Applying Design Thinking to Information Literacy Instruction

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Outline

- **Design thinking basics**

- **University of Maryland instructional context**

- **New design thinking-based curriculum @ UMD**

- **Group activity and discussion**
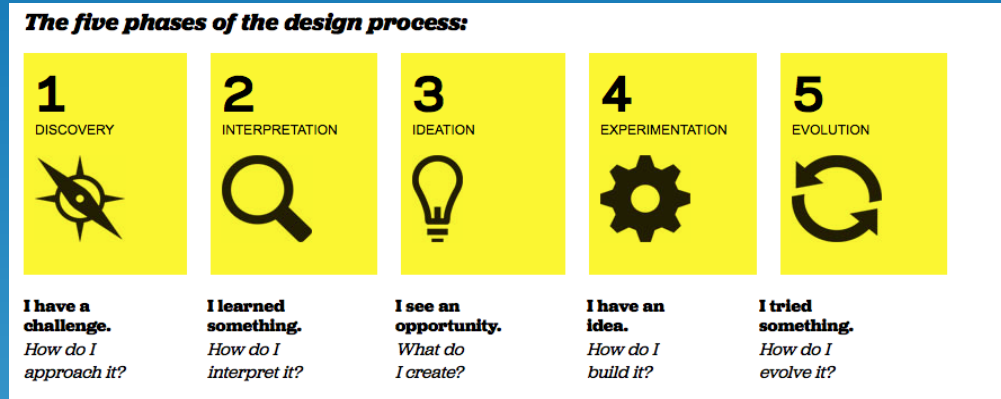
Design Thinking: *Basics

It's Human-Centered. Design Thinking begins from deep empathy and understanding of needs and motivations of people—in this case, students and faculty.

It's Collaborative. Several great minds are always stronger when solving a challenge than just one. Design Thinking benefits greatly from the views of multiple perspectives, and others' creativity bolstering your own.

It's Optimistic. Design Thinking is the fundamental belief that we all can create.

It's Experimental. Design Thinking gives you permission to fail and to learn from your mistakes, because you come up with new ideas, get feedback on them, then iterate. Given the range of needs your students have, your work will never be finished or "solved."

*Taken from the Design Thinking for Educators Toolkit

Design Thinking: Steps

The five phases of the design process:

1 DISCOVERY	2 INTERPRETATION	3 IDEATION	4 EXPERIMENTATION	5 EVOLUTION
I have a challenge. *How do I approach it?*	I learned something. *How do I interpret it?*	I see an opportunity. *What do I create?*	I have an idea. *How do I build it?*	I tried something. *How do I evolve it?*

- **Discovery: Understand the challenge/topic, prepare research**

- **Interpretation: Set your research goal/question**

- **Ideation or Prototype: Generate ideas and refine them**

- **Experimentation: Make the prototype or draft and get feedback**

- **Evolution and Analysis: Track what you've learned, what worked/didn't and start again**

Design Thinking: Process vs Product

- **Works both as a way to help your instruction efforts and frame a process for collaborating with faculty**

- **Works as a way for students to think about their research projects**

Instructional Background UMD

- **On average they teach about 1,000 classes, tours, workshops to about 21,000 students**

- **367 general education classes for 7,307 participants were coordinated and taught by Teaching and Learning Services in 2013**

- **In Summer 2014, the unit took on a curriculum re-design to update its program and coincide with changes happening both with the new Framework for Information Literacy and in the UMD Writing Program**

- **ENG 101 Context: Students have to complete a discussion board prompt, a position paper and a reflective assignment on a topic of their choice**

UMD Program: Outcomes

- **Formulate questions for research based on gaps in information or data available and shape them based on currency, scope and disciplinary focus**

- **Articulate the purpose and distinguishing characteristics of various formats. Identify which formats best meet particular information needs**

- **Determine what authoritative information means for a particular need. Identify markers of authority across resources and analyze and reconcile varied and sometimes conflicting perspectives**

- **Construct a search based on variants of their search question -- from using basic (Boolean and truncation) to creating sophisticated search strategies**

- **Effectively utilize the core functionality features of any research tool. Identify and search in several different resources in order to find the best results**

- **Reevaluate needs and next steps throughout the research process**

- **Communicate information and ideas effectively to multiple audiences using a variety of formats**

- **Advocate and practice responsible use of information as part of original creation or when incorporating the work of others**

UMD Program: Logistics

- **Pilot with about 10 sections**

  - o **Online pre-work**
  - o **In-person session**
  - o **Homework: Research Outline**
  - o **Homework: Topic Evolution Worksheet (also doubles as assessment)**

Design Thinking: In Class

Discovery, Interpretation and Ideation

a. Each large post-it is separated into 4 quadrants (+, -, ?, light bulb) for a class-wide topic. Thinking about using this topic for the assignment, have each group add as many small post-its as they can for the following areas:

1. **Things that are interesting or notable about the topic**
2. **What are the specific problems/issues included in the topic**
3. **Questions about the topic-including audience, type of information/resources needed, visual elements, etc.**
4. **New ideas based on group discussion regarding the topic**
5. **Come up with a research question**

Design Thinking: Research Outline

Discovery, Interpretation and Ideation

1. **Re-framed topic (based on feedback from worksheet and in-class work)**
2. **Main problem/challenge statement or question- what are you trying to solve, answer or claim?**
3. **Background information on the topic needed to understand the direction of your paper**
4. **At least 3-5 main points/solutions to your problem statement and for each main point what evidence you will need to support your claims/arguments (think content AND format)**
5. **What information do you still need? What's missing?**

Design Thinking: Reflection

Evolution and Analysis

Based on the feedback to your research storyboard and the information you found, answer the following questions:

1. **How did the content and format of your sources support your arguments?**
2. **What NEW ideas were you able to generate or in what NEW directions did your research take you?**
3. **What worked well either in terms of research strategy or types of sources found?**
4. **What could be improved about your research process?**
5. **What questions do you still have?**
6. **How did you evaluate the sources you selected-what made them authoritative?**

UMD Program: Results

Mixed success

- **Face to face sessions went extremely well**

- **Student engagement was clear-we had close to 100 consultation requests as a result of the new curriculum**

- **Faculty were very satisfied and will bring classes in twice in the future based on their responses to the survey**

- **Online portions were hit and miss**

- **Some faculty made assignments mandatory, others did not which resulted in poor student response rates**

- **Not sure the pre-work made a difference**

Activity: Planning

The professor for the research class you are teaching has asked you to cover how to narrow a topic-let's use taking selfies as an example.

Using the chat window, please explain what you would steps would you take to prepare and what activity or method you would use to teach this concept.

Activity: Design Thinking Planning

Assume you have the chance to interview the faculty member for the course about this part. Think about the problem or challenge that you have to solve through your instruction.
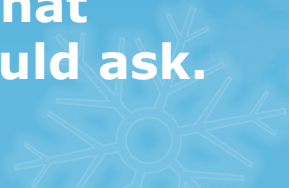
Here are some tips:

- **How might we...**
- **Think about the end goal (outcomes)**
- **Think about the indicators of success (assessment)**
- **Think about the constraints (time, assignment, etc.)**

This step will help determine the students' needs (which hopefully lead to some insights for you about how to approach the instruction!) Using the chat window, please share what questions you would ask.

Activity: Problem Statement

Let's select ONE question to focus on-any preferences?

Based on this question, what do you think the students' NEEDS are-in other words, what does the faculty member want students to be able to do in relation to narrowing the topic of selfies?

Using the chat window, let's summarize this need as a problem or challenge that you have to solve through your instruction.

Activity: Generating Solutions

We are now creating solutions to the new challenge you've identified. Sketch a lot of ideas, this is the time for generating as many ideas as possible, not evaluation—you will evaluate your ideas later.

Using the chat window, please take a couple of minutes and generate as many ideas as you can think of!

Activity: Analysis and Evolution

Each solution would then be further refined, tested and developed based on how it was implemented in the classroom, faculty and student feedback, etc.

Please refer to the handout for an example of how you might go about doing this.

Discussion Questions

1. How did the second set of instructions change your approach?

1. How is the content different?

2. How might these new ideas support student learning differently?

3. What are the students doing differently as a result?

4. How did this process feel?

5. What was your "aha" moment during this session?

6. What additional questions do you have as a result of the activities?

Thank you!

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