Usability Test Report

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TCOM 4120 - Section 02

Group 3

Part I: Usability Test Setup

1. Executive Summary

This usability test report evaluates Owl Express, focusing on its effectiveness, navigability, and user experience. The test aimed to assess the efficiency of the registration process, examine the navigation structure, and identify pain points experienced by users.

The test was conducted with Kennesaw State University (KSU) students familiar with Owl Express. Participants completed key tasks—locating registration times, searching for courses, and managing course registration—while providing real-time feedback through a moderated, think-aloud approach.

Important findings were that Owl Express is usable and acceptable, but it also needed improvements to navigation, organization, the amount of information at display, and design.

2. Technology Overview

Owl Express is KSU's portal for student registration and academic records. It provides access to registration, schedules, grades, and payment plans for students.

3. Goals and Evaluation Questions

Goals:

1. Assess registration efficiency.
2. Evaluate navigation structure.
3. Identify user frustrations.

Evaluation Questions:

1. How quickly can users register for a class?
2. Can users easily find needed information?

3. What usability issues arise during use?

4. Methodology

Participants were KSU students with experience using Owl Express. A moderated test with Concurrent Think-Aloud (CTA) captured real-time feedback, supported by pre- and post-test questionnaires. Performance was measured by task success, error rate, and satisfaction (SEQ and SUS).

5. Device and Software Specifications

Device: MacBook Pro (2023)

Software: MacOS Sequoia 15.1

Browser: Safari 18.1

Owl Express: Release 8.11 (Updated November 2024)

6. Participant Recruitment

We recruited people we know who attend KSU for this usability test.

7. Task Scenarios

1. Locate registration time ticket.

Description: The student needs to see what their registration time is.

Task Scenario: You are a student preparing to register for the spring 2025 semester. Before you can register for classes, you must see if registration is open and available to you. Use Owl Express to find your registration time ticket. Read your time ticket to us.

Successful Completion Criteria: The user finds their time ticket and reads it out to us.

Optimal Path: “Registration” > “Prepare for Registration” > “Select a term…” > “Spring Semester 2025” > “Continue”

2. **Search and find a course**

Description: The user needs to find a specific a class and read the course description to us.

Task Scenario: You are a student preparing to register for Spring 2025 semester and you need to search for the Math subject you need for your General Education requirements. The only search requirement is that the course is called MATH 1111, and the section is 15. After you search for the right class, find the course description, and read it to us.

Successful Completion Criteria: The user finds the course description and reads it to us.

Optimal Path: “Registration” > “Register for Classes” > For “Terms Open for Registration, select “Spring Semester 2025” > **[Search Field]**: For “Subject,” enter “MATH”, for “Course Number”, enter “1111,” scroll down > “Search” > Turn to page 2 of 5 and find section “15” > “College Algebra” > “Course Description”

3. **Register for and withdraw from a course.**

Description: The user needs to register and withdraw from a class.

Task Scenario: You are a student, and you need to register for MATH 1111 in the “Register for Classes” page. You then go to the Class Schedule Builder page to confirm that it has been added to your schedule. Upon registering for MATH1111, you realize that you have already taken MATH 1111 in a previous semester. You will need to log in to Owl Express, navigate to the registration page, and find the summary sub-page to withdraw from the MATH 1111 class and submit the withdrawal.

Successful Completion Criteria: The student successfully registers and withdraws from a class without any errors.

Optimal Path: “Registration” > “Register for Classes” > For “Terms Open for Registration, select “Spring Semester 2025” > **[Search Field]**: For “Subject,” enter “MATH”, for “Course Number”, enter “1111,” scroll down > “Search” > Turn to page 2 of 5 and find section “15” for “College Algebra” > “Add” > On “Summary” page (bottom right corner), click “Submit” > Click the dropdown menu under “Action” for “MATH 1111” on “Summary” page > “Drop Web” > “Submit”

8. Usability Test Scripts

Orientation: We introduced ourselves. We thanked participants for taking part of the study and informed them that they will need to imagine themselves in a scenario and complete an associated task. We defined the think-aloud method for participants and instructed them to use it during the test. We reminded participants that they will be recorded (audio and visual) and that their recordings will remain anonymous and later deleted. We informed the participants the expected time the study will take and that they can opt out of the test if they wish. We asked the participant if they have any questions.

Before the first task: We asked the participant to fill out a pre-test questionnaire about how they currently use Owl Express.

During the tasks: We asked participants to read the task scenarios and the tasks they were instructed to do.

After each task: We asked the participants to complete the SEQ survey.

Post-test: We asked the participants to complete the SUS survey and a post-test questionnaire.

9. Data Collection Instruments

Instruments included a screening questionnaire, pre- and post-test questionnaires, task-level satisfaction (Single Ease Question, 7-point scale), and session-level satisfaction (System Usability Scale).

Screening: Screening questionnaires were used to recruit eligible participants.

Pre-test questionnaire: Pre-test questionnaires were used to see what participants already knew about Owl Express.

Task-level satisfaction: Task-level satisfaction surveys (SEQ) were used to see how difficult or easy a task was for a participant. The data was quantitative.

Session-level satisfaction: Session-level satisfaction surveys (SUS) were used to see how difficult or easy the whole test was. The data was quantitative.

Post-test questionnaire: Post-test questionnaires were used to further see what users thought of the session. Answers were qualitative.

Part II: Usability Test Results

1. Participant Characteristics

Our participants were all in the younger age range since they were all full-time students. Half of the participants were bio majors, and the other half were interactive design majors. All our users had previously used Owl Express and were familiar with the layout.

Table 1: Table for participant characteristics.

Participant #	Age range	Occupation	Major
Participant 1	18-22	Full-time student	Bio
Participant 2	18-22	Full-time student	Bio
Participant 3	18-22	Full-time student	Bio
Participant 4	18-22	Full-time student	Interactive Design
Participant 5	18-22	Full-time student	Interactive Design
Participant 6	18-22	Full-time student	Interactive Design

2. Test Sessions Summary

All usability testing was conducted in person on MacBook Pros. Participants were asked to complete tasks using the Owl Express website while providing real-time feedback through a moderated think-aloud approach.

Table 2: Table for when, where, and how usability tests were conducted.

Participant #	When	Where	How
Participant 1	11/11/24	Library	In-person
Participant 2	11/12/24	Library	In-person
Participant 3	11/12/24	Library	In-person
Participant 4	11/13/24	ALC Building	In-person
Participant 5	11/13/24	Library	In-person
Participant 6	11/14/24	Home	In-person

3. Usability Test Results

a. Task-Level Results

Table 3: Averages for task success, time on task, SEQ score, and errors.

Task	Avg. Task Success	Avg. Time on Task	Avg. SEQ Score	Avg. Errors
1. Time Ticket	100%	49.1 s	5.83	0.17
2. Find the Course	100%	58.3 s	5.67	0.17
3. Register & Withdraw	100%	2 min	4.33	0.674

Table 4: SEQ scores for each task.

Participant #	Task 1	Task 2	Task 3
1	7	7	6
2	7	5	2
3	1	1	6
4	7	7	7
5	7	7	7
6	6	4	5

b. Session-Level Results

The overall system usability score (SUS) was 68.33. It is on par with the industry average. However, it also means that there is room for improvement.

Table 5: SUS scores for all participants.

Participant #	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	SUS Raw Score	SUS Avg. Score
1	4	5	4	1	3	4	3	3	4	3	22	55.0
2	1	5	1	1	2	4	1	5	3	2	11	27.5
3	1	5	2	1	1	5	1	5	1	5	9	22.5
4	4	3	4	1	3	3	5	2	5	2	30	75.0
5	5	1	5	2	5	1	5	1	5	2	38	95.0
6	4	1	4	1	5	2	5	1	5	4	34	85.0

c. Feedback Categories

Users were mainly confused with the navigation of Owl Express. Most of them were confused on how to return to the main page after they clicked on a tab. There was one participant that failed to navigate to the withdrawal section of Owl Express, so they opted to log out completely and log back in.

d. Observed Participant Difficulties

During the testing process, the main difficulties users had included navigating the website and withdrawing from classes. Our participants noted that it was very hard to backtrack when they clicked on the wrong link. Fixing their errors was difficult but not

impossible. They mainly complained about being lost in the site, not knowing how to get back to where they needed to be. We also observed the participants getting frustrated when new tabs would open during the registration task.

e. Negative Scores and Failed Tasks

The average SUS score ended up being a 68.33, which is on par with the industry benchmark of 68, suggesting room for improvement. Although the score isn't drastically low, it still reflects a system that has significant usability challenges such as navigation issues, organization, information overload, and bad design.

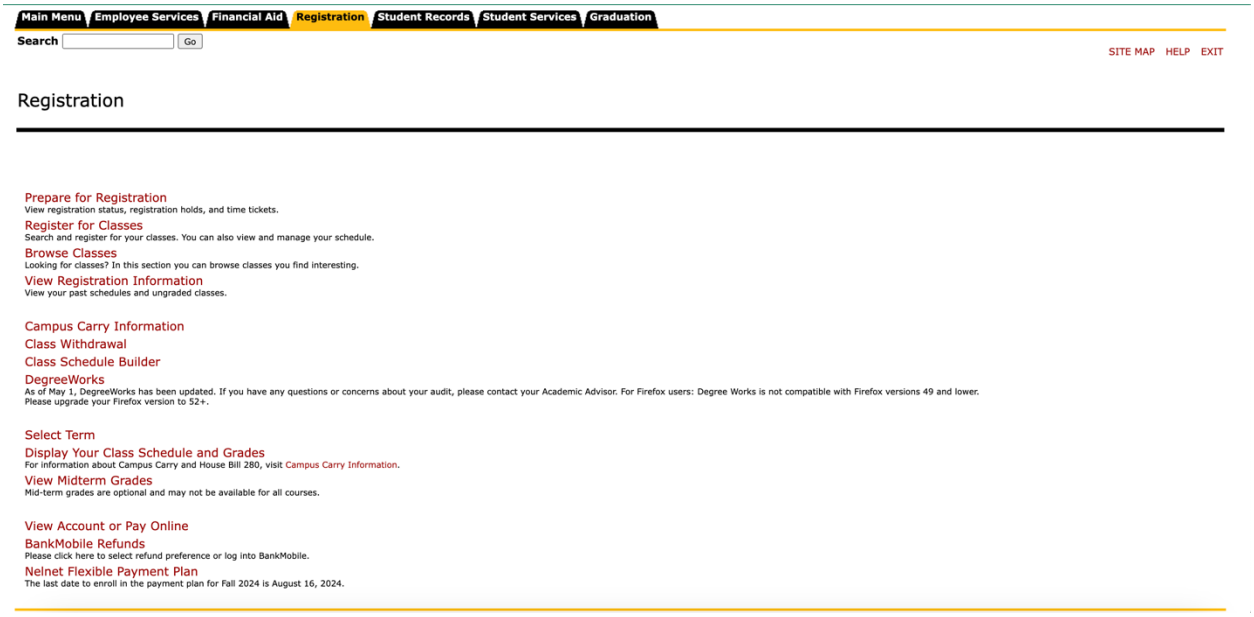

Figure 1. In this screenshot, you can see how many tabs are available on the registration page in Owl Express. There are currently 14 tabs to click on (not including the tabs at the top). This reflects the navigation issues, organization, information overload, and bad design.

f. Main Problems Identified

1. Navigation

Table 6: Participant feedback for navigation.

Participant	Feedback
1	STOP CHANGING THE NAME OF THE LINK UNDER REGISTRATION…ITS ANNOYING…STOP MOVING IT TO A DIFFERENT PAGE TOO…IT'S ANNOYING!
2	The Owl Express navigation is confusing and not intuitive at all. Even with the update, information is hard to find and feels hidden sometimes
3	There are too many things titled registration

2. Organization

Table 7: Participant feedback for organization.

Participant	Feedback
3	Stop naming everything registration if it's just a schedule builder or something

3. Information Overload

Table 8: Participant feedback for information overload.

Participant	Feedback
1	The UI is fine, just the information architecture needs work.
6	They didn't have an exact quote, but they did note that it took several attempts to locate certain features.

4. Bad Design

Table 9: Participant feedback for bad design.

Participant	Feedback
Participant 2	Design is counterintuitive and not even aesthetically pleasing; A more straightforward path for users, a design that allows users to find what they need without 'thinking too much.'

g. Design Recommendations

Enhance navigation: Redesign the menu structure and reduce redundancies (two buttons that lead to registration page).

Improve organization: There should be fewer buttons (e.g. under registration, there are 12 registration-related buttons).

Reduce information overload: The design should either be simpler, or there should be a guide that helps the user accomplish a task.

Improve design: Responsive and dynamic design would significantly improve the user experience.

Part III: Project Reflection

1. Reflections

a. Katherine's Reflection

Overall, I learned a lot through this usability testing experience. It was very interesting to see how different users handled errors during the testing process and how some of them had their own pathways that were very different from the other participants. It made me think a lot about how there are so many different ways to do one simple thing on Owl Express. Really there should be one simple and intuitive pathway for users. Another thing I found very interesting was comparing the quantitative and qualitative data to find patterns. For example, we found that the more time it took for a user to complete the task, the lower the SEQ score. Designing the task scenarios was a fun challenge because we wanted to figure out a way to show how bad the technology was, but we needed to create a task that was ethical. At first, we were going to have users show us their schedule so that we could see they completed registration successfully, however that would then display their grades which could be problematic. Overall, learning how to create task scenarios was very useful for future Usability Tests that I will inevitably have to conduct so it was very nice to get good experience with that and the overall process in general.

Learning the SUS scores was slightly difficult at first but once I got the hang of it, the calculations were very easy. Incorporating them into an actual usability test was cool because we were able to see firsthand how the SUS scores reflected the test itself. It was cool to see the relationships between the data and the test for this portion of the test as well.

All in all, the experience was a positive one, even if it was a very long process. We got a lot of valuable experience from completing this test. In the future, my goal is to be a UX designer, so learning how do conduct official usability tests will definitely come in handy.

b. Mechelle's Reflection

Getting to participate in this usability testing experience has been both insightful and challenging. I learned a lot from the usability testing I conducted with our participants. By observing how users interacted with Owl Express, it highlighted the problems users had with the UI. It was interesting to see the user's behaviors as they all had a different approach to the task given to them. Some of the ways the users completed the tasks were the same way I would have done it, while the others were pathways I didn't know existed. It just goes to show that there is no one right way to do things.

For example, users who spent more time completing tasks often reported lower SEQ scores and pointed out their frustrations during the task scenarios. As for the SUS scores, I had a bit of a tough time understanding this at first, but after doing this usability testing, I got a better understanding of it. This was very useful data towards our research as it showed that there were clear needs for improvements for the UI as users reported navigation issues, organization problems, information overload, and bad design. Making minor adjustments, such as simplifying the menu structure and improving the visual design, could significantly enhance the overall user experience.

At one point we ran into a problem with our usability testing was our task scenario as one of our tasks was unethical. It was unethical because we might accidentally see the participants grades and some people would not be happy about that.

Overall, this experience will be very useful for my future endeavors in the UX/ UI world. I will now know how to approach the research side better through the usability testing process. There's so much that goes into the whole process and all the different things you must consider, which can make things difficult at times.

c. Brian's Reflection

Working on this project was both challenging and rewarding. The in-class activities leading up to the final project has helped me prepare though. Critical parts of a usability test like informed consent, contextual inquiry, and heuristic evaluations were important to learn.

The most challenging parts of this project was creating the usability test plan report. Creating the usability test plan document was a long and complicated process, and quite overwhelming--at least at first. With the help of my teammates--Katherine and Mechelle--these tasks were much more manageable. We would often schedule virtual meetings through Teams to work on our group assignments. During these meetings, we would discuss the assignment and work on it simultaneously. We would clarify things regarding the assignments, and we also bonded. With Katherine and Mechelle on my side, and all of us combining our strengths, I feel extremely proud of our work.

Within the planning report, the most difficult thing about it was creating the task scenarios. Making it align with our project's goals and evaluation questions was not easy. However, with feedback from our instructor (Dr. Singh), we were able to overcome this challenge. We also managed to make our project more ethical in the process.

The usability test sessions were what I expected. It does take a lot of preparation though and the importance of pilot tests cannot be negated. During my pilot test, I found a few issues that were really holding our project back: the not-specific-enough task scenarios (which were later resolved) and the lack of a script. While we did have an orientation script, we did not have a test session script. This made the testing process feel disorganized.

Another challenging aspect was figuring out how to distribute the pre- and post-test questionnaires, and the SUS and SEQ surveys. I felt that making four separate surveys would be too much of a hassle, so I decided to combine everything into one survey.

In the end, the project was a success, and I am proud to have worked with Katherine and Mechelle.

2. Group Reflections

Scheduling was hard throughout this project with everyone taking at least 5 classes. With our schedules full, it was hard to schedule interviews where everyone could be present. If we were to do things differently, we would have a set day for interviews so that we could get them out of the way. In addition to interviews, it was also hard to find

time to work on our project as a group with everything else we had going on. Since none of us were available on weekends, we had to find time for group meetings on weeknights. While it worked out alright, it was difficult to get work done efficiently. Looking back, we would probably also have a set date and time for group calls or meetings. They would still be later in the evening to compensate for our lack of availability, but the consistency might have helped.