

## Toward Developing a Meta-View of Design Thinking

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### ABSTRACT

Design thinking is a process employed by traditional design disciplines to creatively address design problems. Recently we have seen a surge in the use of the term “design thinking” in relation to a multitude of disciplines apart from those traditionally associated with the process such as business, organizational management, and service design (Brunner & Emery, 2006; Pink, 2006).

Our research program is aimed at developing a metaview of design thinking across disciplines to foster collaboration, understanding, and greater integration of the process for a variety of disciplines. A metaview of design thinking would identify the overarching concepts and ideas shared by the disciplines engaging in the process and foster exploration of divergent and convergent ideas within different disciplines.

The first phases of this research program have been to conduct a literature review of relevant works related to design thinking, and to conduct focus groups to gather input from individuals involved in disciplines engaging in design thinking (e.g. interior design, instructional design, architecture, landscape architecture, etc.). Initial conclusions include:

1. An agreement that “design thinking” as a topic is extremely complex and difficult to grapple with;
2. The term is typically discussed in a discipline-specific manner. Getting above the disciplines is difficult, but provides an opportunity to bring people together and support collaboration;
3. The democratization of design increases the importance of this discussion, and;
4. There are important educational and professional implications for understanding and being able to explain design thinking in terms that are not discipline-specific.

As with much qualitative and design research, this process is iterative and new steps continually emerge out of each phase (Laurel, 2003). From the input of the initial literature review and focus group, specific disciplines incorporating and/or discussing design thinking were identified, and key concepts explored. As shared ideas evolved, key terms began to reveal themselves, and were cataloged for analysis. It is through these concepts and terms that commonalities, differences, and “what’s missing” among the disciplines incorporating design thinking can be identified. The identification of a

common view of design thinking also supports opportunities for successful interdisciplinary educational experiences.

This work is important since interior design often struggles to justify itself as a profession, and with perceptions regarding its responsibilities and value. Conversations are increasing around the importance of design in “making things better” (Cross, 2007), and it is critical that interior designers have a strong language with which to discuss the value they bring to improving humans’ quality of life. As the public becomes increasingly aware of design thinking as a positive concept, interior designers have an opportunity to engage in that discussion and improve the public’s perception of the importance of their professional role. Creativity, innovation, and problem-solving (often considered components of design thinking) are also being incorporated into the 21st Century K-12 Learning Initiatives, providing additional opportunities for interior design, and designers in general, to impact younger children’s exposure to ways of thinking beyond the traditional linear methods addressed in schools today.

## NARRATIVE

Design thinking is a process employed by traditional design disciplines to creatively address design problems. Design thinking as a skill is often passed along to students covertly through academic experiences and modeling. Some students and professionals see design thinking as synonymous with design process. However, as more attention is being given to design thinking, it is becoming recognized as a separate but symbiotic process to be studied. As such, it becomes more critical for design disciplines to operationalize and promote design thinking as a contemporary approach to addressing complex problems. Recently we have seen a surge in the use of the term “design thinking” in relation to a multitude of disciplines apart from those traditionally associated with the process such as business, organizational management, and service design (Brunner & Emery, 2006; Pink, 2006). Given this attention and the growing importance of design thinking as a multi-disciplinary tool, it is important for the traditional design disciplines to fully understand the design thinking process and provide leadership in the use of these very familiar activities.

As designers in different disciplines, we recognize the importance of a common language to facilitate strong interdisciplinary collaboration. Our research program is aimed at developing a metaview of design thinking across disciplines to foster collaboration, understanding, and greater integration of the process for a wide variety of disciplines. A metaview of design thinking would identify the overarching concepts and ideas shared by the disciplines engaging in the process and foster exploration of divergent and convergent ideas within different disciplines. This ongoing research program includes several phases as discussed below.

The first phase of the research program has been to conduct a literature review of relevant works related to design thinking. Recently many new works have been released on the topic. Representative works discussed below include both classic writing on design thinking as well as more contemporary work recently released. Nigel Cross' articles from the 1980's and subsequent book on *Designerly Ways of Knowing* (2007) provide a foundation for exploring design in relation to other areas of study including science and the humanities. The information he presents positions design as a critical component of educational focus, and challenges designers to reconsider the vital nature of design thinking in our culture. Rowe, in his 1987 book titled *Design Thinking*, presents a collection of ideas, theories, and systems related to design thinking and problem-solving. Schön's *Educating the Reflective Practitioner* (1987) has become another classic and influential design practitioner book that is set in the architectural design studio. The author discusses the reflections of new designers on their activities, and how these reflections affect both their designs and their design thinking/process. Lawson (2005) discusses design thinking in relation to the more traditional design disciplines of interior design, architecture, and industrial product design in his book *How Designers Think: The Design Process Demystified*. Pink's (2006) popular book *A Whole New Mind* has introduced design and design thinking to an entirely new audience, and is a vital part of the new movement of democratization of design. Farson (2008) identifies design and design thinking as powerful tools that have the ability to facilitate new approaches to our current social and economic problems. He introduces the concept of metadesign in his book *The Power of Design*, and discusses

the importance of taking a big-picture view of “the design of design”. One final work that is representative of the use and discussion of design thinking in non-traditional disciplines is Tim Brown’s *Change by Design* (2009). This book provides a clear discussion of the design thinking tools used by the highly acclaimed consulting and innovation firm IDEO. Our initial readings led to the conclusion that design thinking is rarely defined and that there is no common agreement on the meaning of the term. Traditional design disciplines often see design thinking situated within a specific design process, and find it difficult to discuss it without discipline-specific terminology. Newer design fields often use the term, but have not clearly operationalized it for consistency.

The second phase of the research program included conducting a preliminary focus group to obtain input from individuals involved in disciplines engaging in design thinking (e.g. interior design, instructional design, architecture, landscape architecture, etc.). The focus group addressed the participants’ approaches to teaching design thinking as well as defining the term. For the purposes of this project, we focused on the discussion of the definition of design thinking. The group agreed quickly that design thinking was a challenging topic, and that it was typically approached as a discipline-specific activity. Products resulting from design thinking were often used as a reference point in discussions of the design thinking process. Terminology was sometimes similar among the design disciplines, but had interpretations based on specific disciplines’ expected outcomes. To create an approach that went beyond the disciplines, the group discussed the possibility of a metaview of design thinking that could cross all fields of design. The metaview could provide a better understanding of the similarities and differences in the process across fields, and identify commonalities upon which to build. Data collected from the focus group participants reinforces the conclusions reached from the initial readings. Discussion of design thinking is discipline-specific, and is typically related to the outcomes or products of the discipline. No common definition is available among design disciplines, or within the non-traditional disciplines currently using and writing about the process.

From the input of the initial focus groups and literature review, specific disciplines incorporating and/or discussing design thinking were identified, and key concepts explored. As shared ideas evolved, key terms began to reveal themselves, and were cataloged for analysis. It is through these concepts and terms that commonalities, differences, and “what’s missing” among the disciplines incorporating design thinking can be identified. Some of the categories and terms suggested included roles of the design thinker, tools used by design thinkers, cultural issues and situations of design thinkers, phases or processes used, orientation, and focus of the design thinker. These initial categories are organized in Figure 1.

Insert Figure 1 here

As with much qualitative and design research, the process used in the research project is iterative and new steps continually emerge out of each phase (Laurel, 2003). Additional work is needed to further this project and move toward a more inclusive view of design thinking. Next steps include but are not limited to:

1. Expanding research of readings to include more international and practitioner resources;

2. Studying design thinking courses offered in different academic settings and among different disciplines;
3. Developing a comprehensive bibliography and key design thinking terms;
4. Conducting analysis of terminology for commonalities, differences, and missing components; and
5. Determining interdisciplinary approaches for teaching and evaluating design thinking in educational settings.

Developing a metaview of design thinking is important to facilitate interdisciplinary collaboration in all areas of design. The outcomes of this project are specifically important to interior design since this discipline often struggles to justify itself as a profession, and with perceptions regarding its responsibilities and value. Conversations are increasing around the importance of design in “making things better” (Cross, 2007), and it is critical that interior designers have a strong language with which to discuss the value they bring to improving humans’ quality of life. Creativity, innovation, and problem-solving (often considered components of design thinking) are also being incorporated into the 21st Century K-12 Learning Initiatives, providing additional opportunities for interior design, and designers in general, to impact younger children’s exposure to ways of thinking beyond the traditional linear methods addressed in schools today. Beyond professional collaboration, the identification of a common view of design thinking also supports opportunities for successful interdisciplinary educational experiences. As the public becomes increasingly aware of design thinking as a positive concept, interior designers have an opportunity to engage in the discussion and improve the public’s perception of the importance of their professional role.

APPENDIX

Figure 1: Initial Design Thinking Metaview Categories (cat\_fig1.pdf)

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