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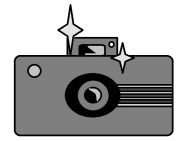
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Empathetic Design Thinking to Fuel your Learning Experience Design

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ABSTRACT

Based on the workshop, “Empathetic Design Thinking to Fuel your Learning Experience Design” presented at the OLCwELD Spring 2017 Conference, this emerging trends article looks to define design thinking and share a model that educators, instructional/learning designers, and other stakeholders can reproduce and adapt in their respective organizations and institutions.

Keywords: design based research, design practice, design thinking, educational research, learner-centered design, learning design, organization design, problem solving, research methods, user-centered design

INTRODUCTION

Design Based Research (DBR) is a methodology designed by and for educators that seeks to increase the impact, transfer, and translation of education research into improved practice (Anderson & Schattuck, 2012). One of the approaches used within DBR is *design thinking*; a human-centered, cyclical design process popular across many fields including design, engineering, and business. Design thinking is defined in an educational context as a user-centered, creative, problem-solving mindset combined with a systematic process for discovering and applying user needs aligned to learning science evidence to create impactful learning designs (Payne, 2017).

Based on the workshop, “Empathetic Design Thinking to Fuel your Learning Experience Design” presented at the OLCwELD Spring 2017 Conference, this emerging trends article looks to define design thinking and share a model that educators, instructional/learning designers, and other stakeholders can reproduce and adapt in their respective organizations and institutions.

THE DESIGN THINKING PROCESS

There are many approaches to design thinking. The common themes across all design thinking process models include the cyclical nature and placing users at the center of the design experience. The process model we presented in our workshop is a learner-focused adaptation of IDEO’s 6-Step Human-Centered Process (Lanoue, 2015) and a similar model from the Hasso

Plattner Institute of Design at Stanford (2010). It consists of six phases: discover, empathize, architect & align, prototype, user validation, and pitch & evolve.

Before embarking on our six phases, designers participated in a brainstorming icebreaker activity to stimulate creative thinking and to help participants get to know one another prior to designing.

1. Discover

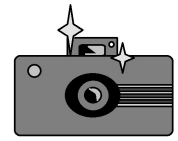
In the *discover* phase, designers begin to define the challenge by identifying the problem to solve. This can be accomplished in various ways including interviewing, observing, or surveying a diverse set of stakeholders.

For the purpose of our presentation to OLCwELD, participants were presented with the design task, *How might we support the development of 21st century skills (problem solving, creativity, communication, and collaboration skills) in college students using engaging learning models?*

2. Empathize

Empathizing with users is at the heart of design thinking. Gaining insights into their feelings, behaviors, and struggles in the context of the problem helps to identify real needs that can be turned into problem statements. There are many ways to gain empathy, including interviews and observation.

Due to time and logistical constraints, participants in the OLCwELD workshop were asked to come up with a list of learner pain points related to the design task,



rather than interviewing or observing learners directly. Next, they worked with their group to share, cluster, and identify the top three pain points. In future workshops, we might reference learner personas or learner interviews via video to achieve learner empathy prior to articulating the learner pain points.

3. Architect & Align

The *architect*, or ideation, phase is where designers are given the opportunity to come up with solutions to the problem(s) they've identified. Designers are encouraged to come up with as many creative solutions to the problem(s) as possible within a limited time frame. To avoid any mental blocks during this brainstorming phase, designers are encouraged to write down any ideas even if they seem incomplete or far-fetched.

In the workshop, participants were asked to engage in a small-group brainstorm activity. Once ideas were generated, they were clustered and prioritized to identify the top three ideas that would most likely resolve the pain points prioritized in the previous phase. Next, participants aligned their top ideas to P21's Key Elements of 21st Century Learning (Crane et al., 2003) to ensure they were considering research-based best practices when moving into the prototype phase.

4. Prototype

Prototyping provides the opportunity to bring the designer's ideas to life. Early prototypes can be simple sketches or storyboards. This phase can be done individually or in small groups. Later versions become more detailed and increasingly representative of final solutions.

In the workshop, participants were asked to design a learning solution based on the pain points and initial solution ideas prioritized in previous phases. They were asked to create sketches and/or storyboards to represent their solutions.

5. User Validation

Design prototypes are validated through solicitation of feedback from learners and other stakeholders. Validation can occur through multiple avenues such as focus groups, interviews, or surveys. During the *validation* stage, the goal is to have learners easily identify the intended purpose of the design and identify the problem it is trying to solve without directly

informing them or biasing their reactions. It is important to not only be able to communicate the purpose of the prototype but to capture and interpret feedback to make changes (Scheer, Noweski, & Meinel, 2012). If there are any gaps within the *validation*, the designer should consider performing different iterations to enhance the integrity of the design.

In the workshop, participants shared their prototypes with their group, received feedback, and considered what they might change in the next prototype iteration.

6. Pitch & Evolve

Following the validation phase, designers are then expected to *pitch & evolve*. The goal is to have designers come up with a concise "elevator pitch" based on the information and evidence-based models collected in the previous phases. It is through this phase that designers begin to identify the best way to leverage their strategies to improve the learning experience for learners to best support their identified pain points. All information in the pitch & evolve phase needs to be organized and condensed to make meaningful insights. (Scheer, Noweski, & Meinel, 2012). The *evolve* portion of this phase encourages designers to solicit feedback from others to consider new ways to perfect their pitch and generate actionable solutions.

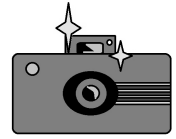
In the workshop, participants each presented a 30-second pitch of their solution to the larger group.

CONCLUSION

The design thinking model is not meant to be a linear process. It evolves through the creation and testing of prototypes, iterative refinement, and continuous evolution of the design as it is tested in authentic practice (Anderson & Schattuck, 2012).

IMPORTANCE TO THE EDUCATION RESEARCH COMMUNITY

Learning research often emphasises the impact of certain models, techniques, or technology on learners, but rarely do we see learner input and validation included in the process. Design thinking not only puts learner needs at the center of the design experience, but also encourages designers to include learners in every phase of the process. Utilizing design thinking as a technique for learning research could begin to close the gap between theoretical suggestions and realistic implementations.



“In popular culture, everyone might be a designer but in management, it seems, everyone should be a design thinker.” (Kimbell, 2009)

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