



How Do You Teach Design Thinking?

Interior Design and Design Studies Cindy.Beacham@mail.wvu.edu
Instructional Design and Technology Neal.Shambaugh@mail.wvu.edu

Roundtable Session Purpose

“How do you teach design thinking in your courses or how do you apply design thinking in your work?”

This roundtable session is designed to solicit ideas about the nature of design thinking from IVLA participants, as well as how they might teach it. We work in two different design fields, interior design and instructional design, and the ideas of design thinking also suggest competencies to develop in our students.

Handout: reading list on design thinking

Activity: 3 questions on your perceptions of design thinking, how you teach the topic, how you have students apply

Summary: in Book of Readings

Background

Design has taken a more “center stage” role in the popular press, being cited as a key ability or sense to cultivate for the new century (Pink, 2006). A design culture, according to Brunner, a partner of the design firm Pentagram and designer of many Macintosh products, provides a fundamental shift in the way we view and make change happen (Brunner & Emery, 2009). Historically, design has been situated within a specific context (e.g. interiors, curriculum, fashion, architecture) and was viewed as an activity reserved for trained professionals (Lawson, 2005; Rowe, 1987). Twenty-first century realities call for more holistic and creative approaches to problem-solving, requiring increased participation from everyone to improve their world. The process of design supports these creative approaches, and is a human activity that all humans can participate in. However, design thinking is perceived as inaccessible to many people. How do we teach design thinking to others?

Significance

The paper for the *Book of Readings* will summarize design thinking through current literature comparing different views and identifying their implications. We will discuss methods to help people understand what design thinking is, how such thinking relates to their needs, and ways to apply these ideas and processes. Designers need to understand what design thinking is and what it means for people, and be able to clearly share this understanding both verbally and visually. Facilitation of design thinking will help all citizens make the connection between their needs in the 21st century and our abilities as both informed citizens and responsive designers to address those needs.



Reading List

Future Releases:

Ambrose, G. & Harris, P. (2009). *Basics design: Design thinking*. Ava Academia. (due to be released Dec. 1, 2009)

Lockwood, T. (2009). *Design thinking: Integrating innovation, customer experience, and brand value*. Allworth Press. (due to be released Nov. 10, 2009)

Annotated Bibliography:

Brunner, R., & Emery, S. (2006). *Do you matter? How great design will make people love your company*. Upper Saddle River, NJ: Pearson Education.

The core theme of this book, as identified by Brunner and Emery is that “design establishes a *relationship* between your company and your customers”. The book provides a foundation of information regarding the importance of designing a successful total customer experience, or risking total failure of the business. They discussed strategies for becoming a successfully design-driven business through 1) awareness, 2) commitment, 3) implementation, and 4) vigilance. Their message includes the mantra that organizations must be designed from the top down and bottom up to be “design driven” – successful design cannot be an add-on to existing products, spaces, or work. While the book focuses on product design in its examples and stories, their message that design is a critical element for today’s culture is clear and applicable to all business contexts.

Cross, N. (2007). *Designerly ways of knowing*. Birkhäuser Basel Publishers.

This book is an expansion of Nigel Cross’ articles published in *Design Issues* in the 1980’s, and provides a foundation for situating design into our educational systems as an equal to science and humanities. He identifies design as a valuable and necessary knowledge base that asks the question “how can we make it better?” in relation to science’s study of “what is”, and humanities’ quest for “how does it affect me?”. Cross has challenged us consistently for decades to reconsider the critical nature of design thinking to our culture. His message is particularly valuable today as we begin to create new approaches to our economic, healthcare, and international systems.

Farson, R. (2008). *The power of design: A force for transforming everything*. Greenway Communications.

Richard Farson believes that design and design thinking are powerful tools to address our current social and economic problems. In this book, he discusses the concept of metadesign, or as he describes it “the design of design”. Metadesigners both include and transcend the traditional design professions, and according to Farson, have the capabilities of re-visioning major systems such as healthcare, education, and criminal justice. He sees metadesigners as leaders with the responsibility of using systems thinking to foster and manage innovation today.

Kelley, T. & Littman, J. (2005). *The ten faces of innovation: IDEO’s strategies for defeating the devil’s advocate and driving creativity throughout your organization*. Broadway Business Press.

IDEO is a consulting and design firm that is widely recognized today as a firm on the leading edge of innovation. The author of this book, Tom Kelley, has worked for IDEO for many years, and developed this set of “human personas” that have been tested continually in IDEO’s innovation work. He begins by identifying the “devil’s advocate” as the most destructive roles to innovation. With that as a base, the book describes three groups of personas that are highly effective in countering the negative effects of the devil’s advocate. First, the 3 “Learning Personas” are driven to continually expand



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knowledge and grow. Next, the 3 “Organizing Personas” understand how organizations move forward, and use that understanding to create a balance between innovation and realism, allowing for growth and forward movement. Finally, the 4 “Building Personas” actually make innovation happen by using the knowledge from the “Learning Personas” and the organizational skills from the “Organizing Personas”. According to Kelley, when companies value and encourage these 10 roles, creativity, design thinking, and innovation will flourish.

Lawson, B. (2005). *How designers think: The design process demystified* (4th ed). Architectural Press.

Lawson’s book approaches this subject with the underlying belief that “*design is a form of thinking, and thinking is a skill. Skills can be acquired and developed.*” He presents an accessible discussion of design thinking set in the context of design process and practice, typically within the professions of visual design including architecture, interior design, and industrial/product design. Designers, as he believes, must employ almost equal parts of convergent and divergent thinking to produce successful design solutions. He talks about the historical progression from initial writing on design process to the current evidence-based study on all areas of design. He does acknowledge, however, that the study of design thinking is in its earliest stages, and that much more work is necessary in this field. Finally, unlike most other comparable works, Lawson proposes a model of design activity and thinking based on Nigel Cross’s earlier work, but expands Cross’s ideas to incorporate new knowledge about the thinking and design processes.

Pink, D. (2006). *A whole new mind: why right-brainers will rule the future*. Riverhead Trade.

Daniel Pink has written this immensely popular book that defines the coming of the “Conceptual Age”, characterized by an “*economy and a society built on the inventive, empathic, big-picture capabilities...*”. This Conceptual Age is a direct response to the Information Age, and will require different skills and abilities, often associated with right-brain thinking, for survival and success. Pink challenges the reader to consider 3 questions: “*Can someone overseas do it cheaper?*”, “*Can a computer do it faster?*”, and “*Am I offering something that satisfies the nonmaterial, transcendent desires of an abundant age?*”. The “Whole New Mind” he discusses refers to the ability to creatively, innovatively respond to those questions. Finally, he shares that success will go to people who can move quickly and master these high-concept, high-touch abilities and apply them appropriately in today’s culture.

Rowe, P. G. (1987). *Design thinking*. Cambridge, MA: MIT Press.

Design Thinking is a collection of ideas, theories, and systems related to design thinking and design inquiry in the field of architecture. The work is comprehensive, and the author provides an interesting historical overview of the doctrines of problem-solving. Much of his discussion centers around the information-processing theory that he identifies as the current prominent approach (as of the book’s publication date) to creative problem-solving. Rowe describes the design process as episodes of heuristic reasoning within which problems are identified, defined, and solutions are explored. He discusses well-defined problems, ill-defined problems, and wicked problems and discusses the influence of different problems on the design process required within architectural design. Ultimately this is a well-documented work providing a scholarly overview of design inquiry within the field of architecture.



Roundtable Discussion

One form of design participation is dialogue, which we used in this roundtable to solicit how IVLA attendees define or view design thinking as well as teach and/or apply design thinking.

- Teaching Design Thinking

How do you **teach** design thinking or use the idea in your courses or work?

How do your students/workers **apply** design thinking in your courses/work?

- Defining Design Thinking

What does design thinking **mean** to you and/or how would you **define** the term?

