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Comments
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Finding real problems
Course open to all Herron students

15 students from several design or art disciplines

Photos by Herron School of Art and Design

Ganci / Finding Real Problems
1. Design things that people actually want.

2. Teach non-designers how to “design.”
Design things that people actually want.

“How might [Color] improve the party-going experience for large groups of friends.”
1. Design things that people actually want.

2. Teach non-designers how to “design.”
Teach non-designers how to “design.”

Design is about way more than the [pretty] objects we make.
Teach non-designers how to “design.”

Web design is about way more than the applications we use to create deliverables.

**cough**  Dreamweaver  **cough**
Teach non-designers how to “design.”

So...what does it mean to be a designer today?
Proposed NASAD competencies for Design

- **Context** (e.g. usefulness, usability, etc)
- **Complexity** (sustainability, systems-level)
- Designing for and with people
- Technology
- **Research** (e.g. “what is needed that doesn’t exist”)
Teach non-designers how to “design.”

How can we provide an educational environment that allows non-designers to get a more complete view of Design?
Competencies of [web] design.

FOR & WITH PEOPLE

RESEARCH
Competencies of [web] design.

FOR & WITH PEOPLE

RESEARCH

BASIC TECHNICAL SKILLS

DISCIPLINARY CONTEXT
Design things that people actually want.

FOR & WITH PEOPLE

BASIC TECHNICAL SKILLS

RESEARCH

DISCIPLINARY CONTEXT
This paper’s subtitle:

Using participatory design research to help students propose and design new applications.
Assignment:
Propose and design a new application or web site that solves a problem for a defined audience.
FOCUS your context/audience

OBSERVE a problem

IDENTIFY problem space

PROPOSE a solution

REFINE solution based on feedback

TELL a story
Criteria to focus context/audience

- Accessible
- Identifiable grouping
  e.g. single moms, Herron students, etc.
Observe a problem through participatory research

Two step process that allows people to describe their problem and ideate around solutions.

- *Describe your day* activity (probe and prime)
- Generative ideation canvas (understand and generate)
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<th>Activity</th>
<th>Frustration level (1 least - 5 highest)</th>
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<td>Wake up</td>
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<td>Find clothes</td>
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<td>Eat breakfast</td>
<td>4</td>
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<tr>
<td>Go to class</td>
<td>4</td>
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<tr>
<td>Sit in class</td>
<td>3</td>
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<tr>
<td>Make / Eat lunch</td>
<td>4</td>
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<tr>
<td>Do Homework</td>
<td>5</td>
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<tr>
<td>Make / Eat dinner</td>
<td>3</td>
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</tbody>
</table>
1. Illustrate how this frustrating part of your life makes you feel.

2. Illustrate how you would feel if this frustration no longer existed.

3. Illustrate the story of this solution. What are the key features? The physical characteristics? How would you interact with the solution?

Don't see a shape you need? Make or draw your own!
1. Focus on one point of frustration in your day. Visualize that frustration.

2. Imagine a world where that frustration did not exist. Visualize how that would feel.

3. What kind of tool would allow you to get from the frustration to ideal state. Describe the tool.

**Generative canvas process**

- FOCUS
- OBSERVE
- IDENTIFY
- PROPOSE
- REFINE
- TELL
1. Illustrate how this frustrating part of your life makes you feel.

2. Illustrate how you would feel if this frustration no longer existed:

3. Illustrate the story of this solution. What are the key features? The physical characteristics? How would you interact with the solution?

- When glasses detect that eyes are straining for prolonged period of time, they vibrate.

- Or could look up to a monitor that would raise blue glasses lever when tire by using glasses with special sensors.
Focus

Observe

Identify

Propose

Refine

Tell
who would like to be our first volunteer to critique Elisabeth’s work?

i like that you added the icons but the tones on the layout are too similar which will make too difficult for the user to focus on his task.

oh wow...yeah i didn’t notice that!

wow he really knows what he’s talking about
After looking through the recipe, she has decided to add the recipe to her calendar for the week. By tapping the “+” button, the recipe was added to her calendar. Now, to see the recipe in a calendar setting for the week, she simply has to pull out the navigation and select the calendar option by tapping the calendar icon next to the word.
Example project 1

Accolade

Audience
Busy college students, age 18-25

Problem space
People are confronted with tasks they are required to do but don’t want to do. (e.g. menial work tasks, school work, exercise, etc.)

Solution concept
A rewards application for the iPhone. The app, Accolade, would reward the user with points once they finish an undesirable task such as studying, cleaning, working out or just going to work.
Example project 2

**Project**

**Audience**
Mid-sized factory floor workers and managers

**Problem space**
Better communication between management and workers is needed to foster a more positive mindset, an alignment of priorities, and a feeling of accomplishment

**Solution concept**
Large-format interactive management tool that allows machine shops to organize employee info (e.g. jobs, materials, time, facilities). Software also keeps shop morale in mind by promoting team-oriented goals.
Hello, Jeff!
Many factory workplaces lack an effective scheduling tool that allows for communication between both employer and employee. This lack of communication creates confusion in the workplace, impeding on priority jobs, project allocation, and overall productivity. Such confusion can cause workers to feel rushed, stressed, and under the thumb of the employer, leading to overall dissatisfaction and a more stressful work environment.

**PROBLEM**

In order to combat the confusion that many tool and die companies face, Project was created. Project software is a management tool that allows machine shops to effectively organize employee information including jobs, materials, time, facilities, and archives. The software also keeps shop morale in mind by promoting team-oriented goals. Project takes the form of a large-scale touch screen that all employees and employers can access.

**SOLUTION**

**JEFF’S WORKDAY**

After arriving at work, Jeff scans his key card into the new Project tool. Project is a large-scale collaborative management system for tool & die shops. Employees interact with the software through touch screen.

**WELCOMING**

Immediately after scanning in to the system, Jeff is greeted with his own personal dashboard. Here, Jeff can process his jobs, facilities, time, materials, and history. Everything he needs is compiled into one place, including clocking in. Jeff simply touches the clock icon to continue.

**CLOCKING IN**

Clocking in at work used to feel like such a chore for Jeff. At the start of the day, it seemed grim. It was as if it wasn’t personalized to him, he was merely another number. Now, Jeff feels as though he’s better welcomed after clocking in. With a simple swipe, he’s set for the day.

**WELCOMING**

Jeff has enough time to step away for a few minutes to grab a cup of coffee. He scans his card to indicate he has left.

**PREPARING**

Jeff signs back into Project and takes some time to understand the jobs he has going on today. On the job tracking screen, Jeff can easily understand high priority jobs, the scope of the work, and the due date. He may also see print layouts, materials, and comments.

As Jeff is scanning the jobs he must complete, he notices that the company is ahead of schedule in their monthly goal. Knowing this, he feels a sense of camaraderie between his employees and wants to do his part in keeping the goal on track.

Jeff also notices that Dustin is working on a project for TCT. He saw this from the display that is located on the right side of the screen.
Reflection

“While participating in the [research] process of this project, I found that the most difficult part to explain to the participant was the solution stage.”

–Sean, Junior Illustration major
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