

ADAPTING TRADITION TO THE FUTURE

THE FUTURE OF DESIGN EDUCATION

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1. IDENTIFYING A TREND OVERLAP

Trends. This short word encompasses a great deal. To a designer, it defines a whole category of insights that are fundamental to good, usable, and innovative design. There are many trends that are obvious, and readily referenced such as color, technology, and fashion, but there are other trends that exist on a macro level, at the juncture and overlap of these other patterns, and one of these, is the trend toward a return to traditional ways. This trend has emerged as a reaction to the complexity of modern life, trying to simplify and re-personalize the way we live our lives. People are starting to farm and garden at home instead of trusting their produce to big box supermarkets. A maker movement has emerged, where people are starting to micro-manufacture products in their homes and garages, bypassing large corporate manufactured goods. Public transportation has been revolutionized by private citizens through peer-to-peer services like Uber and Lyft. AirBnB has returned us to a time of finding lodging in a friendly neighbor's home. This return to privatization, collaborative functionality, and person-to-person commerce, can also be seen in many other areas of society. It is not a stretch, then, to suggest that these trends can, and most likely will, project themselves into the world of design academia. The future of design education could be characterized by this return to traditions, manifesting itself through integrated grade levels and whole department, apprentice-style business relationships, both established within an iterative, technology driven curriculum that teaches design students to design the future.

2. BENCHMARKING CURRENT DESIGN PEDAGOGY

Today's design studio pedagogy focuses on four main sources of knowledge: academic, craft, technological, and sociological (Salama and Wilkinson). The academic segment focuses on composition and design theory. Backed with years of design history, the academic tradition hopes to teach the design student how to "think" like a designer, and creatively and beautifully solve problems. The craft segment is centered around teaching students the building trade, focusing on attention to detail and finish, with "beauty and form as an end" (Salama and Wilkinson). The technological segment is interested in making students fluent in the language of computers, manufacturing, and science, and integrating that knowledge into the products, buildings, or interfaces that they design, in order to continuously evolve our environment. The sociological segment stresses close attention to humane and ecological design, making sure students are aware of the end-to-end lifecycle of their product, and the overarching impact the product will make on the world; both its people and environment.

There is one striking similarity [among these four different design segments, and that is] the overriding primacy given to the design studio as the main forum for knowledge acquisition and assimilation, and for creative exploration and interaction. Such a setting encompasses intensive cognitive and physical

activities, which ultimately result in conceptualizing meaningful environments proposed to accommodate related human activities (Salama and Wilkinson).

This style of education has been long standing, and though it has produced world renowned designers in many industries, it no longer seems fitting to rely on a static and prescriptive design curriculum when we live amidst an adaptive society that is in constant flux and development. Design education must ultimately evolve iteratively like any system, and be redesigned, itself.

3. ESTABLISHING A FIGUREHEAD

The established studio pedagogies have their advantages, but like all systems, they also have weaknesses. Some of these include limiting creativity by evaluating students based on antiquated principles, establishing solutions as “right” or “wrong,” and depriving students of real-world practical experience. Today’s design curriculums are starting to solve these issues by integrating co-curricular projects that not only break down some of the limitations, but also give us ways to experiment with, and design, the design education process, itself. One particular example is Purdue University’s 48:2 design challenge, that spans the forty-eight hour period of a weekend, where all levels of design students come together in cross-functional teams to design solutions for a corporate sponsored design prompt (Figure 1). This event provides excellent design experiences for students of all levels. The older students benefit from leading the team through the design prompt. They learn to delegate responsibilities, relinquish design control, manage time effectively, professionally collaborate with business representatives, and many other professional skills. Conversely, the younger students learn and obtain new technical skills such as CAD, sketching, prototyping, and team collaboration, as well as experiencing what a professional design prompt may include (Figure 2). This annual event is the only opportunity students get to experience this type of collaborative and multi-level environment, and is their only chance outside of a professional internship, to partner with professionals on real world projects. These experiences benefit students because it prepares them for real world situations and limitations, and provides opportunities to experiment with creative solutions that are subjective to the business professional critiquing them, and not the established theoretical principles to which design pedagogies would hold them. Students are able to acquire insights about how design choices, human behavior, and subjectivity relate to business decisions, and how those decisions are not always linear.

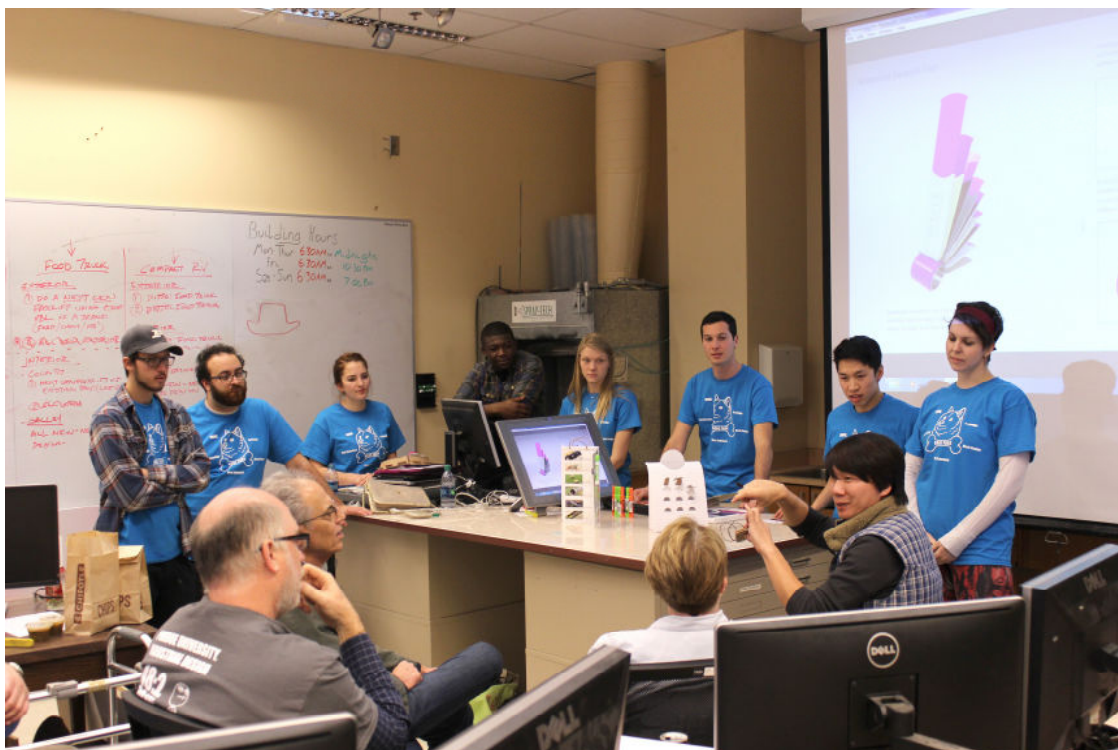


Figure 1. Company representatives review multi-level student designers as they present product concepts and mock-ups.



Figure 2. Students learn craft and collaboration in order to make final prototypes for a professional design prompt.

4. A RETURN TO PAST METHODOLOGIES

This type of design challenge is successful because it returns to a form of education that has long been forgotten or passed over. Firstly, this event eliminates age segregation. This practice was introduced between 1848-1870 (McClusky), and according to Joseph Allen, “Researchers have suggested a variety of benefits of mixed-age

interactions. Such interactions can provide the older children involved with the chance to practice assertive and help-giving behaviors and to develop self-confidence. (Allen). Secondly, it returns modern day students into the apprentice-style of learning, by connecting them with professionals and professional projects on a departmental level. This type of traditional methodology for learning practical skills was an effective way for producing skilled tradesman without a tedious transition period for the student to adapt to a working environment. Incorporating this mechanism on a departmental level establishes a realistic knowledge and expectation of what will come after school, that is not present in today's academic microcosm. These traditional methods, then, in the context of a technology savvy society, as a methodology, allows for creativity, skill acquisition, and rapid testing of hypotheses and design solutions, not only nurturing design education within the students, but ultimately creating experimentation within the design education model.

Technology provides us with powerful tools to try out different designs, so that instead of theories of education, we may begin to develop a science of education. But it cannot be an analytic science like physics or psychology; rather it must be a design science more like aeronautics or artificial intelligence. For example, in aeronautics the goal is to elucidate how different designs contribute to lift, drag, maneuverability, etc. Similarly, a design science of education must determine how different designs of learning environments contribute to learning, cooperation, motivation, etc. (Collins).

The future of design education, should not only instill practical industry knowledge and skills for the student, but it should also be implicitly iterative, incorporating the new "conceptual framework" (Fischer and Giaccardi) of meta-design in order to continuously design and improve itself.

Meta-design is an emerging conceptual framework... [that]...extends the traditional notion of system design beyond the original development of a system to include a co-adaptive process between users and a system, in which the users become co-developers or co-designers. It is grounded in the basic assumption that future uses and problems cannot be completely anticipated at design time, when a system is developed. Users, at use time, will discover mismatches between their needs and the support that an existing system can provide for them. These mismatches will lead to breakdowns that serve as potential sources of new insights, new knowledge, and new understanding...In a world that is not predictable, improvisation, evolution, and innovation are more than a luxury: they are a necessity. The challenge of design is not a matter of getting rid of the emergent, but rather of including it and making it an opportunity for more creative and more adequate solutions to problems.

This meta-design can be executed via feedback from students. Older students will grow into the role of mentor and educator, and as such will develop their own methodologies for teaching design. Those methodologies that prove to be successful will then naturally be adopted into the curriculum, thus evolving it intrinsically. Younger students will provide every-ready usability testing, as well as insights into why certain methodologies succeed or fail. Professors and instructors will secure the role of moderator and coordinator, ensuring that these practices are recorded and used to their utmost advantages. It follows then, that creating an apprentice-style education for an entire design department, operating closely with a single industry sponsor, or many, while eliminating grade level segregations, is a clear path into the variable and co-adaptive environment that is perfect for catalyzing meta-design. Who best to design, "design education", than designers? With corporate and industry sponsors working on real-world projects, hand-in-hand with students and staff, the problems that would emerge within a business, or within an educational model, now cohabitate, and can be solved simultaneously, with their correlations, similarities, and consequences in clear sight. This is an ideal environment for analyzing and

optimizing educational methodologies, along with breaking down barriers between the vacuum of academia, and the industry for which students are preparing themselves.

Further thought may reveal crowd sourcing as a worthy alternative instead of corporate apprenticeships. This is also a viable option for a successful design curriculum. This type of infrastructure could revolutionize the way curriculums are built. Picture an open source design curriculum that is built on the lessons and words of professionals and enthusiasts. Students would have more resources than ever before within many disciplines (design as well as parallel industries), and naturally build up a network via communications with the publishing authors, organically creating opportunities for jobs and internships. Another advantage is that crowd sourced contributors have different motivations than corporations. They are looking for products that have greater usability, delight the user, and are generally philanthropic participants, whereas corporations' main motivation is money. This distinguishing motivation would serve as the source for the actual products and projects that the students work on throughout the school year. Scenarios like Quirky, or GE Appliance's First Build come to mind as examples of how projects could be submitted and then "joined" or supported by students. There could be several crowd funded projects being worked on simultaneously. This infrastructure throws the student straight into the position of novice entrepreneur, readying them for the business world in which they will one day work, with realistic goals, deadlines, and risks. This type of education system would aim to create a pilot peer-to-peer design institute, where students, professionals, and academia come together to gather and share expertise freely. Together they could tackle ambiguous and complex problems, and promote diversity of thinking and strategy.

5. A VIEW FOR THE FUTURE

The future of design education should be as changing and iterative as design itself. Education is not something that should remain stagnant. Like any system, it should undulate with the waves of society in which it exists. Modern times are characterized by a return to an older way of doing things, supported by a technologically advanced infrastructure. So too, should the model for design education look to the past for insights. A removal of grade level segregation, coupled with a departmental apprenticeship-style relationship with a company or a crowd-sourced infrastructure, set up the perfect incubator for creativity, exploration, problem solving, and practical skill acquisition, while allowing students, educators, and industry professionals to learn from each other, through both successes and failures, in order to continuously redesign and improve the educational methodology by which we educate and grow each other.

REFERENCES

Allen, Joseph P., *Social impact of age mixing and age segregation in school: A context-sensitive investigation*. Journal of Educational Psychology, Vol 81(3), Sep 1989, 408-416.

Collins, Allan., *Toward a Design Science of Education., New Directions In Education NATO ASI Series*, Vol. 96, 1992, pp. 15-22.

McClusky, Frederick Dean, *Introduction of Grading into the Public Schools of New England, Part II*, The Elementary School Journal, Vol. 21, No. 2 (Oct., 1920), pp. 132-145.

Salama, Ashraf M. A., and Nicholas Wilkinson. *Design Studio Pedagogy: Horizons for the Future*. Gateshead, U.K.: Urban International, 2007. Print. pp. 3-5.

Fisher, Gerhard, and Giaccardi, Elisa. *Meta-design: A Framework for the Future of End-User Development*. End User Development. Dordrecht, NL. Springer, 2006. Print. p.427