

Mapping the Design Space of Design Education in iSchools

M. Cameron Jones, Ingbert R. Floyd, Michael B. Twidale, Piotr D. Adamczyk

University of Illinois at Urbana-Champaign

iSchools have a well-established reputation for rigorous analysis, applying a range of multidisciplinary methods. However, increasingly many of us are teaching design elements as well as doing design in our research. We believe that as iSchools, we have a unique perspective, or accent, on design activities, which comes from our history of studying not just the design of information systems and how people use them, but from taking a step back and studying the information behavior of individuals and groups, thus taking a more holistic view of design. It is time for iSchools to assert their accent more explicitly in the study of design by integrating design perspectives across multiple disciplines. The development of new multidisciplinary design schools, such as the Stanford Design School, and RPI's Product Design & Innovation program, highlight the value of an iSchool-like, multidisciplinary approach to understanding design. However, iSchools' accent is more than just a multidisciplinary approach; it can bring a critical perspective on multidisciplinary design that can also question the function of design as an information practice. iSchools can account for ethical, social, and more systematic concerns, along with an accent on the more overlapping cognitive and information aesthetic aspects of design practice. However, while this new accent on design is present in iSchools, it is currently underarticulated.

With the recent growth of computer applications that can be tailored and combined without requiring sophisticated programming skills, and with the greater accessibility to tools for technology production, design is becoming an increasingly essential skill in the modern organization. Students need to learn design skills and "design-thinking" in order to secure desirable jobs post-graduation [2]. What are we, as iSchools, doing to prepare students for this emerging market? How are we teaching design, design practice, and design thinking? In art and architecture programs, students take design studios where they learn design methods and engage in long-term design projects. However, in iSchools and Computer Science programs students are typically given little explicit design instruction, and are often forced to discover on their own how to think about and do design as they engage in projects for class and work.

We are proposing this Wildcard to enable a conversation about design from an iSchool perspective. We aim to focus on the special case of design instruction. The proposal authors have experience teaching design at different levels (undergraduate, masters, and doctoral) to multidisciplinary audiences, with students not just from more systems-construction-oriented disciplines such as CS, Library and Information Science (LIS), Urban Planning, Electrical and Computer Engineering, and Geographic Information Systems; but also from disciplines as disparate as English, History, Media Studies, International Studies, Journalism, Cognitive Science, and various disciplines within Education (Curriculum and Instruction, Secondary and Continuing Education, Educational Psychology, and Human Resource Education) [1, 3]. For many of our students, however, thinking in design terms is an alien concept. Thus, we see this Wildcard as having the secondary goal of helping us all to understand the design space of teaching design to students with diverse backgrounds. The aim of this Wildcard is to consider a particular design space that of teaching design in an iSchool. We aim to chart our collective experiences and intentions in teaching to help understand the challenges of conflicting goals, various opportunities and multiply-scaled constraints that characterize this particular design

space.

As designers ourselves, we are aware of the dangers of locking in on particular ideas too early in the process. Thus, we envision this Wildcard as being a brainstorming session for initializing this discussion of what we each mean when we talk about design. To accomplish this work, we intend to utilize the very methods which we teach for exploring design spaces. At the Eclectic Design Research Group (<http://design.lis.uiuc.edu/>), our motivating philosophy is to create as many designs as possible, as quickly and cheaply as possible, and then iteratively explore the design space to test them out, evaluate them, integrate them, and improve them. We see this session as a brainstorming activity where we will attempt to apply this philosophy to the design of our classroom experiences. An incomplete list of possible brainstorming techniques we will be using includes: Concept Mapping, Bad Ideas [4], Scenarios, and Personas.

There are various questions that we believe this activity will allow us to explore. We do not expect to cover all of them exhaustively, and to a large extent will leave it open to the participants which ones they want to concentrate on. Participants will be able to identify particular questions of interest via the electronic infrastructure we set up.

Some of these questions are:

- What is design? Where does design intersect iSchool curricula?
- What are the methods of design which are meaningful and useful in iSchool education?
- What does a class devoted to design look like?
- Who participates in design? Who can do design?
- Where does design happen? Where doesn't design happen (and it could)?
- What are the particular design concepts we are trying to teach?
- What are barriers to teaching design? How can we overcome those obstacles?
- Is there an iSchool way of teaching design? How is that different from other disciplines?
- Are we (or should we be) teaching design or design thinking? Is there a difference?
- How does the iSchool perspective on design compare with the growing discussion of Computational Thinking [5]?
- How do we teach design across many contexts, to students from many backgrounds?
- What are the contexts of design in iSchools? Where is design currently applied? Where is it not?

We hope that this Wildcard will be the initiation of an ongoing, persistent conversation around these topics. Prior to the conference date, we will be setting up electronic infrastructure (<http://design.lis.uiuc.edu/ed/>) for conducting preconference planning activities. We are not sure exactly what form this will take, but we are considering the use of wiki, blog, mailing-list, and document-sharing technologies, possibly supplemented with social networking services. We will be inviting potential participants to share in the planning activities of the Wildcard, by contributing suggestions and topics for discussion, and by helping us create seed materials for facilitating the collaborative, face-to-face brainstorming activities we plan to conduct at the conference.

Depending on the number of participants, we may invite them to present a two-minute summary of one teaching experience in order to motivate and contextualize the discussion. These

presentations might be an account of what was tried, what the motivations and inspirations were, or how the presenter went about trying it. It might be a success, a failure, or an effort that just went, "meh". We are looking for both the tried-and-true, as well as cutting-edge pedagogical techniques. Informal assessments, qualitative analyses, quantified measures, and any other kinds of evaluations are all welcomed and encouraged so that we can explore the broadest design space possible. The emphasis of the session is not on finding answers, but on finding questions, possibilities, and productive venues of exploration. Even preliminary answers will have to wait until next year.

The actual Wildcard session will consist of the following:

Time	Activity
0-15 Minutes	Introduction to the session, where we describe the purpose of the session, and if we don't have too many participants, do quick introductions.
15-60 Minutes	Break into small groups for brainstorming sessions, each of which will utilize a method of brainstorming design. The activities will involve the sharing of particular design-teaching experiences to help map out the space. For example, one might be a listing of different misconceptions students may have about design that instructors try to address, and another might be different activities and interventions used to address a given misconception. Time permitting, we'll break up and reform into different groups and iterate the brainstorming session.
15-90 Minutes	Debriefing where we discuss what we brainstormed, and prepare to continue work after the conference via the electronic infrastructure.

Table 1. Schedule of Wildcard Session Activities

The goal of this session will be to begin to map out the different aspects of the design space of teaching design in order to characterize the design space as fully as possible. Following the conference, we will be continuing the articulation work we began at the conference via the electronic infrastructure. Participants, and others interested in design education, will be able to take topics and ideas generated in the session and explore them further in their classroom and research activities. Results from these explorations can be reported back, updating our collective understanding of design and design education, allowing us to refine the evolving map of the design space. We also anticipate an ensuing discussion of the design of the evaluation of teaching design -- how do we determine the success of not only the students' ability to learn and do design, but also the instructor's ability to effectively teach design?

At next year's iSchool Conference, we will reconvene in a face-to-face session, and participants will present on their experiences over the preceding year. New participants will be encouraged to join and contribute their experiences as well. We will use the remainder of the session to reevaluate where we stand and reflect on what we've learned about design and design education, as well as map out new directions and opportunities for improving design instruction in iSchools. Thus, a part of this exercise will be exploring conferences coupled with persistent conversation mechanisms as a venue for both initializing research and for advancing the field.

References

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