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Industrial Design Graduate Education: Identity Finding

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Background

During the 2005 IDSA National Education Conference, Craig Vogel mentioned that of all the abstracts received for the conference, not one addressed issues related to graduate education within the field. This prompts questions about the current state of, and perhaps lack of attention to, ID graduate education in the United States.

During the 2005-06 academic year, the University of Illinois Chicago embarked on a study to help them define an identity for their (the program has been on a 5 year hiatus, with reinstatement in the Fall 2006) graduate program in industrial design. This was part of a larger study that looked to redesign the MFA** curriculum for their industrial design, graphic design, and electronic visualization program areas. This paper details the results of this study for (1) the positioning of the industrial design MFA program relative to other American ID programs, (2) the personas of future ID students the program wants to attract, and (3) the overall structure and vision of the curriculum as it relates to ID education.

The necessity of industrial design programs to clarify their identities within and across colleges and universities is not just about superficial branding. It is about shaping the strategic direction of the program in terms of attracting and retaining potential students, faculty, and corporate project sponsors. It is also about identifying trends in the overall perceptions of industrial design education in the United States.

Project approach and methodology

The purpose of the study was to gather information from faculty, students, alumni, and employers to be able to develop a concrete curriculum and strategy for the University of Illinois at Chicago industrial design, graphic design, and electronic visualization (i.e. new media) programs centered on the optimized experience of graduate students. Dori Tunstall, the department's resident design anthropologist, conducted interviews with faculty and graduate students in the graphic design, industrial design, and electronic visualization programs. She sat in graduate student admissions meetings for industrial design and electronic visualization. Originally, it was her intention to interview alumni and employers of graduate students as well, but time constraints interfered. In addition, Dori conducted secondary research via professional design association websites, such as AIGA, IDSA, and Core 77; design program websites, industry presentations, and articles on design education. The data resulted in over 700 Post-It notes, which were analyzed through affinity diagramming. (See Figure 1).

** Although the current graduate degree students receive at UIC is an MFA, there is ongoing discussion about whether other designations (MA, MDes, MID, MS) are better suited for their students needs.



Figure 1 Post-It notes on the wall for analysis

The study culminated in a strategic workshop with faculty and representative graduate students from graphic design, industrial design, and electronic visualization. The objectives of the workshop were to:

1. Understand the current experiences of UIC graduate students from the level of the university, college, school, programs, and courses;
2. Understand the position of the UIC programs versus those of competitor schools,
3. Understand who the current and ideal students of the programs are,
4. Come up with internal version of group and programs,
5. Come up with revised curriculum, and
6. Identify ideas and committees for marketing, facilities, technology, and project programming.

Understanding the current graduate student experience

To communicate how UIC graduate students understood the graduate education application process, Dori created an experience model. (See Figure 2). An experience model is an actionable visual representation of users' high-level experiences and/or processes. It was used to focus the attention of the faculty on the graduate student's perspective as the basis for decision-making.

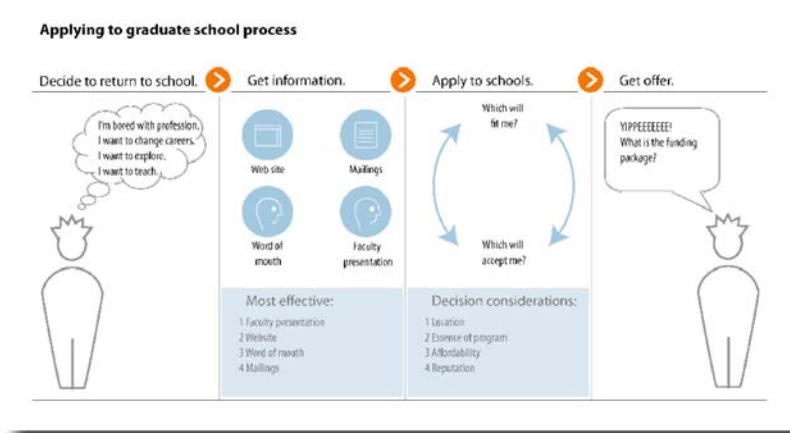


Figure 2 Applying to graduate school experience model

She organized the experience into the four distinct phases of (1) decide to return to school, (2) get information, (3) apply to schools, and (4) get offer.

Decide to return to school

The decision to return to school is characterized by the fact that an MFA/MID/MDes/MA is not a professional requirement in the fields of design, except for teaching. Of the 42 ID programs listed on the IDSA education site, only 23 offer advanced degrees. According to Niti Bhan (2004) in a Core 77 article, "In some cases an advanced degree will enhance job prospects. In others, however, employers may be interested in a strong portfolio, sketching skills and work experience offered by applicants rather than additional paper qualifications." Combining the response from the one UIC industrial design student, with those of prospective candidates for admittance to the program, the primary reasons for ID students to apply to UIC were:

1. More deeply explore new areas and topics in industrial design, and
2. The desire to teach.

In the two other programs (graphic design and electronic visualization) studied, two more reasons arose – boredom with the profession and the desire to change careers. Career change is a common motivation for graduate study in industrial design, and attracts students from a wide variety of disciplines including: architecture, interior architecture, engineering, sculpture, business, law, dentistry, English, archeology, psychology, and furniture design.

Get information

Prospective graduate students get information through multiple channels including websites, conference presentations by faculty, word of mouth, and print mailings. Because many design school applicants are international students, websites provide nearly the only channel for marketing ID programs to them.

Apply to school

The core of the identity question for UIC is in this phase of the process. The two questions that students are asking themselves are "Which school will fit me?" and "Which school will accept me?". The key factors that impact the answers to those questions are location, essence of program, affordability, and the school's reputation.

The identity of the UIC program is shaped by the fact that UIC is a public research university in Chicago. The location is Chicago provides graduate students access to Chicago museums, ID professionals in small to medium-sized firms, and large manufacturing companies like Whirlpool and Motorola. Students expect this access to provide them with internship possibilities or contact with professionals to attend critiques and events. As a research university, the program allows for interdisciplinary collaboration both internally within the school (with graphic design, electronic visualization, and architecture), and externally with engineering, the business school, and the social sciences. UIC's undergraduate Interdisciplinary Product Design course is a key successful example of this collaborative potential across engineering and marketing. As a public institution, UIC is more affordable, especially for foreign students. UIC's 2005-6 tuition for the MFA was \$3,842 (resident) and \$9,841 (non-resident). This is compared to ID at IIT's tuition rate of \$39,675.

Defining the essence and the reputation of the ID program is the core of the study's objective. We will return to that issue later.

Get offer

The final phase of the application process is to get offer. Upon receiving news that they have been accepted students have two responses. The first is of joy and the second is concern about what financial offer will allow them to pay for school.

Defining the essence of the UIC ID program

Defining the essence of the ID program was and continues to be a long process. The UIC ID undergraduate program is in the final stages of a major curricular rewrite, which will have taken 3 years from initiation to implementation (Fall 2006). Although the MFA program philosophy is still evolving, it will likely be aligned with that of the undergraduate program. Philosophical alignment and reputation between undergraduate and graduate programs is an interesting question that comes out of this study. With some exceptions, it seems that many of the schools examined in this study were chosen by respondents based on an ID program's undergraduate reputation – less seems to be known about the strength and philosophies of the graduate programs. Even faculty in their interviews focused on the undergraduate programs although they were reminded that the project was about graduate programs. With the exception of the Institute of Design at IIT which does not have an undergraduate program, ID design programs seem to place a greater emphasis on undergraduate education.

There were two tools used to help define the essence of the program:

1. A three-dimensional mapping of the UIC ID program against other American ID programs
2. A persona describing the ideal industrial design student for the program.

Competitively mapping ID programs

Based on comments by faculty and students and secondary research on ID programs, Dori created a 3D map of the UIC ID program in relationship to other ID programs. (See Figure 3). The X- axis represents the range to which a program focuses on design process (-5) or design artifacts (5) as primary outcome of design education. Craig Vogel (2005) describes this as the balance between strategy and implementation. The Y- axis represents the extent of a program's focus on design for business and corporations (-5) versus art and personal expression (5). The Z- axis represents the range to which a program focuses on the use of Hi-tech computer engineering (-5) or the teaching of hand skills like pen, paper, plastic, and clay (5) as the means to produce design artifacts.

School name	Program	X-Axis Process (-5) to Artifacts (5) scale	Y-Axis Business (-5) to Art (5) scale	Z-Axis Hi-tech (-5) to Hand skill (5) scale
UIC current	ID	-1	-2	2
UIC ideal	ID	0	-1	0
Cincinnati	ID	0	-4	0
ID at IIT	ID	-3	-5	-3
Carnegie Mellon	ID	4	-3	-3
RISD	ID	-4	5	3
MIT	ID	-5	-5	-5
Cranbrook	ID	4	5	3

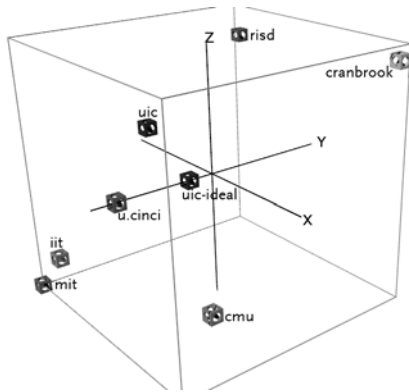
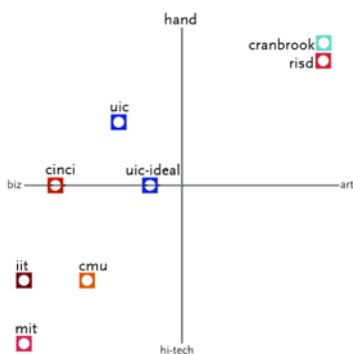


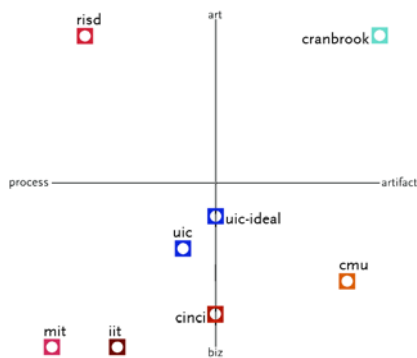
Figure 3 ID program competitive 3D map

Fig. 3a Positioning along the Y (business to art) axis



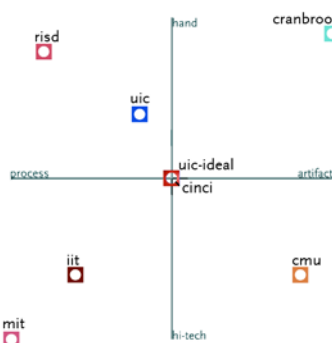
Along the Y- axis, the majority of ID programs are clustered in the business quadrants. The notable exceptions are the ID programs of Cranbrook and RISD, which strong art-oriented schools. Based on the philosophy of the undergraduate program, the current UIC ID program has a strong business orientation. The future UIC ID program intends to balance the business and personal focus by capitalizing on a potential niche in socially-relevant design. UIC’s past association with Design for Democracy has given the program credibility and prestige in that area.

Fig 3b. Positioning along the X (process to artifact) axis



The majority of ID programs emphasize design process. Some, such as MIT’s program, produce only process models as opposed to artifacts. Other’s such as Carnegie Mellon have strong artifact bias. Here one can see the difference in art-oriented programs at Cranbrook and RISD. Cranbrook places a greater emphasis on the artifact, whereas RISD emphasizes the process. UIC seeks to position itself in the center with an emphasis on a human-centered design process, strong manufacturing knowledge, but put to use in the practical production of artifacts.

Fig. 3c Positioning along the Z (hand skill to hi-tech) axis



ID programs are scattered when it comes to the emphasis on hand skills versus hi-tech in the production of artifacts. The more art-oriented programs of RISD and Cranbrook have strong hand skills focus. MIT is not surprisingly deep within the hi-tech sectors. UIC’s ID program again seeks to position itself similar to Cincinnati in terms of balancing the

use of hand skills and hi-tech, to optimize flexibility in addressing multiple design problems.

The positioning of UIC's ID program will be based on the understanding of the key characteristics of each sector as it first relates to the department's overall philosophy, but also its differentiation from other ID programs. UIC's ID program will seek to strike a delicate balance between business and art, process and artifact, and hand skills and hi-tech and be known for this balance.

Modeling the ideal student

The second tool developed to help define the essence of the program was a persona and scenario of the ideal student, who was called Mei. (See Figure 4). Personas are fictional but realistic representations of individuals and/or groups and their experiences. In design strategy, they serve two purposes. First, they provide the designer with a concrete idea of for whom they are designing to guard against designing for themselves. Second, through storytelling, they enable designers, strategists, and stakeholders to empathize with unfamiliar situations and people. Although sometimes personas are completely made up, these were specifically grounded in data gathered by both faculty statements about their ideal student and the profiles of previous ID MFA program applicants.

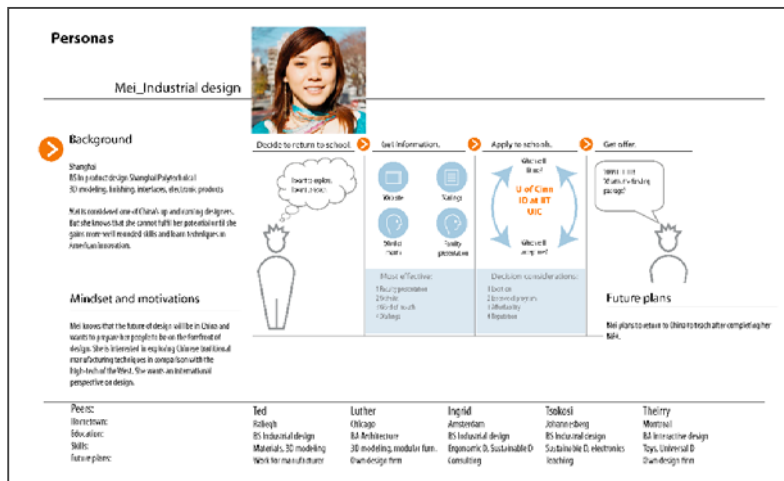


Figure 4 Persona and scenario of Mei

Three elements of the persona and scenario framed the discussion about the essence of the ID program. The first element was the diverse international backgrounds of Mei and her cohort mates. Mei was a Chinese student in search of an MFA to learn US product design techniques to then return to China in order to teach there. This was to reflect the current emphasis on China as the next center of innovative product design.

The second element was the already advanced skills of Mei and her potential cohort mates. One of the discussions in defining the curriculum is whether to have a two-year or three-year MFA program. The trend in design programs has been to offer one “foundation” year for those without backgrounds in design or changing fields. The emphasis on skilled designers reflected the desire to attract more experienced designers who are ready for advanced work then accept less skilled designers. Yet, as a reinstating program, it is understood that it may take a couple of cohorts of students to attract and retain the high-caliber, highly skilled designers to the program.

The third element was the range of industrial design specializations and future plans of Mei and her cohort. From sustainable to universal design, from electronics to modular furniture, the goal was to capture the diversity of areas for advanced design study that the program seeks to support. The program also wants students to work for large manufacturers, create own design firms, work as designers in consultancies, as well as teach.

The curriculum and the vision of the ID program

During the workshop, the ID faculty came up with various vision statements for the program:

- 1) ID @ UIC empowers the individual to shape themselves, and shape the world around them.
- 2) ID @ UIC empowers the individual to engage in personal exploration of contemporary social issues in a collaborative environment.
- 3) ID @ UIC empowers the individual to explore the latest techniques for creating innovation while balancing practical application of a personal vision for advancing socially relevant causes.
- 4) UIC's Master of Industrial Design program has been developed for students with strong foundation design skills who wish to broaden their personal design approach, develop design research skills, gain exposure to the latest techniques in creating innovation, and develop an applied theory towards industrial design.

With the assumption of recruiting advanced design students, these statements manifest themselves in a proposed two-year curriculum plan. (See Figure 5). The model represents the proposal to the faculty, with the first year devoted to thesis exploration, where students are exposed to ideas that first broaden then focus their thesis topics. The summer is devoted to the refinement of the thesis idea through research and/or internships with industries relevant to the thesis topic. The second year is devoted to thesis experimentation.

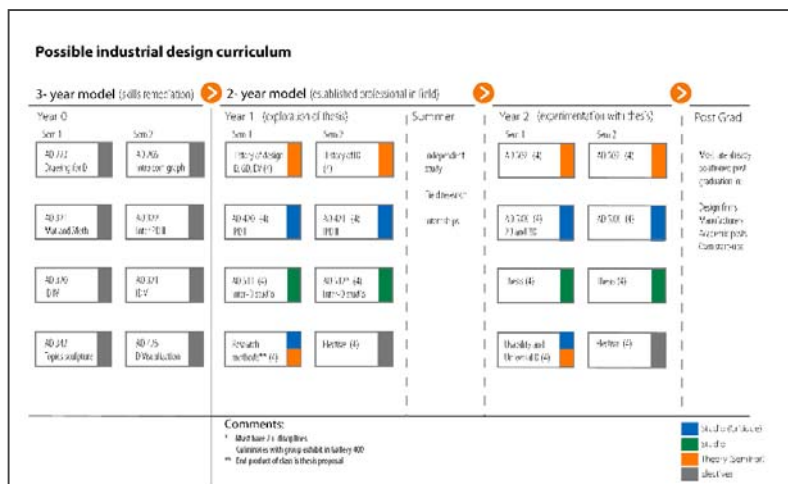


Figure 5 Draft of curriculum model

The in-progress program is planned to be structured in these ways:

- A product design studio track, which allows students to explore many contemporary issues in design related to object-making. This could include the interdisciplinary product development track.
- A theory track devoted to general social theory, contextualizing industrial design, anthropologically-based research methodologies, and usability/ergonomics/and universal design.

- A product design critique studio track that becomes the thesis project the second year to develop personal vision
- A general electives track both years

This structure reflects current trends in ID curriculums, but the essence of the UIC ID program will be defined in terms of the projects and research that students conduct.

Conclusion

Although UIC is only at the beginning stages of applying this research to their program philosophy, curriculum and targeted students, this study will be extremely helpful in many ways. Firstly, it helped to begin to understand the positions of other graduate programs in the field of industrial design, as well as helping UIC to establish a distinct position for its ID Graduate program. Secondly, it helped to understand the ID program relative to other graduate programs within the school (Graphic Design and Electronic Visualization), and provided a better understanding of their (actual and hopeful) program positioning, the mindset and motivations of ideal students, an ideal demographic for an incoming class, and the potential for interdisciplinary work between the three programs.

In order to best utilize the results of this study, the next steps for UIC's program are to more closely examine its relative positioning, develop a philosophy synergistic with its undergraduate program, re-structure its courses to match this positioning, and then begin to market its program in order to attract its ideal students.

Within the larger context of graduate education, and along the lines of Craig Vogel's comment from 2005, it is hopeful that this study provides a structural foundation for many discussions about the role and place of graduate industrial design education in the United States. Hopes are that it will begin to address some of the following questions: What is (are) its purpose(s) of a graduate education? How do programs define and differentiate themselves? How can graduate programs reputations be defined, as distinct from (or aligned with), their undergraduate programs?

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