful, and an expert regarding the assigned designer?

Each presenter is also expected to provide the class with a single page handout composed of 250 words, explaining the basics of the designer and their unique point-of-view, and including two images of their work. This handout should reflect the intellectual content of the class presentation. It is to follow a prescribed format, which the students then keep in a three ring binder. This provides them with a design history book of formalized notes at the end of the course.

The students are each assigned two or three historical and contemporary designers to research during the semester. With approval students are free to exchange an assigned designer with one of their own choosing, or exchange designers with other students. The presentation projects are intended to "provide realistic and relevant contexts which encourage ownership and voice in the learning process" [10]. In this case, students teach a classroom of their peers about a designer they know and understand.

3.2 Lectures

The class period length is one and a half hours and typically begins with a presentation on one contemporary designer, followed by two or three historical designer presentations. The historical designers are paired together by period or common philosophy and, where practical, joined by a contemporary designer who either reflects or contrasts with their work. For example, one class period would start with a presentation about Piet Hein Eek, followed by presentations about Jacques-Emile Ruhlmann, Eileen Gray and Donald Deskey a few key Art Deco designers. These presentations lead to an in-depth discussion of the value and use of materials, the Art Deco designers push to use extreme

and rare materials, while Eek is recycling materials to create his designs. This naturally leads to a discussion on how the students themselves view materials: could they remake some of their personal projects from a "material" point of view and create viable or perhaps even more engaging alternative solutions?

This is significantly different from other typical entry-level art history lecture courses that review dozens of designers in a class period. Covering fewer designers in greater depth helps the students to understand why a period or a specific work is meaningful. An important part of the presentation preparation is to understand the differences between *why* and *what* knowledge and questions. This course focuses on learning to uncover the philosophical point-of-view of the designer and how that drives the meaning and cultural significance in his or her personal work. While dates and facts are part of the presentation, the message and following class discussion should focus on 'why' the designer's work is notable.

As an assigned lecturer for the day, the students are at the core of teaching and learning during that class period. They are publically recognized for their activity in exploring, researching, and discovering knowledge and for their presentation skills. They are also actively engaged in creating and maintaining the quality of the class. The instructor's role in the class is no longer to recite, but to help organize and facilitate as the student projects and presenters take centre stage. The instructor is also positioned, as an audience member, to ask leading questions to direct the class discussion.

There was initial concern that the students would not cover in their lectures the standard material that the average professor would cover. This has proven to be an ungrounded fear; overwhelmingly the students cover enough of the desired material, and sometimes more. When a student has underprepared his presentation, the instructor has the opportunity to review the responsibilities of the student to perform to his best for the class. The instructor should also have PowerPoint slides prepared and easily accessible to fill-in any critical missing points from the absent or underprepared student presentation.

3.3 Feedback

Providing student feedback comes in two different forms, immediate/informal and deferred/formal. The first method, immediate and informal, is the most rewarding to the student presenter. It occurs when questions and comments come from the audience during and immediately following the presentation. The amount and quality of discussion the presentation creates with the class is typically reflective of the quality of presentation. It also "provide[s] opportunity for authentic assessment by assessing not a number of facts or concepts that are memorized and reproduced under examination conditions, but the learners ability to use and apply the knowledge acquired… in the types of settings and situations where it is ultimately destined to be used " [10].

Students also receive deferred formal feedback from the instructor on their presentations. Within the week of their presentation, the instructor reviews their submission on the learning management system (LMS) makes more in-depth comments and provides them a grade. While there is no formal scoring rubric, the instructor responds intuitively to the strengths and weaknesses of each student's presentation. To try and standardize the content, style, and method of presentation would be counter to the goals of a studio class and not entirely suitable for permitting individual adaptation and style.

4 RESULTS

By implementing a studio–based approach to teaching design history, there have demonstrable improvements in the course. Student engagement in class has increased as has the apparent quality of their learning. Student reviews and course ratings have also increased in positive responses and scores.

4.1 Increased engagement

One of the more exciting results of moving to a studio-based model is the observable change in student engagement. Rather than a class full of passive, dozing students, the students are actively listening to the presenter. Because the ownership of class time is transferred to the students, students appear to be more invested in what they both put into and get out of class. There has also been a shift in the balance of insights shared between the students and the instructor, with the majority of thoughts shared by students, rather than the instructor. Another demonstration of engagement is when a kind of

competition emerges between some of the students, to see who can outperform the others presentations.

4.2 Improved quality of learning

The quality of learning in the course, as demonstrated by student work and discussion, has also improved. First, students themselves appear to be more concerned with the quality of work they submit in the class than they were previously. While this may be a natural result of more public work (i.e., their work is viewed by the entire class), this has made students more deliberate in their choices and better prepared. Second, the depth of comments and discussion in class has also improved. More and more, students have moved their focus from the 'what' to the 'why,' concentrating their discussion on what a designer's work means to them as designers, rather than on facts and stats. Third, student discussions and presentations show an increasing understanding of good design; that it is not a mystery or a stroke of luck, but that it can be deconstructed and understood. Finally, and most importantly, students have also demonstrated more critical reflection on their own design work and how it fits into either contemporary or historical trends.

4.3 Student reviews

The student reviews from the first year of teaching this course, in lecture-format, were brutal and eye-opening. For example:

> "I think my expectations were too high for this course. Lectures were boring and tests were not reflective of learning…"

However, more recent student reviews reflecting the studio-based approach show a significant improvement. For example:

> "Professor Howell is an exceptionally rare and talented professor. He is very passionate and outgoing, and tries his best to constantly challenge and help students succeed. Inspirational and motivational, I feel like going to his class is a privilege and I try to just be a sponge and absorb everything he teaches."

Along these lines of thought, students have repeatedly expressed interest in a second semester of this class and in their senior year exit interviews with the program chair have reported on the positive impact this course has had on them.

4.4 Student ratings

Student rating evaluations from the first year for this course matched their reviews; scores were poor, a full 1.5 points below the university average on an eight-point scale.

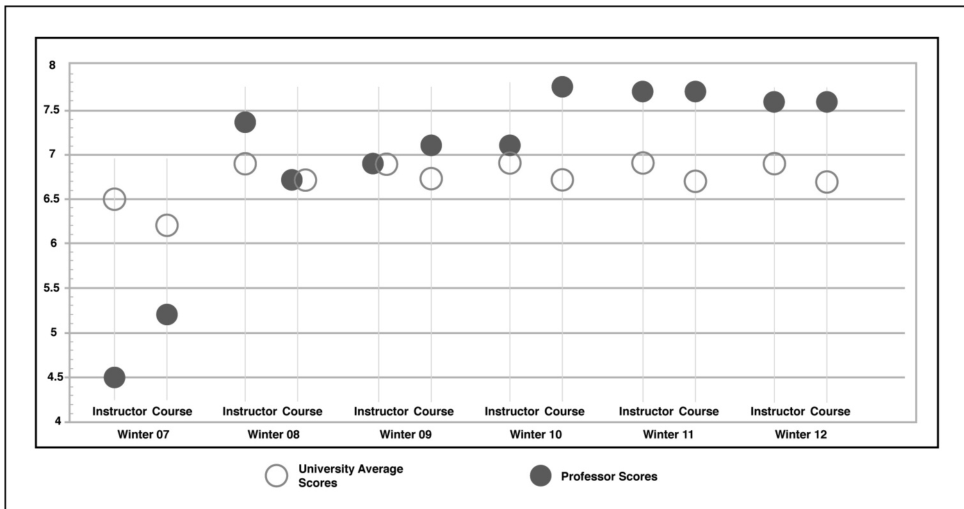

Figure 1. Course and Instructor Student Evaluation Scores over 6 years

The second year, after shifting partially to a studio-based approach, the evaluation scores increased to a half point above the university average. Based on this encouraging progress, the course fully embraced the studio-based approach and, by the fourth year, evaluation scores were 1.5 points above the university average or just below a perfect score of eight (Figure 1). Per the numbers, the shift to a more engaging, studio-based approach successfully transitioned a poorly rated course into a highly rated one.

5 CONCLUSION

Moving a traditionally lectured-based class to a studio-based class at first seemed unrealistic. In the end it has proved to be not only feasible, but an outstanding choice. The students learning, engagement and enjoyment has moved from below average to above average as measured by evaluation scores and individual comments. The professor is no longer a taskmaster pushing a topic, but rather, a valued mentor guiding a positive learning experience.

However, this is not to say that the transition was flawless and the experience revealed some practical and methodological challenges. First, the approach adopted in this course is not a strict studio model. Due to both the nature of the content and availability of critical resources outside the classroom, a classic studio-model may not have been as effective. Second, the challenge of evaluating and assessing student performance continues to be a challenge, as student presentation styles and choices result in a variety of different, but equally effective presentations. Third, the demand for technology use for the presentations has increased the amount of technical issues faced in class, which can consume valuable time. Resolving these issues, or finding processes for preventing them, will require further experimentation and adjustment.

Overall, however, a studio-based approach has offered the students a better, and perhaps more lasting, learning experience. And while the assumptions made by the young historian mentioned at the start of this paper regarding the qualifications of an industrial design professor teaching a history course are still likely correct, one could argue that these designers do, however, qualify to convert a design history lecture-based course into studio-inspired one with success.

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