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Viewpoint

Educating the Designer of 2025

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Abstract
I am not inclined, for several reasons, to believe there are straightforward goals for educators seeking to shape the designer of 2025. The embedded assumption that there are broad similarities among designers is my first worry. I don't just believe that differences are inevitable—I believe in the value of diversity in individual experience and individual points of view. I see thinking through making as vital in my little corner of design, and as valuable resource for educators in general. Thinking through making—once a common way of approaching the world—has largely disappeared, but art and design programs would do well to preserve this important approach. (Note that I am not talking about past designers; much of society dealt with the world as physical stuff to be manipulate.) To some extent, the popularity of design thinking has demonstrated the value of a variety of thinking through making. Much of the conversation around design thinking assumes that the future of design is in the tackling of larger, more complex, and often immaterial tasks. While I embrace that, I wonder whether moves toward larger, more complex, often immaterial projects as the center of undergraduate training undermines the learning of the sort of skills we hope designers have.

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The Unitary "Design"

My first hesitation when I was asked to comment on the designer of the near future was the implication that design is singular enough that we can generalize about it. The existence of so many definitions of design and so many design fields suggests to me that there are no traits that the entire field of design should have in common—including primary skills, thought patterns, or educational background. Design is ill-defined and will remain so, not just because we have not considered the question seriously enough but because defining design clearly is a fool's errand.

Much of my experience with teaching design—and much of design teaching, at least in the US—centers on undergraduate university education. I am hardly alone in objecting to the push toward making universities into four-year job training sites. Many design programs are, at least, in a relatively good position to survive university budget cuts precisely because of the promise of directly related employment—and this on top of student popularity, which is not always unrelated to assumptions about employment.

Education and Flexibility

The value offered by a general education goes well beyond preparation for a first job and is worthy of preservation. Additionally, the way specializations have been structured in much employment-focused education, combined with a strong push to increase four-year graduation rates, favors the notion that students should be prepared for the careers they select as they are entering the university. I hope I am not alone in being uneasy about the prospect of a world populated by people doing whatever they thought was a good idea when they were seventeen.

This is not to say that focusing studies on design inevitably makes one fit for specific design practice and nothing else. The discipline and thinking of design, the experience of looking at things from others' points of view, and the belief in solving problems serve a former design student well in a life that doesn't include professional design practice.

In 1994, I wrote about teaching design as the core of a liberal arts education.[1] My intended point was more about saving liberal arts education than about augmenting design education although most people citing the article seemed to read it as the latter. My thesis was that the old definition of "an educated man" (to use the old-definition gendered terminology)—someone who has learned all of the stuff that "educated men" know—had long since imploded under the weight of too much stuff for anyone to know. The result has been a series of categorical selections standing in for the impossible "all of." We then ask teenagers to make sophisticated connections that we fail to make. My article advocated choosing a central interest that connected with social, technological, scientific, and aesthetic subjects, then using the theme as a tool to promote connected thinking. (I, not surprisingly, suggested graphic design as a plausible nexus.)

A small move in a similar direction to that approach has appeared in many schools in the form of classes for specific majors. I was on the advisory board of an animation program many years ago; they had a "physics for animators" class that presented Newtonian physics in terms of animation techniques. That solved the problem of animation majors chafing at a science requirement for their degree, encouraged them to take breadth requirements seriously, and helped ground their craft. My current university converted their old required writing classes to category-specific classes like writing for the arts or writing for biomedical professions. This is hardly the leap I suggested but it is a step in that direction.

If only because they can believe that most of the specific writing skills they are learning are of actual use in their chosen field, my students seem more engaged in their writing classes than they appeared to be before the changes in the writing program. When the program was first put together, I was worried that it was merely a step in the move toward universities-as-trade-schools but after several years of observing it at a distance, I believe it is a qualified success.

Perhaps its greatest weakness is if one takes the claim of "writing for" at face value. An English department is not likely to be staffed by people with the experience to teach the several forms of writing (promotional copywriting, design project proposals, and letters about past due invoices, for instance) precisely as they are likely to be used in design practice.

Education Supporting Design

Saying that design will be better if designers are broadly educated was not meant to be the main point of my 1994 article but it is no doubt true. I can't think of

anything I know about that has not aided my career as a designer. The design skill that I believe is most important is one I've never really figured out how to teach: the ability to be interested in everything and anything. This is, perhaps, more true in my field, graphic design, than in some other design areas. A primary job of graphic design is the translation of clients' information for consumption by people who are often unfamiliar with the client's specialized world.

I teach in a graphic design program that's part of a Bachelor of Fine Art in art, where the majority of student credit hours are art and design classes—my fears of the demise of general education don't preclude my enthusiastic participation in arts education. When people in the arts defend their relevance in an era of university cutbacks and arguments about whether various sorts of education are "worth it," they often lean on ideas of culture and creativity. I'm all for culture and creativity but the stronger argument for me is one of what might be called cognitive diversity. That is, there is no one right way for all people (or even all designers) to think.

Monocultures are dangerous. A golf course with one particular type of grass will look beautiful and coherent until it meets the one particular fungus that wipes it *all* out. The forest or region with one species of tree will be convenient for foresters until the bug that kills *those* trees moves in. An economy based on one industry can thrive until it can't. It's healthy for every student to be faced with a variety of perspectives and it's healthy for design and society if widely varying approaches are used in different design programs.

My own interest in everything and anything, my desire to encourage my students' interest in everything and anything as a design skill, the realization that different students need different routes into designing, combine with my belief that it's healthy for every student to be faced with a variety of perspectives to contribute to the urgency of providing a variety of views of design. To some extent, that may be near-ubiquitous in design education. Technical, social, communicative, and aesthetic issues can't help but surface in most graphic design classes. I try to make sure that business, historical, philosophical … as many issues as possible are put forth in my classes.

This belief in diversity makes me even more reluctant to promote a singular direction in design education. Students are better off if there is variety in their individual education but design and the world are better off if there is difference among design programs.

Thinking through Making

A, perhaps *the*, main focus of my approach to teaching future designers is intended to foster thinking through making. I believe that thinking through making is a vital approach for the practice of design. Thinking through making shouldn't be the only way people deal with the world (and probably not even the only way people design) but it used to be common and it's now endangered. Art-adjacent design programs, sometimes architecture, and a few mechanical engineering departments may be the last vestiges of a way of considering how things work or could work—a way that is iterative and often physical. It's even fading in most of those places.

How do we teach thinking through making? I tell my students that I could be replaced by a parrot that just repeats, "Make it real. Make it now." (I even have that printed on pencils that we give to all of our new students.) That functions a lot of ways. It means creating as real of a representation as you can of whatever you want to know about at each stage. This approach recurs at every point in a project. It is not limited to designers and designing.

Once students have the basic information about a project, I encourage making as a center for discovery, for communication with others, and as a way to gain a clearer understanding of the topic and the nature of whatever they are designing. In many communication design projects, the first step is drawing. The point of these drawings is not to represent a possible finished design but rather to start a sort of visual vocabulary list to bring the designer face-to-face with a range of issues—factual, tonal, and so on. Through a series of specific exercises, the drawings encourage expansion of the designer's vocabulary and they inspire connections and analogies.

Other types of projects will have different starting points. Years ago, I saw images of people in different positions that allowed the design team and their clients to imagine the feelings evoked, in turn allowing the development of new types of recreational watercraft.

Small depictions allow quick idea development, full scale (albeit possibly crude) depictions allow a better realization of human interaction. Prototypes created to test any given aspect of a design project do not have to

depict the entire final project, just the part the designer needs to understand at any given time. Each success and failure provides new information.

The point of this rapid prototyping is of course to examine the prototype, but the act of creating the prototype allows the designer the chance to focus on issues in a visceral manner. The important point is to make sure that thinking through making actually involves thinking. Much of that thinking happens in a sort of meditation during craft but some involves judgment best made in response to what is made. Judgment during creation can often undermine making.

Some of that thinking is about process. When my graphic design students move from small scale compositions on tracing paper drawn over a scale version of the project grid to full size computer generated compositions, I routinely tell them to print their pages at the scale of their thumbnail sketches then go back to drawing small so they have a tool for better imagining what happens when their now-tangible ideas are scaled up and made real.

Is This Broadly Applicable?

I believe this approach is applicable to a wide range of design specialties but I make no claims of universal applicability. I'm unconvinced by the idea that there is a singular broad field of design. Many who would object to my claims about the value of thinking through making will see my approach as old fashion and hopelessly mired in archaic craft traditions. Many would see all of this an overly narrow vision.

This wider vision of design positions the important and exciting future of design within the context of larger problems with solutions that are divorced from artifact creation. Without relegating work associated with artifacts to the unimportant and boring category, I agree that there are many pressing problems that design methods might help.

Designing for Complexity

I certainly won't argue with those who point out that many designers will be dealing with more complex problems.[2] (I will also point out that many won't—I will also acknowledge that simpler tasks at least *seem* more vulnerable to automation.) I have doubts that grand visions about remaking large systems offer design employment for more than a few, but the appeal of enabling a new generation to remake the world is undeniable.

Introducing students to larger-scale projects promotes systems thinking, teamwork, and a broad view of the applicability of their newly acquired skills. Larger scale and team projects should be standard. Team projects require supervision and participant reflection to avoid the impression that group work is some sort of *Lord of the Flies* reenactment.

I'm not convinced by the idea that an undergraduate education can be a real preparation for the design of gigantic-scale design projects, however. Failure and refashioning, repetition and iteration—all are central to learning to design (at least my corner of design). By repetition, I mean using the knowledge created by designing something as a basis for starting over and designing it again; satisficing may be inevitable in some projects but it is not good training for optimizing design abilities.

Training new designers to tackle projects that are massive in scale and complexity within the limited timespan of an undergraduate education wouldn't seem to allow for the experience of seeing their work fail and learning the lessons of that failure. Others may have a clear vision of how to train students to deal with massive complexity and handle broad issues in the short time we have them—I look forward to seeing details. In the meantime, preparing the new designers of 2025 to live and learn in 2025—ready to participate in a more modest level of design—then having faith that they will invent the design of 2035, 2045, and 2055 may satisfice.

Notes

1 Gunnar Swanson, "Graphic Design Education as a Liberal Art: Design and Knowledge in the University and the 'Real World,'" *Design Issues* 10, no. 1 (1994): 53–63, DOI: https://doi.org/10.2307/1511656.

2 For example, see Meredith Davis, "Trend 1: Complex Problems," *AIGA*, accessed February 12, 2020, https://www.aiga.org/aiga-design-futures/complex-problems.

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