

DESIGN STUDIO IN MANAGEMENT EDUCATION TEACHING UNDERGRADUATE STUDENTS THE VALUE OF DESIGN

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1. INTRODUCTION

As industry is beginning to recognize the importance of cross-disciplinary teams, it becomes more relevant for the members of the various disciplines to appreciate the value each member brings and for there to be an environment of mutual respect. While many existing design firms already have a well-established culture that promotes the value of integrated team work, many industries are just now experimenting with how to change their corporate culture that has historically been segregated by hierarchy and discipline. It is challenging enough to change the corporate culture from within besides needing to guide new hires away from the antiquated culture towards the newly integrated company. This is especially challenging if the new hires are educated based upon the same premises as the senior members of the company and therefore readily adopt divisional and hierarchical perspectives as acceptable and the norm.

The fight against hierarchy and disciplinary segregation is even more challenging if incoming management does not understand nor appreciate the value of integrated teamwork. This is especially true in a company that intends to find success through a creative environment. While there are a few graduate-level management programs within the United States that provide a reasonably balanced view of corporate strategy, the alumni of these programs are handicapped by their pre-graduate school education, their prior work experience, and the pervasive culture that supports oligarchical rule within organizations. There were no undergraduate management, or business, education programs in the United States that intentionally prepared their students to thrive in an interdisciplinary, creative environment; though a few programs like this do exist overseas, most notably in Scandinavian countries. The School of Something at Generic University saw a unique opportunity to build on its already outstanding reputation for undergraduate management education in a liberal arts setting by purposefully creating a program that redefines student expectations for work environment. Much of this was conceived through consultation with creative alumni, industrial design faculty at other universities, and in response to a noticeable cultural shift towards prioritizing design.

The School of Something program, named *Blah, Blah, and Blah (BBB)*, focuses on preparing entry-level managers for creative industries, especially design (Reference). In addition to traditional undergraduate management coursework, the students within the program have to take eight major-related courses. One of those courses is a semester-long design studio, a unique experience and educational opportunity.

2. THE BBB PROGRAM

At its highest level the BBB program seeks to change the way a stereotypical management student perceives and responds to the world around them. It fosters within students a deep appreciation for the interdisciplinary roots and connections among creative and technical design, marketing, and innovation. Moreover, the program enhances creative thinking and acting. In addition to gaining a better understanding of how their surroundings are constructed, students cultivate a habit of trying to envision how their world can be improved. Students also learn quantitative, empathic, interpretive, and visual methods in order to assess the relationships between consumers/users and their environments, with a particular focus on remedying unmet needs and filling gaps between current and ideal circumstances. As they learn more about the overall design process, students also have the opportunity to practice techniques such as role playing, sketching, creative narrative, prototyping, and simulation, which help them to transform ideas into reality.

That said, the BBB program is not divorced from the goal of educating managers. Faculty are well aware that they are not creating designers, but managers that have a deeper understanding of and appreciation for design. The BBB program exposes students to the orchestration, design, logic and strategy underlying organizations' key marketing and management practices. It highlights the complex interplay that takes place between market research/analysis of consumer-product relationships and the strategic management of the marketing mix or brands. Students enrolled in the BBB program augment their core understanding of management functions with an interdisciplinary examination of some of the creative, analytical, and technical processes that combine to generate ideas and transform them into images, products, and services which powerfully shape our culture.

3. VALUE OF DESIGN STUDIO

Before the reader continues they should remember that this is a required design studio course for *undergraduate management students*. This strongly implies that the students have a broad range of creative experience and skills before taking this course. Some have had no exposure to creative activities since kindergarten other than the introductory course for the BBB program and some already have significant learning and experience in graphic design and the arts. All students have previously been exposed to the design process through a semester-long project and various readings (Aspelund, 2006; Gelb, 2004; Kelly, 1995).

As with any well-constructed course, the learning objectives are clearly established from the beginning. This course is designed explicitly for 3rd-year management students within a creative-focused program. While the studio may have much of the same structure and characteristics as a typical industrial design studio, there have been modifications to accommodate the unique student composition. Each of these goals lend themselves well to a studio-based environment and are discussed individually though they often work in concert.

3.1. FOSTERING PROACTIVE LEARNING: EXPLORING, DOING, AND REFLECTING

In general, our industrialized education system has only trained students to respond, or react, to explicit learning stimuli, e.g. "Here's your homework, please finish it." One of the values of a studio course is that students cannot find success by simply responding to requests for work. Since problem formulations are generally ambiguous, students need to proactively seek to define the problem for themselves and sometimes even need to go and find a problem to define. This eliminates passivity in their education by forcing them to engage with the assignment. That alone is not sufficient in that students must then reflect upon the work they have accomplished and determine whether it is ready for presentation to their peers and the faculty. Learning through reflection is strongly encouraged throughout Generic University and becomes a stark reality when students arrive at their first critique.

3.2. GIVING AND RECEIVING CRITICAL FEEDBACK

Very few students are emotionally or mentally prepared for their first design studio critique. But, as students experience more critique they are molded into critical thinkers, improve their empathy for the user, and are better prepared for success in creative organizations. Before the students enter this studio class they have already been *gently* exposed to critical feedback and understand its value in helping to change their perspective and challenge their design intentions. Design studio is the opportunity for the faculty to share unvarnished, though professionally presented, critique of students' design intent, process, and execution. Since many of the students have incredibly limited design experience they often find the first critique to be overwhelming. As the semester continues they become more comfortable with accepting critique and move toward providing effective critique for their classmates. While critique from the students is generally high-level and somewhat myopic, the realized benefit is an environment where they are comfortable enough to challenge themselves and each other.

3.3. LEARNING BY DOING THROUGH HANDS-ON WORK

While most of the current industrialized education system focuses on learning through verbal methods it is known that there are many other effective techniques for learning that may better address student learning preferences (Felder and Silverman, 1988). Kinesthetic and visual learning are generally neglected despite being the preferred learning strategies for 95% of the population. Design studio does not eliminate all verbal learning experiences. In

fact, the students are required to read and provide verbal communication. The difference is that verbal learning is now incidental and not the primary mode. Students are expected to explore with their hands, either through creative exercises or in the conceptualization of designs. From the first day students are expected to build, make mistakes, build more, and progress in their learning by doing. Just like critique, the students initially struggle with something that is unfamiliar and uncomfortable. But, as the semester progresses they embrace the challenge of working with new materials, pushing the bounds of what they can model and prototype. Within that they develop an unconscious expertise with physical tools and techniques that were previously foreign to them.

3.4. ENCOURAGING CREATIVE AND NOVEL THINKING AND DOING

Students in design studio have previously been exposed to creative exercises and methods for challenging their assumptions and looking for novelty through techniques like child's-eye. This course provides the opportunity to foster within them a design attitude, which is quite rare in management curricula. Through projects and critiques the faculty challenge them to apply the learning from their consumer research classes to better understand their users and stakeholders. The students are pushed to synthesize large amounts of information to better define the design problem and creatively push towards novel solutions through exploration and conceptualization.

3.5. SCOPING A PROJECT AND MEETING DEADLINES

Much of the activity described above occurs within the context of a semester-long project. The students are given an initial 1-week individual project which helps to orient them to the novelty of a design studio class. On the second week they are introduced to a team-based real-world project that they must see through to the end of the semester. Typically, this project comes from an outside source that provides general problem definition and expectations for results. The faculty help the students scope out, through the structure of the course, what needs to be accomplished and how to successfully meet the deadline with appropriate deliverables.

Since this is not exclusively an *industrial* design studio, the semester project can take about any form. For example, in the spring semester of 2014 the class was challenged with the need to better integrate the local Rail Trail with downtown. This provided a very open-ended design problem that needed to consider a large number of factors from many different perspectives. The faculty serve as project managers but primarily push the students towards independence.

3.6. BEING INTRINSICALLY ENGAGED

Lamentably, one of the biggest challenges of higher education is that many students have been trained to only respond to extrinsic stimuli, i.e. grades. Design studio can be conducted in a way that discourages purely extrinsic motivation. Working with their hands, regular critique, and creative endeavors all flourish despite the lack of alphanumeric feedback. Students are not left without direction. Regular verbal critique and visual feedback from the faculty provide the students with a clear understanding of the expectations for the course and push them towards intrinsic motivation. Working in groups provides additional pressure due to peer expectations for excellence. Finally, the competitive collaboration inherent within a design studio that operates with multiple teams pushes the students even further (Toulis, 2011). All of these little pushes and bumps result in students gaining respect for their own work and becoming excited by the potential for their ideas to be realized in a fully integrated design. As students perceive their classmates pushing ahead and witness the positive response from the faculty, they too continue to push beyond their self-imposed limitations while recognizing that the design studio is a safe environment in which they can experiment, explore, test, fail, and iterate.

3.7. GAINING UNDERSTANDING AND RESPECT FOR THE DESIGN PROCESS

Since this is a design studio course for undergraduate management students, it is likely that this is the first and last design studio course the students will ever take. While the BBB program does not graduate designers, a few students may go on to pursue graduate degrees in design fields but most will likely move onto an industry of their choice where they will work as an entry-level or mid-level manager of a creative team. Some students pursue entrepreneurial ventures and others find their dream job in a design consultancy. Regardless of where they land, it is expected that all graduates of the Blah, Blah, and Blah program at Generic University will have regular interactions with designers, whether industrial, graphic, interaction, fashion, or others. It is expected that this

design studio course builds within the students a deep empathy for the design process, its challenges, and the difficulties that often face designers. This empathy is probably the most important result of management students taking a design studio course. Yes, they can now properly sketch an idea and can quickly build a model. More importantly, they understand how long it takes to do good design and how exhausting (and energizing!) it can be. As managers they will be more likely to set realistic expectations for their team and better defend their team when communicating with upper management and clients. Hopefully, many of these students will climb up through organizations while influencing the culture along the way. Maybe they will even tear down the walls that separate the disciplines and remove the hierarchy that inhibits innovation, creating for designers the environment they need to be their best.

4. LAYOUT OF CLASSROOM

Given pedagogical and physical constraints, the design studio was constructed to be a primarily standing classroom (Figure 1). Standing height work tables line 3 walls of the studio providing the students with 18 individual work spaces (Figure 2). Each work area has a 3' by 2.5' work surface, a raised shelf for storage, an adjustable LED desk lamp, at least 4 grounded outlets, and a stool for sitting (Figure 3). Incidentally, the first task of the semester is for each student to create their own storage caddy for their design implements. This is especially challenging since this studio has to be shared between two classes. Additionally, there are two 8' by 3' work tables in the middle of the room. This is where teams can conduct group work, larger prototypes can be built, and critiques are conducted. There is additional storage cubbies for book bags, other tools, and materials. There is a digital projector and screen for showing related videos and there is plenty of natural and artificial lighting.



Figure 1. Students working in the studio.

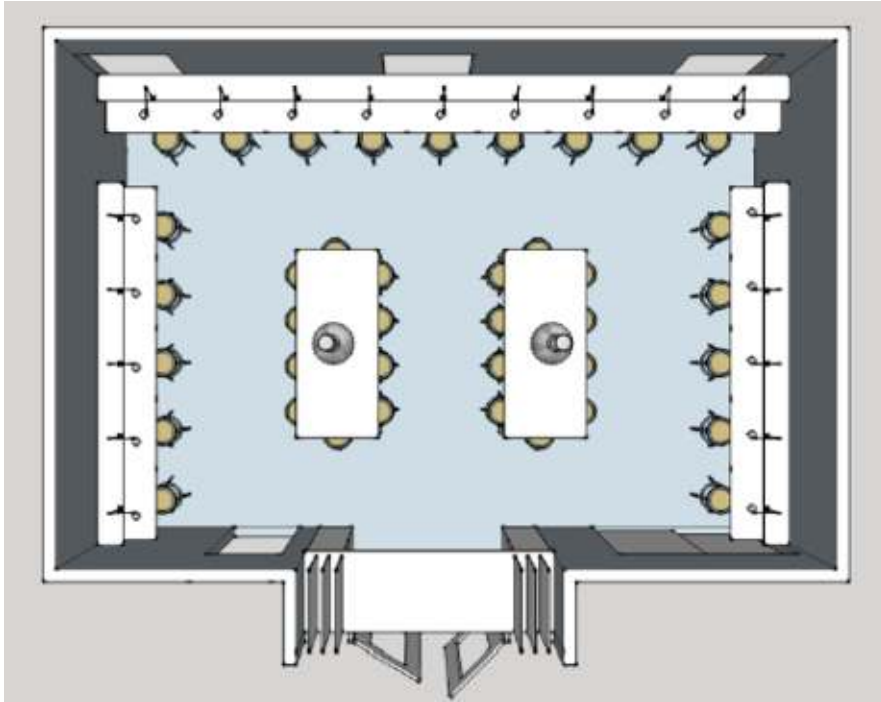


Figure 2. Room layout for initial studio design.



Figure 3. Individual work area within the studio space.

Unlike many industrial design studios, this space is primarily used just for studio class and class related projects. It may be due to culture, but the students tend not to use the space for non-studio activities. The drawback of this

is that the sense of community among the students is still weak despite purposeful activities within the studio, like weekly afternoon appetizers on Thursdays. The positive is that since the studio has limited space and needs to serve 36 students, it prevents there from being too much overcrowding. In the future, this course will need a much larger studio to accommodate all the studio students and an active community.

5. STRUCTURE OF CLASSES

The design studio is taught once per week in a 4 hour session. Again, this is the first, and likely only, design studio for most of the students and they are often initially overwhelmed with the unique structure and environment. Therefore each day is designed to be dynamic and engaging, providing sufficient time for rest so that student engagement remains high throughout the 4 hours.

Since many of the students are still being introduced to visual thinking, each class starts with a visual exercise that is 30 minutes to an hour long. These vary widely from sketching exercises to sculpting with PlayDoh to exquisite corpse. Regardless of the exercise, the intent is to improve their visual thinking while shaking their mode of thinking from any previous activity like a lecture or lunch.

Once all the students have mentally positioned for studio, the class spends the next hour focused on the new task of the day. If starting a new part of the design process, a reading is usually discussed. If a new tool or technique is required, a lesson is given with an immediate short project to be accomplished that provides an opportunity for the students to practice and learn through doing.

Typically, a break is taken at the half-way point of the class, giving the students (and faculty) time to rest and recharge. Upon returning from the break the students are usually given the next step to consider with their design and told to work on it with the expectation that they will spend the rest of the class focused on the task at hand. Generally, the bulk of each class is the students learning by doing, working on their design projects, and receiving casual feedback and suggestions from the faculty. The expectation is clearly stated in the syllabus, though not always clearly understood, that the students will require significantly more time outside of class than most of their other classes. Throughout the semester the students learn what the workload expectations are for a studio, another means to build empathy for their future colleagues from design.

In almost every class there are individual or team assignments due. Early in the semester critique of individual assignments is conducted primarily by the faculty. As stated in the previous section on the value of critique, this slowly changes to incorporate critique from classmates and moves toward critique of team work by other teams and the faculty. Students are expected to reflect upon and clearly respond to all critique by the following assignment. This purposefully builds comfort with critique. This is necessary due to the fact that their final design presentations, and often mid-semester, are given before actual clients with a vested interest in their designs.

Each class concludes with a reminder of the learning accomplished that day and the tasks that need to be accomplished that week. On occasion, some tasks have intermediate deadlines which helps to encourage the students to engage throughout the week with their designs in the studio. The faculty have offices in the same hall as the studio and make a habit of regularly stopping by the studio to provide feedback and casual critique for the students. While minimally effective so far, this helps to engender a studio culture in a traditionally lecture-based learning environment.

6. CONCLUSIONS

All too often designers in industry are frustrated by colleagues that do not appreciate the unique value designers bring to projects nor appreciate the challenges that designers face. Some designers are positioned to manage other designers, either through additional courses of study or through organizational learning. But more often than not, managers have no design experience and cannot easily empathize with designers. Rather than continuing to educate undergraduate management students in preparation for hierarchically and disciplinarily segregated organizations, the Blah, Blah, and Blah program within the School of Something at Generic University has chosen to prepare its graduates to be effective managers of design and other creative groups within innovative organizations. In requiring all students to take a semester-long design studio course, the program ensures that its graduates have a healthy respect for the challenges that designers face each day, an appreciation for the design

process, empathy for the struggle to create great designs within constraints, and a desire to proactively build an environment in which design is a core value of their organization.

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