Moodle Project Report

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Understand the problem space: focus groups

What is a problem space and what was ours?

A problem space is where the needs or issues of a customer are. This can be a large area like having problems with a mega-chain store or something as small as a local drycleaner. Problems can range drastic or simple, but they all share one focus. Our problem space was the Moodle webpage. We were given the task of exploring the website and finding problems or improvements that needed to be done to the site.

Why did we run a focus group?

Focus groups are useful for getting people's thoughts, opinions, and ideas on a topic of subject. We ran a focus group with our prototype because we wanted to get a user's perspective each on each step/task they did with our design. A survey or questionnaire is a good tool for gathering information as well but using the focus group allows people to exchange ideas and learn from each other. If every person thought the exact same way there would be no change in the world or in a problem space. Get a group of people together who all think in their own way and new solutions and or ideas will present themselves.

Who did we interview, how did we recruit them, and what questions did we ask?

For our focus group we selected one group member to be the moderator and the other five members acted like typical users of the web application. As for recruitment, we set a date and time where every member was able to attend and patriciate in the focus group. Questions asked during the focus group secession varied from asking a simple pros and cons list to how we felt about online learning as whole, with Moodle being an essential part of that learning process. We also discussed about how we thought professors did when it came to teacher in an online environment.

What were our findings?

We also found that students would like the ability for customization available for their Moodle page. “It would be cool for each student to be able to customize each class where you could move where assignments, quizzes, projects are located on the screen”. Moodle has classes set up, so each tap has the class ID and a plain color background. When we were talking in our focus group all of us touched on the topic of how being able to move the layout of classes like having homework at the top with the most recent lectures or adding a photo element to your class tap. Through customization students could rework their own individual page so it suits them the best and maximizes their online learning experience.

The topic of online grading also was a big talking point. “You can take the quiz literally right through the Moodle website and then get your results right then and there.” While it is very convenient to take a test or quiz on Moodle and have it graded immediately after completion, there are some discrepancies with the grading scales. Many teachers don’t show how each section of the course impacts their grade. Moodle also can have discrepancies with online questions if the wording doesn’t match with the answer. Having consistent grading and score values is something every student would want to see.

Moodle has had a positive effect for working from home. Having everything in one place for school makes learning much easier and has helped cut out a lot of stress and factors from college life. Students don’t need to worry about coming into class late due to traffic jams and or bad commutes. Teachers post their lectures online for students to review. As described by one member of the focus group: “It’s nice to have recorded classes, because when you’re in class there is no recorded class to allow you to go back and watch it”. There is no need to worry about not printing out documents since everything is turned in electronically. Asynchronous classes especially cut out a lot of scheduling stress. Students can watch the videos and do their homework when it works for their schedule and if the teacher posts regular updates the class pace is very well defined and manageable. These recordings also make great study tools for studying during finals or even wanting to improve on a topic that was troubling when it was first taught.

Socialization is another big topic that we talked it. Online learning can put up an invisible wall between both the students and the teachers. Since most of the time webcams aren’t required for most students, they spend hours talking to icons on screen. As described by one member of the focus group: “I don’t feel like I am having real conversations with my group members who have their cameras turned off”. Teaching in person and teaching over the computer. Getting one on one time with a professor is difficult as is and talking to a classroom of icons sometimes doesn’t even feel like school.

Target demographic and problem statement

What is a target demographics and a problem statement?

A target demographic is a pool of people that share specific interests, traits, and hobbies that closely resemble who the product was intended for.

A problem statement is a declaration of the current state of something that you aim to fix, and what should happen to fix the described problem in the current state. A problem statement should be a concise summation of a problem written in a way that clearly describes a single problem.

What was our target demographic and why?

Our target demographic for our prototype would be new and transfer college students. Preferably students who classes are project based and require a constant stream of communication between group members. As new/transfer students, they won't know as many people or how OU's school system works when they first begin. From our focus group findings, we noticed a common problem with the communication within Moodle itself. After reconvening with the focus group again, we found that having an easy-to-use tool of communication inside the site will help acclimate new students and new transfer students to OU much faster and make communication for their school projects much easier than trying to get everyone's number or creating a massive e-mail chain.

What was our problem statement and why?

Our problem statement is: Users in our demographic often struggle to find ways to communicate and collaborate with other students outside of class time. This is because not all teachers make time for students to communicate within class time and because new students may not know about other third-party communicating and collaborating tools yet.

Our problem statement was determined by predicting the needs of new incoming, and current students looking for an easy way to collaborate and interact with other students in their classes through Moodle. Our target demographic is uniquely affected by the problem as described in our statement because this group of students is the most likely to not already know of workaround systems to facilitate interaction with their classmates and would be the most needing to reach out to their peers, being that they are the newest students out of the demographic of all college students.

Generating a solution

What is a vison statement?

A vision statement is the inversion of the problem statement that serves as a high-level design objective or mandate. In the vision statement the users' needs are stated first and from there a transition from those needs is made by showing how the design vision meets the business goals.

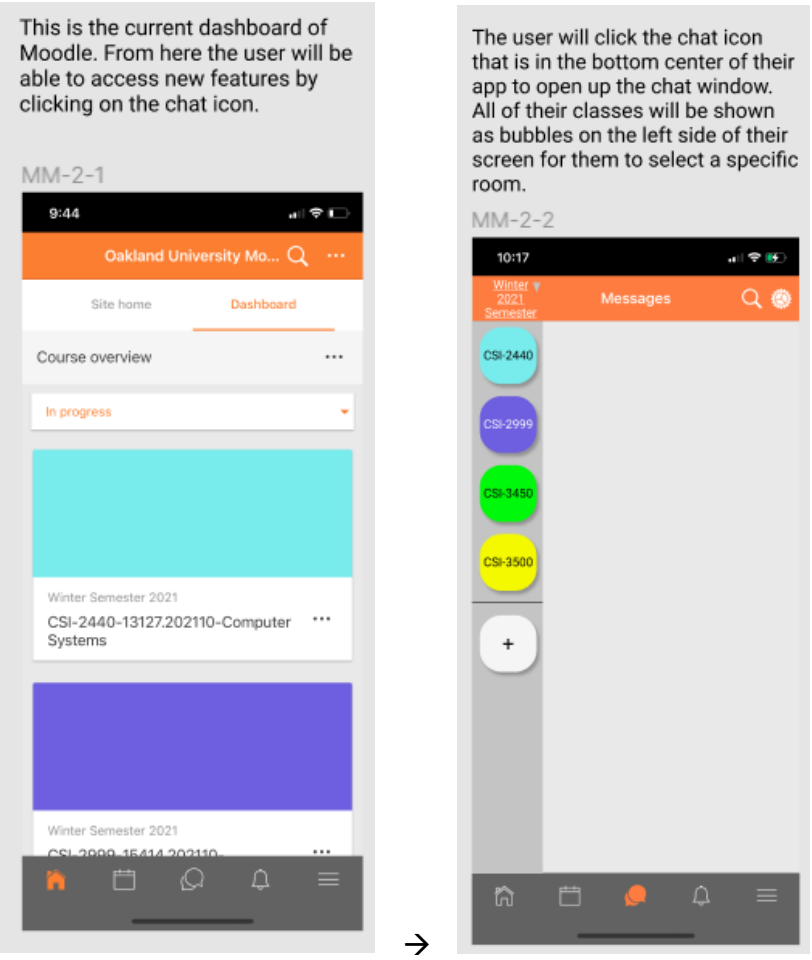
What was our vision statement?

Our vision statement that we decided on is as follows: "Our solution will provide Moodle users a tool to meet and communicate directly within the Moodle platform. Students would be able to link directly with group members from their class to discuss coursework."

What is a key path scenario?

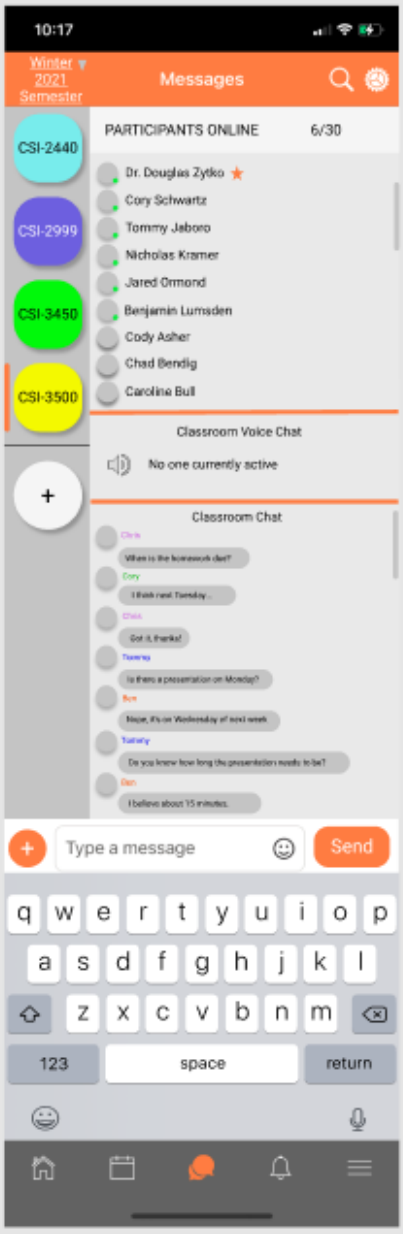
A key path scenario describes how the persona interacts with the product, using the vocabulary of the interaction framework. The scenarios depict the primary pathways through the interface that the persona takes with the greatest frequency, often daily.

What was our key path scenario?



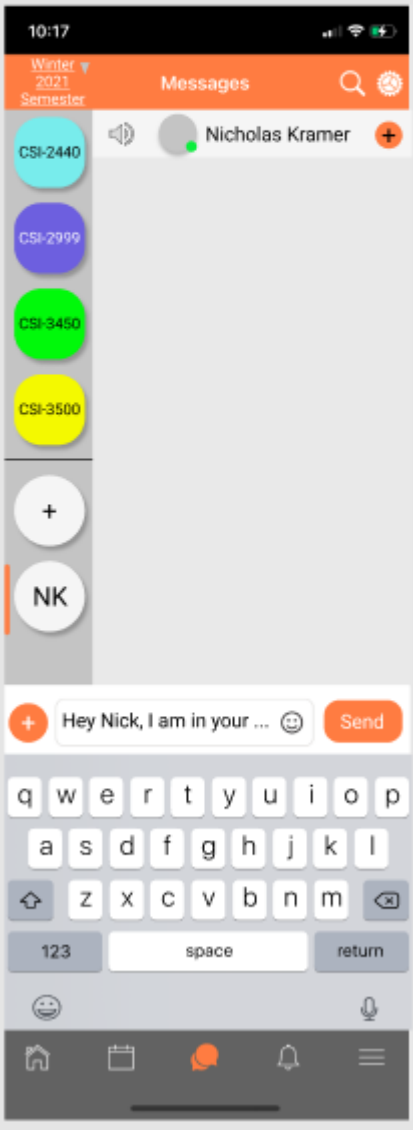
When the user selects their desired class icon, it will open up a similar screen as the classlist that already exists in Moodle, they will be able to start a chat with anyone they would like to in the class, or be able to talk in the general chatroom for the class.

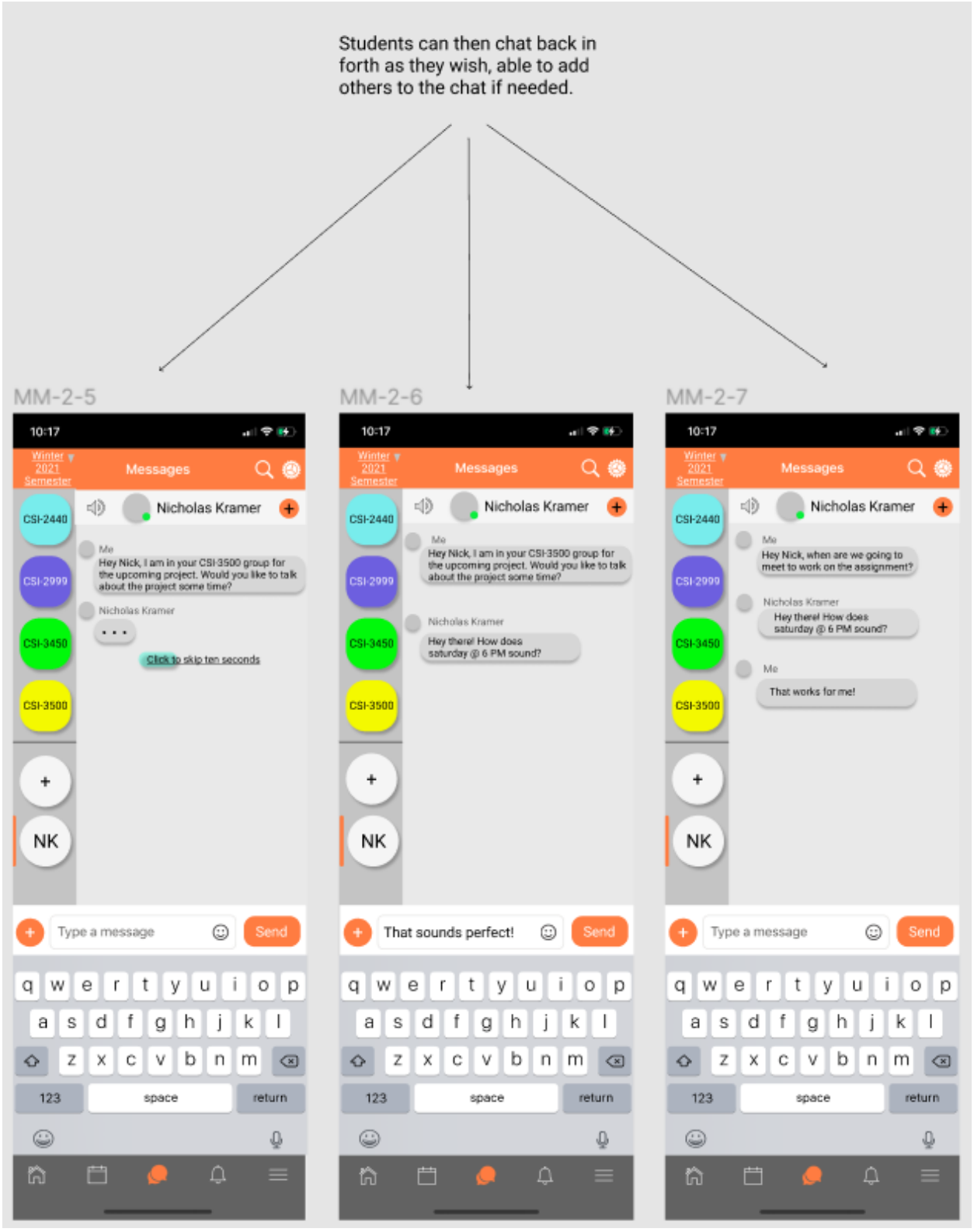
MM-2-3



When the user selects a specific classmate, a 1 on 1 chat screen will pop up. Classmates will be able to send messages back and forth with each other just like the current version of moodle, but this redesign will help the user to organize and navigate through the app.

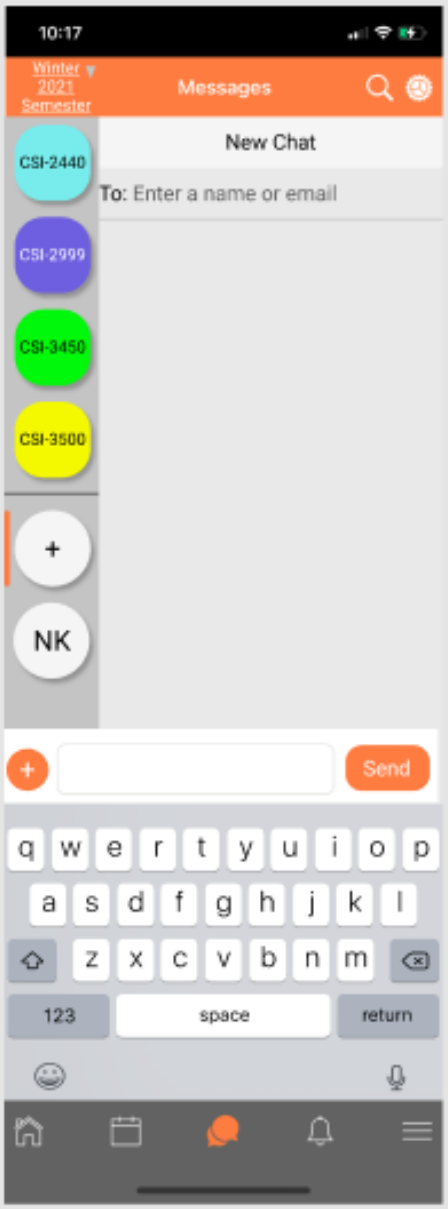
MM-2-4




Students can then chat back in forth as they wish, able to add others to the chat if needed.
MM-2-5
MM-2-6
MM-2-7
10:17
Winter 2021 Semester
Messages
Nicholas Kramer
CSI-2440
CSI-2999
CSI-3450
CSI-3500
NK
Me
Hey Nick, I am in your CSI-3500 group for the upcoming project. Would you like to talk about the project some time?
Nicholas Kramer
Click to skip ten seconds
Hey there! How does saturday @ 6 PM sound?
That sounds perfect!
Hey Nick, when are we going to meet to work on the assignment?
That works for me!
Type a message
Send
123
space
return

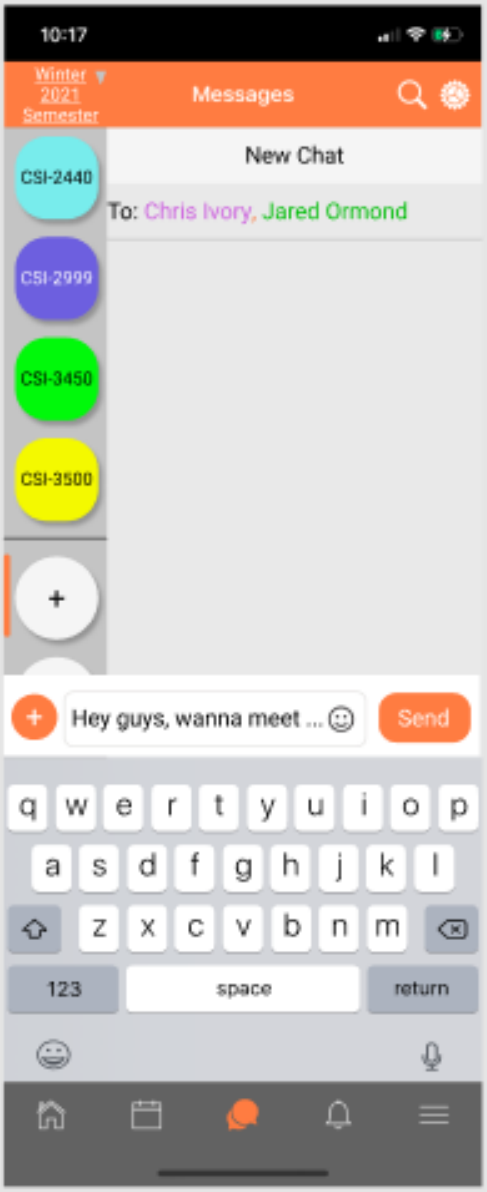
Users can create as many chats as they would like, adding other members, or keeping it private.

MM-2-8



In this example, you can see a group chat of 3 classmates is created.

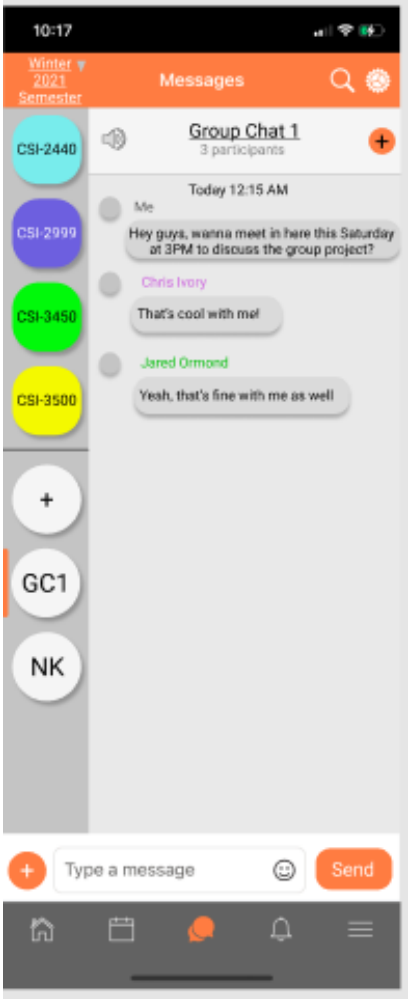
MM-2-10



Users can distinguish what messages are being sent by who, by choosing a random color that will represent each new student added to the chat (each color can only be used once).

This way, when meeting for the first time when everyones names are not familiar, they will be able to tell between the different chats.

MM-2-11



→ end of keypath

How did we arrive at our vision statement and key path scenario?

We arrived at our final vision statement and key path scenario by going through a few different iterations of the vision statement and key path scenario. We listened to the feedback from our team and others about our vision statement and key path scenario and made the appropriate changes based on that feedback.

Usability Assessment

What is a usability test and why did we do it?

A usability test is a collection of techniques used to measure characteristics of a user's interaction with a product. These tests are usually focused on measuring how well users can complete specific, standardized tasks, as well as what problems they encounter in doing so. We do usability testing so that we can understand how real users interact with the product and then make the necessary changes based on the results.

Hypothesis and research questions we explored with our prototype

What are the hypothesis and research questions we explored?

Hypothesis:

1. Users will initiate group chats directly within Moodle instead of sending emails back and forth if they are able to.

Research Questions:

1. Who do users think are able to view their group chats, and who would they want able to view them?
2. What benefits does a user anticipate from using group chats in Moodle?
3. What features do users expect to have in group messaging?
4. Do our users intend on using voice chat to communicate with others?

How are they feasibly testable given the constraints of the course?

We believe our hypothesis and research questions are feasibly testable in the last 2 weeks of the course. Given our proposed questions in the usability script for answering the hypothesis and research questions, we believe this is enough to answer them. If needed, we are able to conduct multiple usability tests if our hypothesis and research questions did not retrieve desired answers/results.

Our Prototype

Link to our prototype in Figma:

https://www.figma.com/proto/FvNl1r99gT4bxQOhVkE6if/Moodle-Prototype-Version-1?node-id=18%3A2&scaling=scale-down&page-id=0%3A1

Our Usability Testing Plan

How did we test our hypothesis and research questions?

We tested our hypothesis and research questions by asking slightly related questions during our usability test.

For **hypothesis 1**, "Users will initiate group chats directly within Moodle instead of sending emails back and forth if they are able to.", we asked the following questions:

1. "Have you tried to use other means of communication? If so, which ones?
   - Clarifies our users have not tried other communicating applications like Slack and Discord
2. "What would you want from a more modern form of communication provided by the school that would take precedence over emails?"
   - Understand if our user would even be interested in having a better form of communication provided by the school that isn't emailing
3. ~~"What advantages or disadvantages does this have over other methods of communication?~~ Does this serve as a replacement?"
   - We ask this question near the end of the prototype to understand after viewing the potential product, if our participant is satisfied with the idea and would consider this as a replacement for email.

For **research question 1**, "Who do users think are able to view their group chats, and who would they want able to view them?", we asked the following question:

1. "Besides the other person in this group chat, who else do you think can view these conversations? If there is no one, you can say no one else."
   - Being a school application, we ask this to gauge who the participant thinks can view their chats besides the people in it. This is a question related to privacy and to understand if the school wanted access to chats, the user would be okay with it.

For **research question 2**, "What benefits does a user anticipate from using group chats in Moodle?", we asked the following questions:

1. "What advantages or disadvantages does this have over other methods of communication?"
   - Understand whether the participant can see from the prototype that there is a benefit or advantage from using the application inside of Moodle. This also gauges any disadvantages which can be applied toward our revised solution or prototype.

For **research question 3**, “What features do users expect to have in group messaging?”, we asked the following questions:

1. “Before we continue into the message tab, what would you expect to be on the next page?”
   - Understand what idea the participants have in mind for a messaging page and contrast them to our ideas
2. “Is there anything you feel is missing or is overwhelming on this page? If so, what?”
   - See if there is to many features or not enough features that the participant would expect
3. “If you had three magic wishes to improve this product, what would they be?”
   - Asked at the end of the usability test. Determines if the participant wanted to see something added that wasn’t presented in the prototype.

What testing methods did we decide to use?

The testing method we are using is an interview approach and letting the participant interact with a prototype we created on Figma. One member from our group will attend the test to record and to clarify when needed. We will have a student from the class, outside our group, to conduct the interview with the participant. This will allow for unbiased reactions and questions with the participant.

The usability testing plan:

Hypothesis:
Users will initiate group chats directly within Moodle instead of sending emails back and forth if they are able to.

Research Questions:
Who do users think are able to view their group chats, and who would they want able to view them?
What benefits does a user anticipate from using group chats in Moodle?
What features do users expect to have in group messaging?

Prototype with appropriate scope and fidelity.

https://www.figma.com/proto/FvNl1r99gT4bxQOhVkE6if/Moodle-Prototype-Version-1?node-id=18%3A2&scaling=scale-down&page-id=0%3A1

Usability test - Interview Script

Introduce what is going to occur:

1. "This interview will be pretty informal. I'll ask a lot of questions, but I'm not testing you—I'm actually testing this product that I didn't design. If you get stuck or confused, it's not your fault. In fact, it helps us find problems we need to fix."

Learn about the user's context:

1. "What kind of classes do you take and how has it been attending school online?"
2. "How do you currently contact other students in your courses?"
3. "Have you tried to use other means of communication? If so, which ones?"
4. "What would you want from a more modern form of communication provided by the school that would take precedence over emails?"

Segway into the introduction

1. "As we go, please think aloud. Tell me what you're trying to do and how you go about doing it. If you get confused or don't understand something, please tell me. If you see things you like, tell me that too. Since I didn't design this, you won't hurt my feelings or flatter me. In fact, candid feedback is the most helpful."
2. "Would you be willing to look at the prototype"?

Introduce and Get reactions from the prototype

Home screen is shown, we have not entered the re-designed messaging feature yet.

1. "This is the current view of Moodle from a student with 4 courses in progress during their winter semester. How would you go about messaging a student from one of your courses and why?" NOTE: DO NOT CLICK ON ANYTHING YET
2. "Before we continue into the message tab, what would you expect to be on the next page?"

Take notes about where their first click is and why

Click on the message tab in the bottom middle to continue with the prototype.

3. "The current goal of this user is to message Nick Kramer from their CSI-3500 class to schedule a meeting time, where would you go next and why?"

Take notes on what users expect from the messaging landing page

Continue to the CSI-3500 class message board by clicking on CSI-3500

4. “So, what goes through your mind as you look at this?”
5. “Where would you go next and how would you go about doing that?”
6. “Is there anything you feel is missing or is overwhelming on this page? If so, what?”

Take notes on what user says and whether they have same mindset as we do

Continue by clicking on Nicholas Kramer to initialize chat with him

7. “In relation to the user’s goal, what are you looking to do on this page?”
8. “What do you think of this so far?”

Take notes on the users interaction with the prototype

Continue to next slide by clicking on the send button

9. “What is being demonstrated in this slide?”

User should be able to understand Nick is typing a message to reply and can continue by…

Continue by clicking on “Click to skip ten seconds”

10. “Besides the other person in this chat, who else do you think can view these conversations? If there is no one, you can say no one else.”
11. “Where do you think these users would be meeting up and using what to communicate?”
12. “How would you go about sending a reply to this person?”

Continue by clicking on send

13. “The user’s new goal is to initialize a group chat with their assigned group members from CSI-3500: Chris Ivory and Jared Ormond. How would you go about doing that from this page and what do you expect it to do?”

Take notes and Continue to New Chat page

14. “What is this page for?”
15. “What would you do from here to accomplish your new goal?”
16. “Is there anything missing from this page you would expect to see?”

TAKE NOTES! Is there a different feature our user wants to see in group messaging?

Continue to the next page by clicking on "Enter a name or email" or the keyboard

17. "What do you think of this page? What will you do next?"

Continue to next page by clicking on the send button

18. "What advantages or disadvantages does this have over other methods of communication? Does this serve as a replacement?"
19. "Besides the other people in this chat, who else do you think can view these conversations? If there is no one, you can say no one else."
20. "Is this page missing any features you would expect to see?"

END OF PROTOTYPE

User Debriefing

1. "What did you like about this product? What did you dislike?"
2. "How would you describe this product to a friend?"
3. "If you had three magic wishes to improve this product, what would they be?"

END OF USABILITY TEST

Results of our usability tests

Link to the recorded usability test:

https://drive.google.com/file/d/1iD5eIHvWDN5gMlkFtmppNLUTff6yD0Hz/view?usp=sharing

Results based around hypothesis and research questions:

Hypothesis: *Users will group chats directly within Moodle instead of sending emails back and forth if they are able to.*

From this hypothesis and our findings, we learned that our participant is a transfer student from Macomb Community College to Oakland University, and would prefer using a more modern form of communication to initialize conversations with class members. Like we anticipated, participant did not know of any other quick and easy method to communicate with class members besides searching for their email. Upon the end of the usability test, participant stated "this would serve as a good replacement instead of searching the student down and trying to find their information".

Research Question #1: *Who do users think are able to view their group chats, and who would they want able to view them?*

From this research question and our findings, we learned that our participant was hard of words when trying to explain this. He then went on to state that being privacy related, he believed that for one-on-one chats, only those two would be able to view them, maybe the professor, but not the school. Participant elaborated that there should be a privacy statement or button to allow the user to understand whether this is kept private or not from the teacher and the school.

Research Question #2: *What benefits does a user anticipate from using group chats in Moodle?*

From this research question and our findings, we learned that besides email, our user does not know of any other quick and easy method of communication with other students. The benefit they anticipate from this application is decreasing time spent searching for student's emails. However, the participant did not elaborate on the time spent waiting for reply emails like we anticipated. Our participant also related this benefit to being easier to get other contact information, and then leaving the app: "… I would plan on messaging the student to end up getting their phone number or snapchat". This indicates our users may not be interested in coming back to Moodle to chat or voice chat.

Research Question #3: *What features do users expect to have in group messaging?*

From this research question and our findings, we learned our participant alluded to the gesture of clicking on students' names instead of searching for their name multiple times in the test. Meaning our users will expect to be able to find classmates by entering the class first, and then selecting from a "student menu".

Also, our participant did not interact well with the plus sign for starting new chats. This is because he would rather go to the class the other students are in, select them from a class list, and add them to a single or group chat.

Participant also made a great question: "If I type Chris, will there be just one Chris from my CSI-3500 class, or will there be a ton of Chris's from all of my classes". This question can be answered by, altering our search with better filters, or having the user go through a "student menu" and selecting the Chris from there.

Participant expects to be able to see profiles of students by clicking on them while in the chat, as well as changing the name of group chats by clicking on the group chat name. Both of these were intended to be added, but we decided to keep a lower fidelity/scope in the prototype.

Revised prototype based on our findings

What were the changes we made and why?

1. **Removal of the + circle for starting new chats**
   We did this because our participant did not reach for + sign to start a new chat. We agreed that because students are just learning names for the first time, it is most likely that they will not remember how to spell each other's name when searching for them. We are not removing the feature completely, as we can use the search bar in the top right to replace this.
2. **Higher Scope and Fidelity for initialization of chats.**
   In this, we are adding more screens in the prototype to showcase how a user will start a group chat without clicking on the (now eliminated) + circle. We did this because many of our users will be interacting with the application this way for the first time and showing/testing them on a prototype with higher scope and fidelity will bring us closer to the final product, while still getting realistic criticism from our participants.
3. **Color messages sent by the user**
   We did this because our participant did not enjoy trying to cipher which text they sent against other students. To respond to this, we are going to color the messages sent by the user, so they more easily understand which one is from them.

Link to revised prototype in Figma:

https://www.figma.com/proto/djrcXg8a6ZzadUmbqm0Uw8/Moodle-Prototype-Version-2?node-id=18%3A2&scaling=scale-down&page-id=0%3A1

Next steps from here

What would be our next step from here?

We would create a higher fidelity prototype and make changed based on our findings from the usability test. After this, we would be conducting a new usability test.

After making changes to a higher fidelity prototype based on our findings, our next step from here would be conducting a new usability test.

In the new usability test, there will be the same demographic being tested, with very similar research questions (Some questions may need to be changed based on the changes made to the prototype). The script would be changed to have the participant go through a higher fidelity and scope of a prototype. This is because as we move along, we want our prototype to look more and more like a finished product.