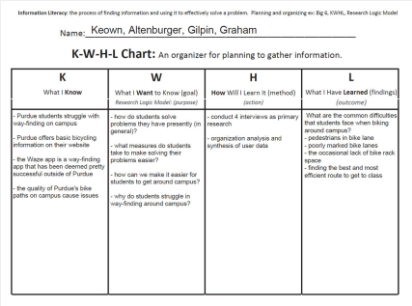
PRINCIPLES OF UX DESIGN
PERSONAL PORTFOLIO
JESSIE KEOWN

Competency 1: Foundations

WHAT I LEARNED FOR FOUNDATIONS (UCD, UCD VALUES, UXD, STRATEGY, TEAMING)

1. I developed understanding of the UCD process and values
2. I helped conduct project information planning

MY EXAMPLES



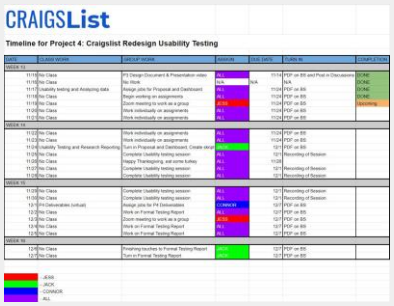
Information Literacy: the process of finding information and using it to effectively solve a problem. Planning and organizing ex: Big 6, KWHL, Research Logic Model

Name: Keown, Altenburger, Gilpin, Graham

K-W-H-L Chart: An organizer for planning to gather information.

K What I **Know**	W What I **Want** to Know (goal) - Research Logic Model: (purpose)	H **How** Will I Learn It (method) (action)	L What I Have **Learned** (findings) (outcome)
- Purdue students struggle with way-finding on campus - Purdue offers basic bicycling information on their website - the Waze app is a way-finding app that has been deemed pretty successful outside of Purdue - the quality of Purdue's bike paths on campus cause issues	- how do students solve problems they have presently (in general)? - what measures do students take to make solving their problems easier? - how can we make it easier for students to get around campus? - why do students struggle in way-finding around campus?	- conduct 4 interviews as primary research - organization analysis and synthesis of user data	What are the common difficulties that students face when biking around campus? - pedestrians in bike lane - poorly marked bike lanes - the occasional lack of bike rack space - finding the best and most efficient route to get to class

P1 KWHL - used to plan project scope and desired information



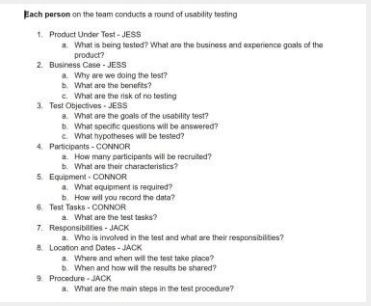
CRAIGSList

Timeline for Project 4: Craigslist Redesign Usability Testing

DATE	CLASS WORK	GROUP WORK	ASSIGN.	DUE DATE	TURN IN	COMPLETION
WEEK 12						
11/10	No Class	P3 Design Document & Presentation video	ALL	11/11	PDF on BB and Post in Discussions	DONE
11/10	No Class	No Work	DEL	N/A	N/A	DONE
11/11	Usability testing and Analyzing data	Assign jobs for Proposal and Dashboard	ALL	11/24	PDF on BB	DONE
11/13	No Class	Begin working on assignments	ALL	11/24	PDF on BB	DONE
11/16	No Class	Zoom meeting to work as a group	JESS	11/24	PDF on BB	working
11/20	No Class	Work individually on assignments	ALL	11/24	PDF on BB	
11/21	No Class	Work individually on assignments	ALL	11/24	PDF on BB	
WEEK 13						
11/23	No Class	Work individually on assignments	ALL	11/24	PDF on BB	
11/25	No Class	Work individually on assignments	ALL	11/24	PDF on BB	
11/24	Usability Testing and Research Reporting	Turn in Proposal and Dashboard, Create slides	ALL	12/1	PDF on BB	
11/30	No Class	Complete Usability testing session	ALL	12/1	Recording of Session	
11/30	No Class	Happy Thanksgiving, eat some turkey	ALL	11/28		
11/27	No Class	Complete Usability testing session	ALL	12/1	Recording of Session	
11/29	No Class	Complete Usability testing session	ALL	12/1	Recording of Session	
WEEK 14						
11/30	No Class	Complete Usability testing session	ALL	12/1	Recording of Session	
11/30	No Class	Complete Usability testing session	ALL	12/1	Recording of Session	
12/1	FYI Deliverables (virtual)	Assign jobs for FY Deliverables	CONNOR	12/7	PDF on BB	
12/2	No Class	Work on Formal Testing Report	ALL	12/7	PDF on BB	
12/3	No Class	Zoom meeting to work as a group	JESS	12/7	PDF on BB	
12/4	No Class	Work on Formal Testing Report	ALL	12/7	PDF on BB	
12/5	No Class	Work on Formal Testing Report	ALL	12/7	PDF on BB	
WEEK 15						
12/6	No Class	Finishing touches to Formal Testing Report	JACK	12/7	PDF on BB	
12/7	No Class	Turn in Formal Testing Report	ALL	12/7	PDF on BB	

JESS
JACK
CONNOR
ALL

P4 timelines - used to plan out project efforts and strategy to complete deliverables



Each person on the team conducts a round of usability testing

1. Product Under Test - JESS
   a. What is being tested? What are the business and experience goals of the product?
2. Business Case - JESS
   a. Why are we doing the test?
   b. What are the benefits?
   c. What are the risk of no testing
3. Test Objectives - JESS
   a. What are the goals of the usability test?
   b. What specific questions will be answered?
   c. What hypotheses will be tested?
4. Participants - CONNOR
   a. How many participants will be recruited?
   b. What are their characteristics?
5. Equipment - CONNOR
   a. What equipment is required?
   b. How will you record the data?
6. Test Tasks - CONNOR
   a. What are the test tasks?
7. Responsibilities - JACK
   a. Who is involved in the test and what are their responsibilities?
8. Location and Dates - JACK
   a. Where and when will the test take place?
   b. When and how will the results be shared?
9. Procedure - JACK
   a. What are the main steps in the test procedure?

P4 usability dashboard - strategy to completion of tasks by team members

Competency 1: Foundations

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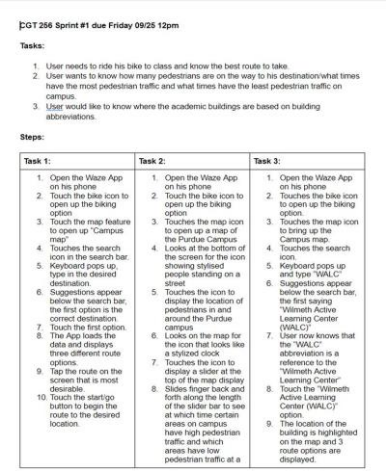
MY EXAMPLES



CGT 256 Sprint #1 due Friday 09/25 12pm

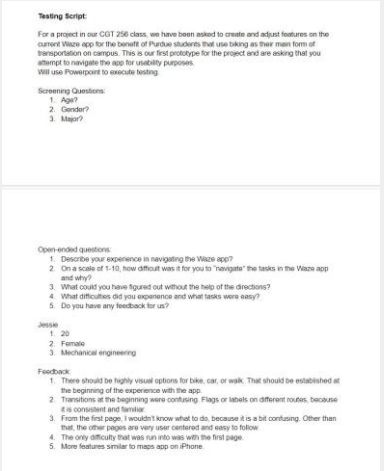
Tasks:

1. User needs to ride his bike to class and know the best route to take.
2. User wants to know how many pedestrians are on the way to his destination/what times have the most pedestrian traffic and what times have the least pedestrian traffic on campus.
3. User would like to know where the academic buildings are based on building abbreviations.

Steps:

Task 1:	Task 2:	Task 3:
1. Open the Waze App on his phone 2. Touch the bike icon to open up the biking option 3. Touch the map feature to open up "Campus map" 4. Touches the search icon in the search bar. 5. Keyboard pops up, type in the desired destination. 6. Suggestions appear below the search bar, the first option is the correct destination. 7. Touch the first option. 8. The App loads the data and displays three different route options. 9. Tap the route on the screen that is most desirable. 10. Touch the start/go button to begin the route to the desired location.	1. Open the Waze App on his phone 2. Touch the bike icon to open up the biking option 3. Touches the map icon to open up a map of the Purdue Campus 4. Looks at the bottom of the screen for the icon showing stylised people standing on a street 5. Touches the icon to display the location of pedestrians in and around the Purdue campus 6. Looks on the map for the icon that looks like a stylized clock 7. Touches the icon to display a slider at the top of the map display 8. Slides finger back and forth along the length of the slider bar to see at which time certain areas on campus have high pedestrian traffic and which areas have low pedestrian traffic at a	1. Open the Waze App on his phone 2. Touches the bike icon to open up the biking option. 3. Touches the map icon to bring up the Campus map. 4. Touches the search icon. 5. Keyboard pops up and type "WALC" 6. Suggestions appear below the search bar, the first saying "Wilmeth Active Learning Center (WALC)" 7. User now knows that the "WALC" abbreviation is a reference to the "Wilmeth Active Learning Center" 8. Touch the "Wilmeth Active Learning Center (WALC)" option 9. The location of the building is highlighted on the map and 3 route options are displayed.

P2 Sprint #1 Organizational Plan - used to plan and execute sprint testing based on tasks, divided among team members, served as a place to put data and information gathered



Testing Script:

For a project in our CGT 256 class, we have been asked to create and adjust features on the current Waze app for the benefit of Purdue students that use biking as their main form of transportation on campus. This is our first prototype for the project and are asking that you attempt to navigate the app for usability purposes.
Will use Powerpoint to execute testing.

Screening Questions:
1. Age?
2. Gender?
3. Major?

Open-ended questions:
1. Describe your experience in navigating the Waze app?
2. On a scale of 1-10, how difficult was it for you to "navigate" the tasks in the Waze app and why?
3. What could you have figured out without the help of the directions?
4. What difficulties did you experience and what tasks were easy?
5. Do you have any feedback for us?

Jessie
1. 20
2. Female
3. Mechanical engineering

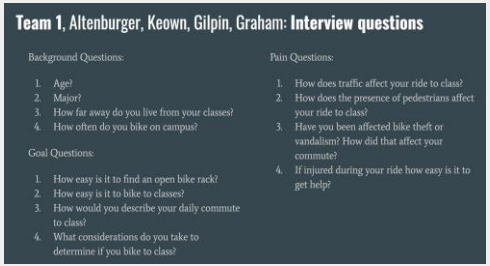
Feedback:
1. There should be highly visual options for bike, car, or walk. That should be established at the beginning of the experience with the app.
2. Transitions at the beginning were confusing. Flags or labels on different routes, because it is consistent and familiar.
3. From the first page, I wouldn't know what to do, because it is a bit confusing. Other than that, the other pages are very user centered and easy to follow.
4. The only difficulty that was run into was with the first page.
5. More features similar to maps app on iPhone.

Competency 2: User Research and Design Requirements

WHAT I LEARNED FOR USER RESEARCH (METHODS, PLANNING, COLLECTING, ANALYZING, SYNTHESIZING)

1. I led user interviews
2. I helped my team synthesis data from user interviews

MY EXAMPLES



Team 1, Altenburger, Keown, Gilpin, Graham: Interview questions

Background Questions:

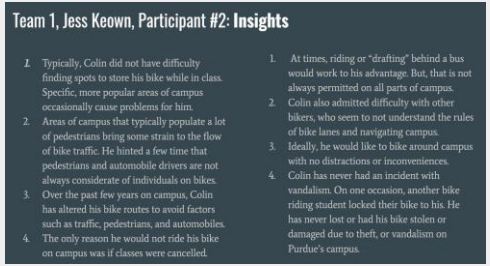
1. Age?
2. Major?
3. How far away do you live from your classes?
4. How often do you bike on campus?

Goal Questions:

1. How easy is it to find an open bike rack?
2. How easy is it to bike to classes?
3. How would you describe your daily commute to class?
4. What considerations do you take to determine if you bike to class?

Pain Questions:

1. How does traffic affect your ride to class?
2. How does the presence of pedestrians affect your ride to class?
3. Have you been affected bike theft or vandalism? How did that affect your commute?
4. If injured during your ride how easy is it to get help?

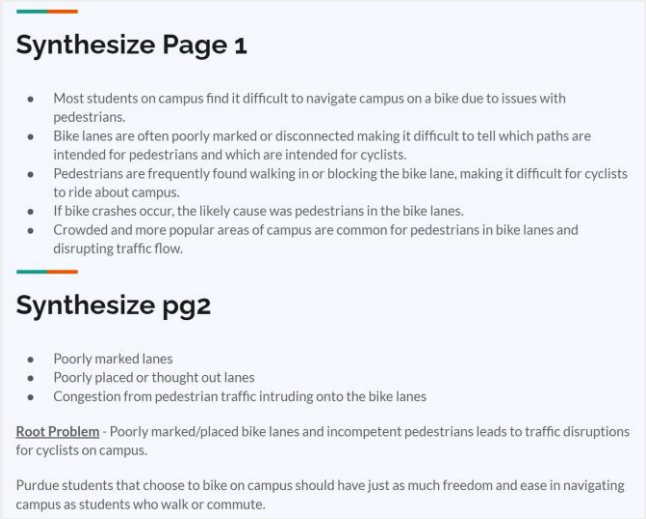


Team 1, Jess Keown, Participant #2: Insights

1. Typically, Colin did not have difficulty finding spots to store his bike while in class. Specific, more popular areas of campus occasionally cause problems for him.
2. Areas of campus that typically populate a lot of pedestrians bring some strain to the flow of bike traffic. He hinted a few time that pedestrians and automobile drivers are not always considerate of individuals on bikes.
3. Over the past few years on campus, Colin has altered his bike routes to avoid factors such as traffic, pedestrians, and automobiles.
4. The only reason he would not ride his bike on campus was if classes were cancelled.

1. At times, riding or "drafting" behind a bus would work to his advantage. But, that is not always permitted on all parts of campus.
2. Colin also admitted difficulty with other bikers, who seem to not understand the rules of bike lanes and navigating campus.
3. Ideally, he would like to bike around campus with no distractions or inconveniences.
4. Colin has never had an incident with vandalism. On one occasion, another bike riding student locked their bike to his. He has never lost or had his bike stolen or damaged due to theft, or vandalism on Purdue's campus.

P1 Interview planning and data collection - displays list of insightful questions for interview and information gather from session



Synthesize Page 1

- Most students on campus find it difficult to navigate campus on a bike due to issues with pedestrians.
- Bike lanes are often poorly marked or disconnected making it difficult to tell which paths are intended for pedestrians and which are intended for cyclists.
- Pedestrians are frequently found walking in or blocking the bike lane, making it difficult for cyclists to ride about campus.
- If bike crashes occur, the likely cause was pedestrians in the bike lanes.
- Crowded and more popular areas of campus are common for pedestrians in bike lanes and disrupting traffic flow.

Synthesize pg2

- Poorly marked lanes
- Poorly placed or thought out lanes
- Congestion from pedestrian traffic intruding onto the bike lanes

Root Problem - Poorly marked/placed bike lanes and incompetent pedestrians leads to traffic disruptions for cyclists on campus.

Purdue students that choose to bike on campus should have just as much freedom and ease in navigating campus as students who walk or commute.

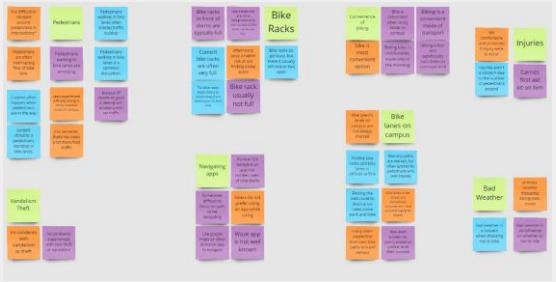
P1 Interview synthesis - displays further analysis of findings and application to problem

Competency 2: User Research and Design Requirements

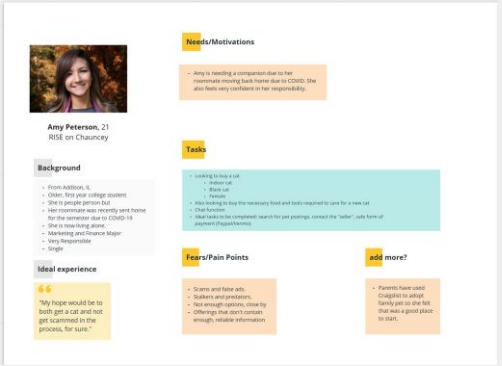
WHAT I LEARNED FOR USER RESEARCH (METHODS, PLANNING, COLLECTING, ANALYZING, SYNTHESIZING)

1. I participated in affinity diagramming and helped narrow scope for project deliverables
2. I created a Proto-persona to create a plan for project efforts and design requirements

MY EXAMPLES



P1 Affinity diagramming - displays analysis of collected user research data, organization of data into topics



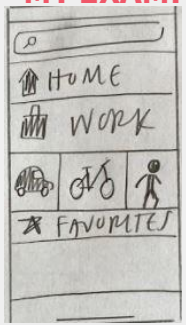
P4 Proto-persona - showcases development of persona based on research data and planning for project efforts to meet the requirements of user needs, tasks, and fears/pain points

Competency 3: Conceptual Design

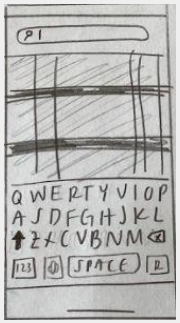
WHAT I LEARNED FOR CONCEPTUAL DESIGN (SKETCHING, CONCEPTS, USER FLOWS, SCENARIOS)

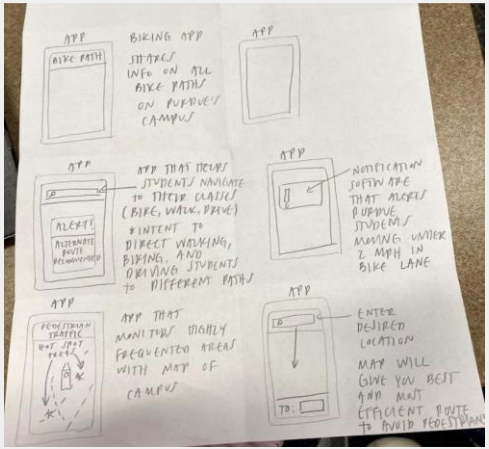
1. I learned how to brainstorm in different ways to create new and innovative ideas
2. I sketched different ideas to meet the design requirements and needs based on user project research

MY EXAMPLES



P2 Screen design sketches - design ideas to meet the needs and design requirements based on research data





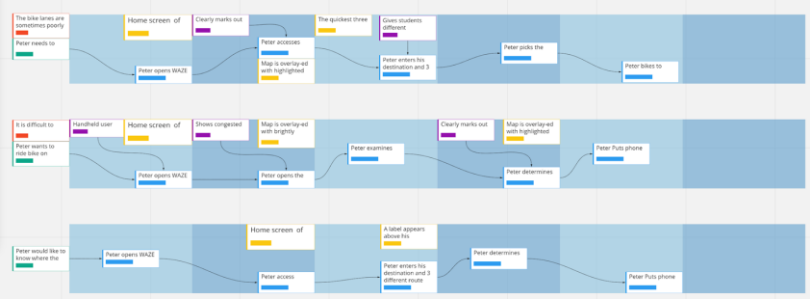
P2 Crazy 8's - brainstorming activity that involves quick sketching of possible design solutions

Competency 3: Conceptual Design

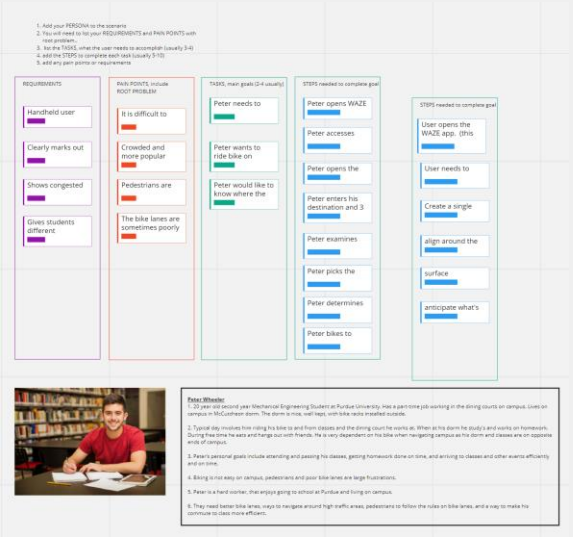
WHAT I LEARNED FOR CONCEPTUAL DESIGN (SKETCHING, CONCEPTS, USER FLOWS, SCENARIOS)

1. I developed a scenario based on an identified root problem to help further project efforts

MY EXAMPLES



P1 Persona and Scenario - displays understanding of scenario and persona application for project deliverables

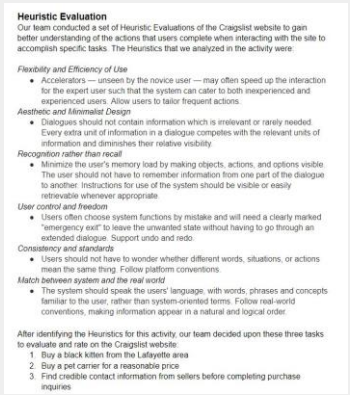


Competency 4: Evaluation Methods

WHAT I LEARNED FOR EVALUATION METHODS (USER FEEDBACK, USABILITY TESTING, DESIRABILITY TESTING)

1. I led a Heuristic evaluation to gain insight on project developments that need to be made
2. I gathered data from desirability testing to analyze findings

MY EXAMPLES



Heuristic Evaluation

Our team conducted a set of Heuristic Evaluations of the Craigslist website to gain better understanding of the actions that users complete when interacting with the site to accomplish specific tasks. The Heuristics that we analyzed in the activity were:

Flexibility and Efficiency of Use
- Accelerators — unseen by the novice user — may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

Aesthetic and Minimalist Design
- Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Recognition rather than recall
- Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

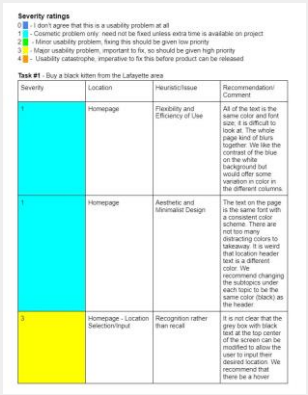
User control and freedom
- Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

Consistency and standards
- Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

Match between system and the real world
- The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

After identifying the Heuristics for this activity, our team decided upon these three tasks to evaluate and rate on the Craigslist website:

1. Buy a black kitten from the Lafayette area
2. Buy a pet carrier for a reasonable price
3. Find credible contact information from sellers before completing purchase inquiries



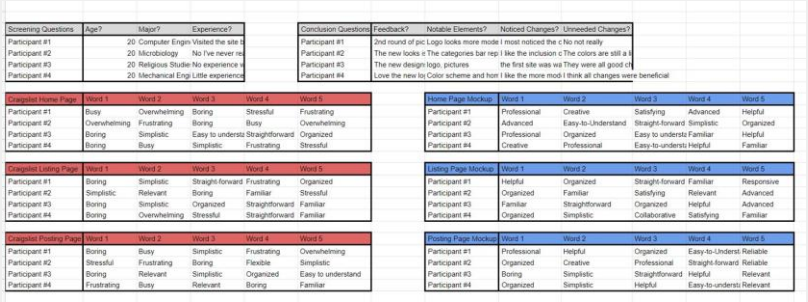
Severity ratings

0 - I don't agree that this is a usability problem at all
1 - Cosmetic problem only: need not be fixed unless extra time is available on project
2 - Minor usability problem, fixing this should be given low priority
3 - Major usability problem, important to fix, so should be given high priority
4 - Usability catastrophe, imperative to fix this before product can be released

Task #1 - Buy a black kitten from the Lafayette area

Severity	Location	Heuristic/Issue	Recommendation/ Comment
1	Homepage	Flexibility and Efficiency of Use	All of the text is the same color and font size. It is difficult to look at. The whole page kind of blurs together. We like the contrast of the blue on the white background but would offer some variation in color in the different columns.
1	Homepage	Aesthetic and Minimalist Design	The text on the page is the same font with a consistent color scheme. There are not too many distracting colors to take away. It is weird that location header text is a different color. We recommend changing the subtopics under each topic to be the same color (black) as the header.
3	Homepage - Location Selection/Input	Recognition rather than recall	It is not clear that the grey box with black text at the top center of the screen can be modified to allow the user to input their desired location. We recommend that there be a hover

P4 Heuristic evaluation - used to evaluate design features to make improvements in project deliverables



Screening Questions	Age?	Major?	Experience?
Participant #1	20	Computer Engin	Visited the site t
Participant #2	20	Microbiology	No I've never re
Participant #3	20	Religious Studie	No experience v
Participant #4	20	Mechanical Engi	Little experience

Conclusion Questions	Feedback?	Notable Elements?	Noticed Changes?	Unneeded Changes?
Participant #1	2nd round of pic	Logo looks more mode	I most noticed the c	No not really
Participant #2	The new looks s	The categories bar rep	I like the inclusion c	The colors are still a li
Participant #3	The new design	logo, pictures	the first site was wa	They were all good ch
Participant #4	Love the new lo	Color scheme and hon	I like the more mod	I think all changes were beneficial

Craigslist Home Page	Word 1	Word 2	Word 3	Word 4	Word 5
Participant #1	Busy	Overwhelming	Boring	Stressful	Frustrating
Participant #2	Overwhelming	Frustrating	Boring	Busy	Overwhelming
Participant #3	Boring	Simplistic	Easy to understa	Straightforward	Organized
Participant #4	Boring	Busy	Simplistic	Frustrating	Stressful

Home Page Mockup	Word 1	Word 2	Word 3	Word 4	Word 5
Participant #1	Professional	Creative	Satisfying	Advanced	Helpful
Participant #2	Advanced	Easy-to-Understand	Straight-forward	Simplistic	Organized
Participant #3	Professional	Organized	Easy to understa	Familiar	Helpful
Participant #4	Creative	Professional	Easy-to-understa	Helpful	Familiar

Craigslist Listing Page	Word 1	Word 2	Word 3	Word 4	Word 5
Participant #1	Boring	Simplistic	Straight-forward	Frustrating	Organized
Participant #2	Simplistic	Relevant	Boring	Familiar	Stressful
Participant #3	Boring	Simplistic	Organized	Straightforward	Familiar
Participant #4	Boring	Overwhelming	Stressful	Straightforward	Familiar

Listing Page Mockup	Word 1	Word 2	Word 3	Word 4	Word 5
Participant #1	Helpful	Organized	Straight-forward	Familiar	Responsive
Participant #2	Organized	Familiar	Satisfying	Relevant	Advanced
Participant #3	Familiar	Straightforward	Organized	Helpful	Advanced
Participant #4	Organized	Simplistic	Collaborative	Satisfying	Familiar

Craigslist Posting Page	Word 1	Word 2	Word 3	Word 4	Word 5
Participant #1	Boring	Busy	Simplistic	Frustrating	Overwhelming
Participant #2	Stressful	Frustrating	Boring	Flexible	Simplistic
Participant #3	Boring	Relevant	Simplistic	Organized	Easy to understand
Participant #4	Frustrating	Busy	Relevant	Boring	Familiar

Posting Page Mockup	Word 1	Word 2	Word 3	Word 4	Word 5
Participant #1	Professional	Helpful	Organized	Easy-to-Underst	Reliable
Participant #2	Organized	Creative	Professional	Straight-forward	Reliable
Participant #3	Boring	Simplistic	Straightforward	Helpful	Relevant
Participant #4	Organized	Simplistic	Helpful	Easy-to-understa	Relevant

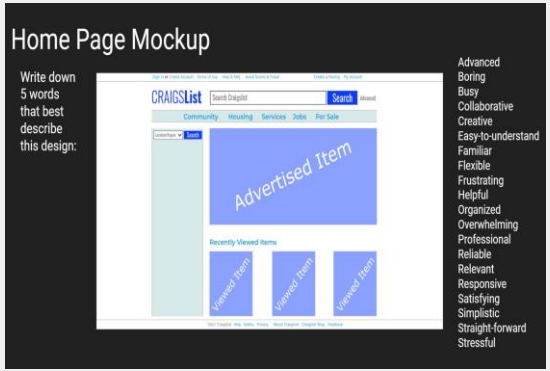
P4 Desirability testing - exhibits attempt at evaluation of data from desirability testing of project website mockups

Competency 4: Evaluation Methods

WHAT I LEARNED FOR EVALUATION METHODS (USER FEEDBACK, USABILITY TESTING, DESIRABILITY TESTING)

1. I helped conduct desirability testing with users to evaluate project design methods

MY EXAMPLES



P4 Desirability testing - Displays further understanding and attempt to evaluate design improvements

MY TAKEAWAYS

1. UCD Processes and Project Planning
    a. I learned the importance and value behind the UCD and strategic project planning and their benefits in projects and design efforts. I hope to use these ideas in my future assignments and potential projects in college and in a future job setting.
2. Interviews and Data Synthesis
    a. I now understand the importance of structure behind an interview and the value in analyzing the findings. I plan to use interviews in future projects to gain a better understanding of things I may not have previously considered.
3. Brainstorming
    a. I learned the value of different types of brainstorming such as quick sketching. I plan to use the different brainstorming activities from this course in future projects and assignments.
4. Heuristic Evaluation
    a. I now know the value of evaluations in design and project efforts. They offer great insight and I plan to apply what I have learned in my upcoming projects and tasks in a work environment.
5. User testing
    a. I have begun to understand the importance of outside feedback and information. User testing has been very beneficial in my designs in this class and I hope to continue a pursuit for feedback in my personal projects and future assignments as they offer ideas that I may not have ever considered.