

Planting the E-Seed: Entrepreneurial Careers for Next-Gen Industrial Designers

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Abstract

In the world of design education, students often have strong ambitions to become entrepreneurs in capacities ranging from self-employment to manufacturing their own products. Educators arm students with tools they need to become competent industrial design professionals, but fall short of readying them for opportunities in entrepreneurial ventures. This paper focuses on curriculum components, new to our design program at the University of Cincinnati, that prepare students for opportunities in self-employment and other entrepreneurial activities. These components enable students to hear real-world case studies and apply them to their particular aspirations. The end goal is to arm students with knowledge and foresight when pursuing entrepreneurial careers or when an entrepreneurial opportunity arises.

Developing an Entrepreneurial Mindset

For the past several years, entry-level industrial designers have had to adapt to major changes in the field. In the late 80s, we converted to CAD and digital imaging software, and with that transition came the necessity to continually learn new software and its updates. With recent evolutions in international outsourcing and advancements in communication technology, there is a greater demand for all of us to think more globally. Devices such as Cintiqs are replacing even our most basic tools, the pen and paper. Along with these technical and skill adaptations, entry-level designers now have to battle the realities of an economy that is trying to recover from a business climate the US has not seen since the Great Depression. While all of this can seem daunting to new designers, these obstacles have the potential to unveil opportunities no other entry-level industrial designer has seen in the field's history. The opportunities, I believe, lie in entrepreneurialism.

As in current and past generations, students of industrial design are equipped with skills that enable them to conceptualize and present product ideas that are aesthetically pleasing, intuitive to use, and make sense to manufacture. What is different from past generations is the breadth of knowledge current students are being taught in class and learning on their own. Online resources have been an overwhelming factor in gaining this knowledge. The internet has made it possible for designers to be experts in "just in time" knowledge gathering. They are at home with Skype-like communication technologies that enable them to collaborate across town or around the world. This generation is also deep into social networking and the self-promotional capabilities it offers.

In most cases, this information is nothing new. However, how one chooses to use it has the potential to be a significant stimulus for change in this profession. The change comes in the form of opportunities designers have when entering a career in industrial design. While traditional design positions will still be there, the opportunities for starting one's own venture are becoming options worth investigating. This line of thought might seem intriguing, but how does one do it? Most design schools are organized to prepare students for finding employment with an employer not working for oneself.

Entrepreneur | änrəprə 'noʊr; -'nər | Noun: According to Webster's dictionary, an entrepreneur is one who organizes, manages, and assumes the risks of a business or enterprise. Entrepreneurs live in the future. They have creative personalities, are innovative, and thrive on change.

At the University of Cincinnati's Industrial Design program, I have begun to plant the seed of entrepreneurialism. When I was interviewing at UC, I was asked to participate in their Senior Critique. I was amazed at the quality of work at this event, but more importantly the thought behind the designs. I knew these ideas would help find employment for several students, but what would happen to the ideas, the products, the designs? After being hired by UC, I began to take a careful look at what we were preparing our students to do. Not surprisingly, we are and have been preparing our students to get jobs and to be stewards of good design and social responsibility, as are most design schools in the world. After this review, it was clear that the missing component in our curriculum was entrepreneurialism.

Our university has a robust professional practices program. Each student must continually have an updated resume, cover letter, and portfolio for each of his or her six co-op experiences. In this regard, our students are extremely prepared for employment upon graduation. What they are not prepared for is what to do if an entrepreneurial opportunity presents itself. With this in mind, I began teaching a professional practices course in the spring of 2008. Traditionally this course was taught to reiterate many of the lessons learned in co-op experiences. I took a different angle, taking a broad-brush look at the potential for entrepreneurial careers.

On the first day of class, I asked, "How many of you dream of starting your own consulting business or bringing your own product to market?" The response was an 80% hands up. This was very encouraging and has stayed consistent in subsequent quarters. The class was developed to be a ten-week lecture series that focused on the simplest form of entrepreneurialism, freelance design, to the most complex, starting a manufacturing company. In each form of endeavor we have a professional who represents the topic area, attends class, tells his or her story, gives critical insight to the nuances of their business development, and explains what to be aware of before starting one's own venture.

The class kicks off by exposing students to intellectual property law. A UC patent attorney typically conducts this lecture. He or she clearly explains the university's position on IP, as well as that of the outside business community. Also explained is how to protect one's ideas through confidentiality agreements, trademarks and copyrights, provisional patents, and utility patents. Case studies are also presented outlining successes and failures in the realm of intellectual property.

From a design perspective, we begin with the freelance designer. I have two to three designers present their work and business philosophies. They discuss their design and business strategies and uncover the intricacies of running a small business. From these lectures, students begin to see similarities that typically revolve around the business aspect of design. These areas include the power of face-to-face networking,

accurate time budgeting, the importance of solid proposals, and how well-crafted legal contracts can make a project move smoothly even if there are project scope discrepancies. They make it clear that in most cases they can have help with this style of employment. In one case, the designer's wife was his business partner and took care of all non-design-related tasks so he could concentrate on what he does best. From this overview our students become well informed in the basics of freelance design and the nuances that help make a successful venture.

Next we have a presentation from a design consultancy owner who explains how he or she got started, what made them take the leap, how they attracted new clients, and how they eventually grew into thriving businesses. In this lecture, students receive firsthand information on what to look for when embarking on an entrepreneurial venture, what it means to be responsible for paying several employees, and the pressure of finding projects to sustain firms' existence. They also learn how gratifying it is to have taken a risk, grown a company, and seen dreams realized.

After getting a few examples of how people have started their own businesses, local start-up support organizations are brought in to the classroom. These organizations come in the form of business incubators that provide short-term office and studio space to help companies grow, and assist in matching complementary professionals and provide strategic planning for business growth. These partners can come in the form of engineers, business strategists, lawyers, or accountants. Students are informed that many communities have these organizations and are eager to assist in building new businesses to help grow local employment.

Another area we explore is grant writing. This option is typically available for those who have a product they want to bring to market. Our students learn where and how to find start-up capital for new product development. Some of these options come from local and state organizations, while others come from the federal government in the form of grants such as the Small Business Innovation and Research (SBIR) grant program. This is where we begin to bridge into a new area. No longer are we talking about setting up a design service, but rather planting the seed for getting product ideas to market.

Next we have several speakers discuss an option that uses private investor capital. We educate our students on the difference between angel investors and venture capitalists. We explain how these options work, their advantages and disadvantages. Again, this is directed to those who have product ideas and want to start a company based on those ideas.

At the end of the course, we explore the world of product licensing and royalty revenue streams. We have speakers from the corporate side and design side present their views of this process. Our corporate presenter explains how proposals are reviewed, what makes them good and how to find the correct person to approach with ideas. From a design perspective, we have professionals present who are actively working in product licensing. They reiterate the importance of legal contracts, explain how design work is conducted, how payments are made, and what happens when one is sought out to develop a product that will be licensed. Along the way, each side, corporate and design, reinforces the need for confidentiality agreements and legal assistance.

Evaluation and Results

For knowledge assessment, I have developed a blog that contains questions based on our most recent presenter. These questions are answered and peer-to-peer discussions evolve from the responses. Each student is graded on their participation and quality of responses as they relate to the thread. I also have students prepare one portfolio project to be presented to a venture group. This exercise shows students that there are differences in presentation content from interviewing for a job to pitching ideas for funding.

On a more holistic view, I am constantly encouraging students think about their senior capstone projects as potential bridges to entrepreneurial ventures. While not every student will pursue an entrepreneurial career, the information obtained, coupled with the traditional design education knowledge, will assist them to be more aware of how the business of design truly works. For those who are passionate about entrepreneurial careers, we have already seen results. In a recent Southern Ohio innovation competition staged by regional investors, students from this class won four out of the top eight awards. These were cash awards directed toward providing the winning inventors start-up capital as a base for their product ideas.

How will this have a significant impact on our field? The following are a few facts regarding the importance of entrepreneurialism in the US:

- According to the United States Department of Labor Bureau of Labor Statistics, of the 136,602,000 workers over the age of 16 in the United States in 2004, 15.1% of them, or 20,673,000, people worked at home (United States Department of Labor 2005).
- A recent Kauffman Foundation study found 71% of registered voters feel entrepreneurial ventures are key to solving the US's economic crisis—more so than big business, scientists, and government (Pruitt and Rohrs 2008).
- The US is ranked 4th in the world in ease of doing business and 8th in starting businesses (www.doingbusiness.com).
- Businesses with fewer than 100 employees make up 99.7% of all employees, account for 39% of all high tech jobs, create 60-80% of the net new jobs annually, and represent 89% of all exporters in the US (NSBA 2003).

These statements point out the importance of entrepreneurialism, our changing work environment, and the necessity of starting businesses. Entrepreneurial growth needs new innovative ideas—ideas that are developed by looking at things differently, ideas that are not only in line with current trends but create entirely new ones, ideas that address true user needs and not only the bottom line. Many disciplines look at these criteria and wonder how? Industrial designers, on the other hand, look at them as a way of life.

From a big business perspective, major corporations such as Procter & Gamble have realized that substantial growth must come from outside their walls. They have implemented a growth system that encourages collaboration with non-traditional innovators. They care little where these ideas come from, as long as they are great innovative solutions.

In our spring quarter we have what is called DAAP Works. It's a week-long event that showcases the college's senior capstone projects. I am working to make this event more than just a showing of student work and more of a launch pad for entrepreneurial adventures. At our last DAAP Works show, we had three venture groups evaluate the students' work and had several students develop their projects around the idea of truly beginning a career in design entrepreneurialism. These students are pushing forward, some with outside help and others on their own.

From class lectures, my favorite, most empowering quote was from Shawn Jackson of University of Michigan and Shawn Jackson Design to the students:

“At this point in your lives you have nothing to lose. Many of you are not married, have no children, no mortgage payments, and not many restrictions at all. Now is the time to become entrepreneurs.”

With that said, we wrap up our course. Again, current graduating students in industrial design may be seeing a tough road ahead, but with new technology and communication avenues, I encourage you to resist locking your magnificent ideas away in portfolios, keep them in the public eye, and don't underestimate the power of your designs.

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