Design Thinking and the Liberal Arts: a framework for re-imagining a liberal arts education

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The Imperative

New media are rapidly transforming the landscape of how we communicate, learn, and create, increasingly blurring the lines between traditionally separate domains. Simultaneously, a booming DIY “maker” culture is removing barriers to the process of transforming ideas into tangible creations, calling into question the notion of expertise as being solely tied to individuals who have been trained and practicing in a specialized field for years on end. A central concept underlying both of these movements is the value of radical collaboration to encourage the unconventional mixing of ideas, thereby creating a culture where ideas (and the technologies that help us realize these ideas) belong simultaneously to no one and everyone.

Meanwhile, as these powerful cultural shifts take place, the current national conversation regarding the future of liberal arts education often fixates on a false dichotomy between humanities and STEM fields, with the social sciences occupying an uncertain place between the two. Now, perhaps more than ever before, we are in need of an inspirational re-imagining of the liberal arts in which the humanities, social sciences, and STEM disciplines work in synergy to not only prepare students for creative engagement with the messy and challenging problems facing our world, but also for the active creation of the new realities that they have imagined as possible. Design and Design Thinking offer a promising framework for such work.
A central tenet of creative design work is that we learn by doing and making; prototyping is seen as a way of testing out our ideas, and creating models is a way to communicate as well as improve our thinking.

**Design** is the process of intentionally creating something that does not yet exist. In contrast to analysis, which works to deepen our understanding of what is, design is more concerned with the question, “what if?” While critical analysis is undeniably an important component of design, divergent creative thinking skills are equally essential, yet they are often underemphasized in today’s educational systems.

**Design Thinking** can be conceptualized as the application of methodologies associated with design to identifying, framing, and solving problems (or creating experiences) in any domain or realm. It encompasses an often non-linear and iterative process of inspiration, imagination, idea-development, prototyping, and, ultimately, implementation. Design Thinking is also often associated with certain attitudes and attributes, including: the development of a resilient and productive relationship to failure, risk-taking in the realm of ideas, the development of creative confidence, the capacity for empathetic observation, agility and optimism in the face of conceptual blocks, comfort with the discomfort of ambiguity, an appetite for changing one’s frame of reference in order to gain new insights, a willingness to take collective responsibility for idea improvement, intellectual humility, and an iterative and collaborative mindset.

Perhaps not surprisingly, broader conversations around teaching and learning on campus reveal that these very same attributes are often the ones that Smith faculty long to see more of in our students; such qualities enable deeper learning and engagement regardless of the specific disciplinary context in which they are applied. Moreover, a well-recognized by-product of the creative confidence that accompanies the act of “making” is a sense of self-efficacy: a belief system about one’s own ability to affect change and have a positive impact on the world. The development of such self-efficacy is particularly important within the context of Smith’s mission as a women’s college focused on “developing leaders for society’s challenges.”

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In 2010, a group of approximately forty faculty and staff gathered together to discuss Tim Brown’s and Jocelyn Wyatt’s article “Design Thinking for Social Innovation.” Over the course of two hours, we discussed our views on three questions:

1. What does design accomplish in terms of student learning?
2. Is Design Thinking a useful construct for us here at Smith?
3. How might we build on the community of design thinkers at Smith to create something greater than the sum of its parts?

Since that time, a core group of 10-20 faculty and staff from diverse disciplines has gathered on a semi-regular basis to continue this conversation using the vehicle of Teaching Circles sponsored by the Sherrerd Center for Teaching and Learning. Over time, members of the group have:

- explored the possibility of developing a Concentration in Design Thinking;
- developed new design-related courses in French Literature, Philosophy, Choreography and Design, and the First Year Seminar Program;
- developed new collaborative approaches to co-teaching introductory studio art courses;
- participated in the design of the curriculum for the Asian Women’s Leadership University, which includes a required year-long studio-based course sequence in Design Thinking and its application to local community problems;
- catalogued design-related courses at Smith;
- shared information regarding design-related events on campus;
- shared our goals and aspirations, and successes and failures, as they relate to student learning through design.

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3 engineering, landscape studies, architecture, dance, film studies, studio arts, art history, computer science, philosophy, math, French languages and literature, theater, Lazarus Center for Career Development, Smith College Museum of Art
Our momentum builds on existing strengths at Smith and the local Five College community

- an institutional culture where the barriers to cross-disciplinary collaboration are extremely low (e.g., Kahn Institute, Concentrations, Interdisciplinary Programs);
- a strong historical tradition of students and alumnae who work for social and environmental change, now shepherded by the Center for Community Collaboration and CEEDS;
- a rich offering of studio-based experiential learning within specific fields of study (engineering, landscape studies, literary studies, architecture, studio and performing arts);
- outstanding prototyping and production facilities (including the centers for Design and Fabrication, Media Production, Visual Communications and Imaging, and the Art Department’s Wood Shop);
- a growing Five-College engagement with the Digital Humanities, Visual Culture, and the interplay between Arts and Technology;
- Hampshire College’s Creativity Center and the Five College Maker’s Group;
- the inspirational collections of the Art Museum and the Botanical Gardens;
- the strong design ethos of CEEDS and the Concentrations in Museums, Book Studies, and Poetry;
- a growing appreciation and support for entrepreneurship (the Draper Competition and the Peggy Morse Brodsky 1952 Fund of Entrepreneurship in Engineering);
- a thriving Sherrerd Center for Teaching and Learning that emphasizes the creative design of effective learning environments rooted in the principles of the Learning Sciences.

What might it look like to take Design Thinking at Smith to the next level?

How might we position Smith as the premier undergraduate institution for Design Thinking and the Liberal Arts?
We imagine the DesignLab@Smith as fostering radical collaboration among students, faculty, and staff from diverse disciplines as they come together to apply Design Thinking methodologies to the creation of:

- novel and intelligent solutions that address unmet human needs at local and global scales;
- transformational and thought-provoking experiences that include performances, exhibits, and productions;
- innovative experiments in co-teaching and collaborative learning (both virtual and physical).

The DesignLab@Smith will:

- connect campus community members who are interested in doing design as well as learning about design;
- promote design-related educational experiences, courses, and events at Smith and the Five Colleges;
- provide physical and virtual studio spaces and prototyping facilities for experiential collaborative design work in any domain;
- teach concrete design thinking tools and approaches for creative problem solving that can be applied in any context;
- facilitate groups on campus that may wish to come together to co-create;
- encourage a culture of academic risk-taking, experimentation, and co-creation as a way of thinking and learning;
- advocate for the integration of mind and body, virtual and physical, through the process of making;
- foster active and playful engagement with ideas and things.
The idea of the DesignLab is a scalable one with many possible manifestations. Honoring the spirit of experimentation that takes place in a laboratory or studio, we imagine a first step might include the useful repurposing of a decommissioned space on campus as a way to begin testing out our ideas for what DesignLab might ultimately become. Indeed, the lab itself is an emergent concept that will serve as an ongoing example of the application of Design Thinking methodologies as it takes shape and evolves over time.

Although many of the forms of creative work that occur in DesignLab are already happening to varying degrees on campus, such activities often feel siloed by discipline; a distinguishing feature of DesignLab is that it is intentionally “anti-disciplinary.” Such an approach recognizes that all disciplines have methodologies and approaches that, while valuable, can also constrain thinking; the only way to overcome such constraints is to “push those ideas out to other disciplines (and peoples) who view the world from a perspective different than your own.” This philosophy does not reject disciplinary points of view, as such viewpoints serve as our foundations for thinking and creating. Rather, we reject the artificial notion that one must choose between seemingly disparate points of view in the process of creative design work. If successful, we imagine that, in the best Smith tradition, DesignLab will ultimately create powerful opportunities to explore with students new ways of understanding, collaborating, and making their mark on the world.

In many ways, DesignLab shares common features with Smith’s existing Centers for Engagement, Learning, and Leadership, which are described as “interdisciplinary by design and engaged with contemporary issues … offer[ing] the opportunity to respond to emerging student … interests, to provide contexts for internships and independent projects and to address real-world challenges.”

That said, DesignLab is distinct in that the emphasis is on experimentation, testing, and collaborative co-creation in the process of pushing ideas into the realm of the tangible.

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4 http://www.smith.edu/academics/centers

5 Moss, Frank. The Sorcerers and their Apprentices: how the digital magicians of MIT’s Media Lab are creating the innovative technologies that will transform our lives. New York: Random House LLC. 2011.

6 http://jumpthecurve.net/education/an-antidisciplinary-approach-to-the-future/
• transformation of the physical space of the lab to accommodate various forms of designing for engagement;

• experiments in collaborative co-teaching that are appropriately credited as full course teaching commitments by all partners, providing stipends for collaborative course development and compensating “home” departments for such work;

• grants to connect several courses from different disciplines around a central design challenge, perhaps also engaging alumnae in a variety of ways;

• a visiting Designer in Residence who could lead an on-going series of design experiments with students, faculty, and staff;

• creation and curation of a “wall of opportunity,” both physical and virtual, as a visible repository of local community needs and aspirations to serve as inspiration for course projects, performances, and short-term (2-3 day) design-challenges;

• experimental courses such as Local Problems, Local Solutions: an introduction to Design Thinking methodologies and their application (with)in community, perhaps in collaboration with the Center for Community Engagement, or a related studio in Global Problems, Global Solutions in collaboration with the Lewis Center for Global Studies;

• centralized administrative support for the organization of coordinated design events on campus such as the lectures, performances, social events, and Museum exhibits associated with this year’s visits by landscape architect and photographer Ann Whiston Spirn, artist and architect Maya Lin, dancer and environmentalist Andrea Olsen, and others;

• grants for collaborative creative projects to be undertaken by small groups of faculty, students, and staff with funds for materials and supplies and (possibly) course releases, organized similarly to Kahn or Digital Humanities projects;

• high-level technical support for the technologies employed by the lab as well as for acquisition and experimentation with promising new technologies as they emerge;

• front-line (lower cost) rapid proto-typing equipment such as laser cutters, 3D printers, media production, and image processing;

• the security to enable 24/7 access to design spaces and relatively safe prototyping equipment, recognizing that collaborative creative work does not conform to traditional “business hours”;

• creation of a self-guided campus tour, Unearthing Design, that reveals elements of design on Smith’s campus not readily apparent to passers-by;

• curation of a DesignLab exhibit space to showcase the iterative process of Design Thinking methodologies at work on campus;

• development of unique student leadership opportunities related to the organization and orchestration of such experiments in creative engagement;

• short-term (3-7 day) pop-up design challenges and Design Thinking “bootcamps.”
Transformational Benefits

FOR SMITH

• new models for experimenting with the structure, labor and credits of the traditional single instructor, four-credit, letter-graded, semester-based course (how might we re-imagine courses, teaching credits, and grading?)
• new models for faculty lines: how might we better value professional connections between theory and practice?
• clearer articulation of “pathways of practice” in the curriculum, where students link theory to practice within and beyond the classroom
• new opportunities for the construction of “portfolios of praxis” to demonstrate interpretive understanding, agency, and action
• increased opportunities for creative engagement with design challenges across disciplinary and demographic boundaries
• potential for greater connection with alumnae
• new physical resources dedicated to experimenting (how might we imagine experimental spaces outside of the sciences?)

FOR STUDENTS

• creative agency
• resilience in response to failure
• risk-taking in the realm of ideas
• empathetic observation
• agility and optimism in the face of conceptual blocks
• comfort with the discomfort of ambiguity
• changing ones reference frame to gain new insights
• “rising above” to see coherent themes and opportunities when confronted by a sea of information
• taking collective responsibility for idea improvement
• intellectual humility
• an iterative, integrative, and collaborative mindset
• intelligent framing of complex problems, and the initiative to acquire new skills, knowledge, and collaborative relationships to solve such problems, when necessary
• transforming ideas into tangible realities