

Project Phase 1
Mobile D2L System
CS 747: Human Computer Interaction

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Overview

Desire2Learn, or D2L, is an online system sold to universities that aims to provide services for facilitating education through online course content management. The purpose of this project is to provide a mobile application version of the D2L course management system to support users of mobile devices who need to interact with D2L.

This document will describe the results for the first stage of the project – requirements gathering and analysis. In it we will describe the users, their tasks, the data gathered from interviews and field studies held with current users, and the final requirements generated from the aforementioned activities.

Users

There are three main user types identified for the mobile D2L system.

Primary Users

1. **Students.** Students are the main primary users of the system. Students may be undergraduate or graduate university students taking courses to improve their education and typically, earn a degree in a desired field. Students range in age from their late teens to the elderly. Most undergraduate students will range in age from 18-23, while graduate students have a wider age range, typically from the mid twenties to middle age. While there is a wide variation in these students' backgrounds, they will all use the system for the same purposes. Students use the system to access and submit course content from a mobile device. They may need to check content posted to the course by a professor, or submit their own content for grading.
2. **Professors.** Professors are responsible for teaching courses to students by providing content which the students learn and are then evaluated on. Professors also come from varying backgrounds, and range in age from their late twenties to the elderly. They use the system to submit course content for students to access, and to review and assess the content students have submitted. Since they will typically provide most of the content for a course, they are less likely to be mobile users than students, as writing documents is more difficult on mobile devices due to hardware limitations.
3. **Teaching assistants.** Teaching assistants are students who are not enrolled in a class for course credit, but instead are paid to work with a professor to help teach and grade a course. They share the same range in ages and backgrounds as the students, but their tasks are essentially a subset of the professor's tasks, focusing mainly on submitting grades and content for a course.

Secondary Users

1. **IT Administrators.** IT (information technology) administrators support the system technical aspects and infrastructure of the system. They may be student workers or seasoned professionals. They typically range in age from their twenties to their sixties. Since the focus of this project is on the mobile application of D2L, they will primarily be using the system by supporting it, assisting primary users, and adjusting the back-end D2L system to support the mobile version as necessary. Since the data for D2L is stored on servers which are accessed by

the users (such as through the mobile application we are proposing), it is assumed that there will already be a D2L system installed and functioning at the university which the IT staff currently supports. The application proposed in this project will provide a new way to access it to better support users' growing needs.

Personas

Undergrad Persona – Niles Dupree



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<http://www.flickr.com/photos/eulothg/6915570849/sizes/m/in/photostream/>

Niles Dupree is an undergraduate student at the University of Wisconsin - Milwaukee. Niles just started attending the university this year. He's 19 years old and has a knack for technology and loves mobile devices. D2L is a new system for him but he's quick at learning how to use new websites. Most of his days are spent on the computer but now with starting his schooling to get his degree in Biology he really needs to be able to work on the go.

Graduate Persona – Chuck Buttersworth



Figure 2 creative commons licensed by keoshi
<http://www.flickr.com/photos/keoshi/214007566/>

Chuck is a second year master's student in Political Science at UWM. He is 25 years old, lives near campus in a studio apartment and recently broke up with his girlfriend. He is on his second Android smartphone and feels naked without it. Chuck loves living in a time in which he can always be connected to the people and information he wants. Since moving out of his parent's house when he began college, Chuck has never had a landline house phone and views phones other than smartphones as "nostalgic." He logs into the UWM desktop version of D2L daily and the mobile version once or twice

per week. He works at a local coffee shop 20 hours per week as a barista. He is very busy juggling his academic, work, and social life trying to find a new girlfriend.

Professor Persona – Dan Fulton



Figure 3 creative commons licensed by Zilverbat <http://www.flickr.com/photos/25228175@N08/4684747970/>

Dr. Dan Fulton is a professor at UWM. He is 52 years old, married, and teaches History. He uses websites regularly and has been using the desktop version of D2L for five years now, and is familiar with its capabilities for setting up course content. He recently bought a smartphone and is quickly learning its capabilities and adapting to its controls. He'd like to use it for more of his everyday work, as he is often between classes or in research labs away from his desktop computer, and would like to have access to his regular tasks in these situations. He also travels frequently, and uses his smart phone to remain available to students.

Task Analysis

Overall Task Structure

Tasks in the system are built around courses. For each course, a user has a set of tasks related to managing or accessing the content for that course. By executing the steps in the task, the user's goal is to interact with the course in some way.

Note that the tasks covered in this analysis represent what the user can do with the current system, which is defined as the current mobile D2L site for UWM. Our project's aim is to improve the mobile experience for D2L (versus the desktop version of D2L or desktop-based course management systems in general), so we must begin by analyzing the tasks users can do with the current mobile system.

Task list for current system

The current mobile D2L system supports the following tasks:

1. View D2L news and events
2. Search class list
3. Switch to desktop version
4. View course events
5. View course news/announcements
6. Dismiss course news/announcements – this will remove news from the news view
7. Access course content (documents, presentations, etc.) – this typically will entail opening or downloading the content to view in an external application, like a PDF viewer.
8. View recently viewed course content topics
9. Bookmark course content for easier access at a future time
10. Access previously bookmarked content
11. View course discussion forums
12. Submit messages to course discussion topics
13. Reply to messages in course discussion topics
14. Subscribe to discussion topics
15. Search discussion topics
16. View course grades
17. View course grade feedback
18. View grade weight, average and statistics
19. Logout

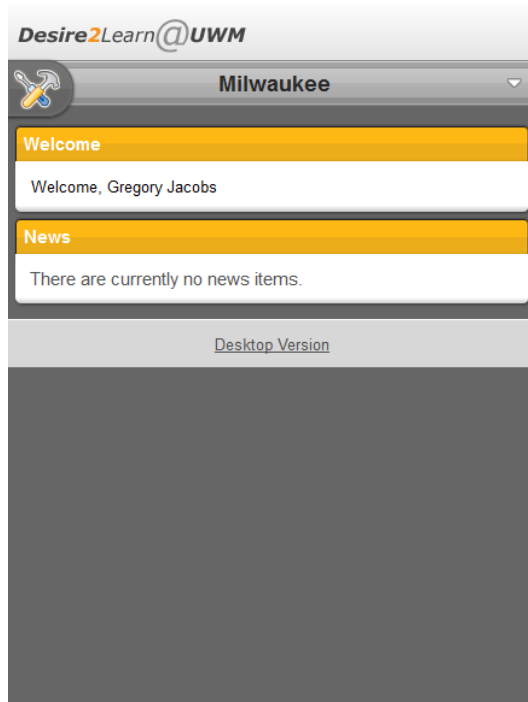
Task Scenarios

Reply to messages in course discussion topics

Mike Smith is a student in Computer Science 747: Human-Computer Interaction. He is riding the bus on his way to class when he remembers that there was a discussion group assignment due this week. He

has to post a response to at least one other student's message to complete the assignment, and he needs the points from this assignment to pass the class.

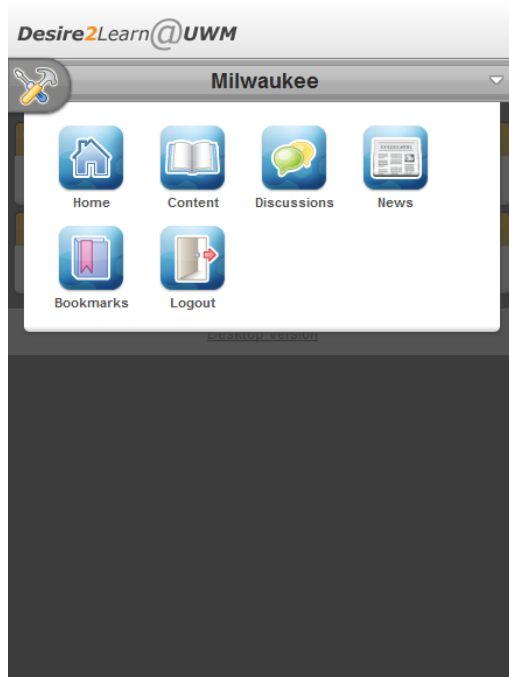
He quickly pulls out his smartphone and logs in to D2L. A screen similar to the one below is shown:



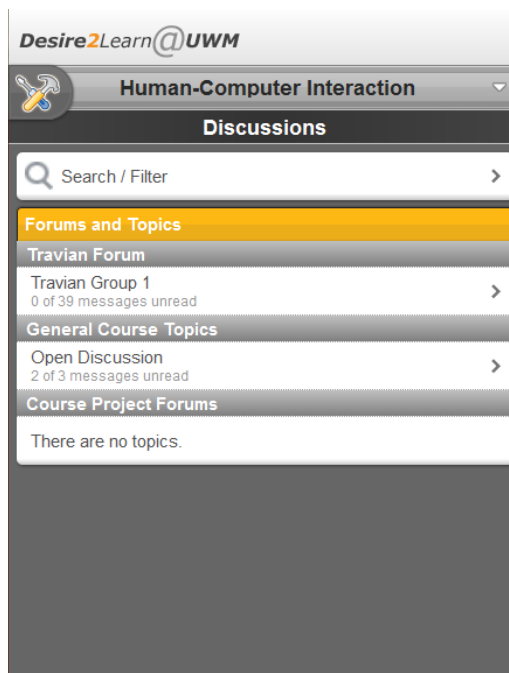
He presses the Milwaukee drop down. A list of his courses is displayed, and he chooses his CS 747 from the list, similar to what is shown in this image:



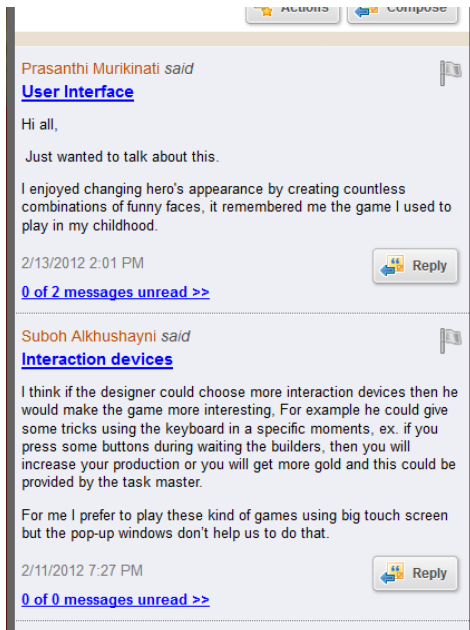
He then presses the tools icon to bring up the list of actions, and chooses discussions, as can be seen in this screen:



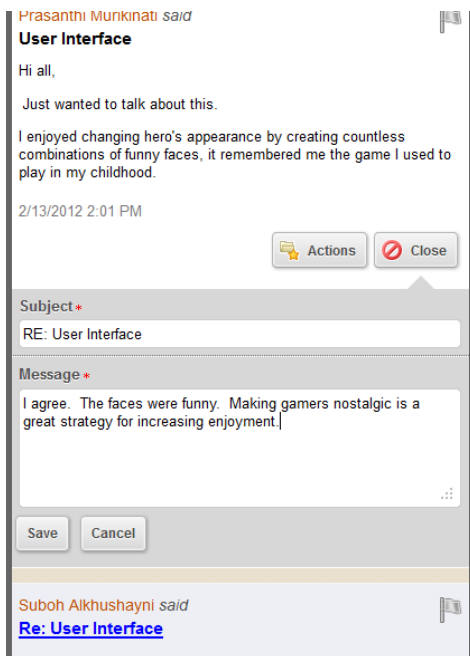
The discussion topic list loads. He quickly checks his watch to see how much time he has, then clicks on the *Travian Group 1* topic.



He scrolls down and reads a few messages. Since he is in a hurry, he selects the first message in the list, thinking “this is a good message to respond to.”



He presses the **Reply** button, and a small dialog with a subject and message opens. Luckily, the subject has auto-populated “RE: User Interface,” which works for his message, so he leaves it unedited. In the message pane, he types “I agree. The faces were funny. Making gamers nostalgic is a great strategy for increasing enjoyment.” When finished, he presses the **Save** button.



He observes that his message has been posted. He relaxes now that the assignment is complete, and puts away his phone.

Access Course Content: syllabus

Ken Finley is a student in Sociology 101. While eating lunch, he remembers he forgot to do the readings for his class in 2 hours. His instructor keeps track of participation points and Ken didn't raise his hand in the last class. He has to make sure to answer at least one question in class today to make sure his participation grade doesn't suffer. Luckily he has his textbook with him, but he does not have a copy of the syllabus, so he doesn't know what chapter to read. Ken thinks to himself, "I'm glad I live in the modern times. I'll get the chapters from the syllabus on my cellphone and have the chapter read before I finish this burger."

Ken the ketchup off his fingers and gets out his cellphone. He navigates to the UWM Homepage on his phone and clicks the D2L link in the top navigation. He is presented with the D2L login page and enters his username and password.

He presses the Milwaukee drop down to access all of his classes.

Ken selects Sociology 101. He wishes the system would draw a highlight box around the one class that he clicked when he clicks, instead of drawing a box around the whole list of classes. But he also wishes the food in the Union was a little cheaper and more delicious.

Ken scrolls down and then back up and doesn't see the syllabus. He presses the tools icon and is presented with a list of options that includes Content, which he clicks.

The system now gives him a list of folders, with the first folder being Course Information. Ken clicks that folder and sees the first document is the Syllabus. Ken pauses and wonders whether he should grab another French fry to celebrate finding the info now or once he actually has read the document. He decides to not get his hands all greasy quite yet until he actually knows what chapter to read. "Better off getting the pages in my book greasy, than my cellphone screen," Ken thinks to himself.

Ken clicks the icon that looks like a sheet of paper that's labeled Syllabus. A new screen opens with a PDF download icon and the filename of the document: Soc101Syllabus.pdf. Ken thinks, "Geez, I have to click 'Syllabus' twice?" Ken clicks the PDF download and the system downloads the syllabus.

He clicks the back button on his cellphone and is brought back from the download screen to the course screen. He clicks the tools icon, quickly followed by the Logout icon. He leans back in his chair and knowing he will have no problem now getting the assigned reading done in time and be prepared to answer one, if not two questions in class this week.

Task Concrete Use Cases

Reply to messages in course discussion topics

<u>User Actions</u>	<u>System Response</u>
User logs in to D2L page.	System verifies user's identity. System displays D2L home page.
User selects the Milwaukee dropdown.	System displays list of user's courses.
User selects desired course from dropdown list.	System displays course home page.
User selects the Tools button.	System displays course tools list.
User selects the Discussions button.	System displays discussions list page.
User selects a discussion topic.	System displays discussion messages for the topic in a new page. Discussion messages are shown in linear order, scrolling downward. In order to see response messages, the original message must be selected. Only 10 messages are shown at a time. At the bottom is a "Load more" link to show more messages.
User presses the reply button on a message.	System displays the message and any previous responses in a new page. A small form is appended below the original message with the following input text fields: <ul style="list-style-type: none">• Subject• Message Below the text fields are Save and Cancel buttons.
User types a message into the message field and presses Save.	System saves the response message. System displays the user's response below the original message on the screen.

Access Course Content: syllabus

<u>User Actions</u>	<u>System Response</u>
User logs in to D2L page.	System verifies user's identity. System displays D2L home page.
User selects the Milwaukee dropdown.	System displays list of user's courses.
User selects desired course from dropdown list.	System displays course home page.
User selects the Tools button.	System displays course tools list.
User selects the Content button.	System displays content list page.
User selects Course Information folder.	System displays a Table of Contents of the Course Information.
User selects Syllabus.	System displays the Syllabus page, which has a link to download a PDF of the syllabus.
User clicks PDF icon of to initiate download.	System allows phone to display download screen.

	System downloads the PDF to phone for viewing with user's PDF viewing software.
User clicks back button on cellphone.	User is brought back to the Syllabus screen of the Content for the course.
User clicks tools icon.	System displays course tools list.
User selects Logout icon.	System logs user out.

Domain

The system is targeted at a university environment, and is used as a class content management system. Its goals are to provide online access for traditional class materials, including documents, quizzes, discussions, grades, and communication methods between class members and professors.

Requirements Gathering Activities

Interviews

Four users were interviewed for the purposes of receiving direct feedback on users' opinions about the current system, and what additional needs they have. The interviews followed a structured format. The interview format and questions are below:

Structured Interview Procedure:

Record the interview if possible.

Make the interviewee feel comfortable.

Ask the specific questions below and record the answers.

1. What are the most common reasons you use D2L?
2. Do you ever have trouble navigating the desktop version of D2L?
3. What features of the desktop version of D2L do you think work well?
4. What features of the desktop version of D2L would you like to see improved?
5. Have you ever used the mobile version of D2L?

If NO complete Q6 - Q10

If NO: 6. Why haven't you used the mobile version?

If NO: 7. What do you envision the mobile version to be like?

If NO: 8. Why do you think you would use the mobile D2L over the desktop version?

If NO: 9. What do you think you would use the mobile version the most for?

If NO: 10. Aside from not owning a smartphone, can you think of any reasons why you would not like to use a mobile version of D2L?

If YES complete Q11 - Q18

If YES: 11. How do you feel the mobile version compared to the standard version?

If YES: 12. Were things where you expected them?

If YES: 13. Did you have any trouble navigating the mobile version?

If YES: 14. Did you encounter any technical difficulties using the mobile version?

If YES: 15. What are the most useful D2L features in a mobile version?

If YES: 16. What sort of environment (times, places, environmental conditions) would/do you most likely use the mobile version of D2L in?

If YES: 17. Would you recommend the mobile version to other D2L users? Why or why not?

If YES: 18. Do you have any other comments about your experience using the mobile version of D2L?

Interview Results

Interview 1

One of the key lessons learned from this interview was that the system's appearance had a large effect on its usability. The user mentioned several times that the look and feel of the application gave the appearance that it was incomplete or "under construction." The interview also revealed that the user found the Tools icon to be unintuitive and not a logical starting point for their tasks.

The user also mentioned preferring the desktop version, for two likely reasons. The first was that, as mentioned above, the interface of the mobile version seemed incomplete and not user-friendly. The second is that uploading files to the dropbox was one of the main tasks the user mentioned using D2L for, and this feature is not available in the mobile version.

An enhancement the user mentioned was the need for a better news feature, including the ability to update the news feed with notifications from other aspects of D2L, such as grades (e.g. showing newly posted grades in the news feed). Finally, the user indicated that the browser "back" button behavior was not always consistent, which is another issue that should be addressed.

Interview 2

Interview 3

Interview 4

Full results of the surveys can be found in Appendices A-D.

Field Studies

In order to gain a better understanding of how users interact with the current mobile D2L system, four field studies were performed in which users were directly observed interacting with the system by executing a set of tasks.

Field Study Procedure

- Administrator will observe user complete the following tasks.

- Instruct the user not to back out of an area once the task is completed. Some tasks continue from place left off and some start from the beginning again.
- For most tasks there are multiple ways to accomplish it, therefore keep track of how they navigate to it.
- For each task note the user's ease of completing the task, the user's mood, the user's comments and any other observations.
- The administrator must not direct the user on how to do the task but may offer minimal help only if the user is incapable of moving forward in the task.

Field Study Tasks

1. Go to the main page of the class Human-Computer Interaction.
2. For this class, find and view the syllabus in the Course Information folder.
(The point of this task is to note how long it takes them to figure out that these things are in the Contents section and how they navigate there).
3. View the grade for Quiz #1 for this class.
4. View a course announcement of your choice for the Human-Computer Interaction class.
5. Go to the Discussion section and post a test message onto the Open Discussion forum.
6. Go to the class Content section and *bookmark then view* the Chapter 2 Slides found in the Requirements folder of the Lecture Slides folder.
7. Go back to the table of contents.
(This task is designed to see if they recognize the breadcrumb trail above the slides folders vs. using the Tools icon at upper left of screen.)
8. Find but do not open the D2L system news.
9. Go to the chapter 2 slides by using the bookmark you created earlier.
10. Find and open the list of Recently Viewed Topics.
11. Logout

Field Study Results

Field Study 1

There was a small initial learning curve in the study as the user grew accustomed to the D2L mobile interface. After the first couple tasks, the user seemed comfortable with almost all of tasks. However, there were a few navigation errors rooted in a few main issues. The first was that the user had difficulty with the high-level navigation of the system, at first not recognizing the "Milwaukee" banner as the course selection drop-down, and later not recognizing the tools icon as the entry point for most D2L features. This is likely due to the fact that this navigation structure differs greatly from the desktop version. Another issue was that some features' terminology was confusing in relation to the navigation, for example the user found the "Recent Topics" location in the Course Content to be misleading, they expected it would be related to the Discussions feature.

Despite these issues, the user remained positive and willing throughout the field study. Overall, the study indicated room for improvement in the interface, but showed that after a certain amount of use, the user did not have great difficulty accomplishing most tasks.

Field Study 2

In general, the user was quite comfortable performing the assigned tasks. There was a very minor learning curve that seemed involve knowledge of the tools icon. The user was clearly experienced with smartphones, but seemed to have limited experience with the D2L Mobile, as some tasks presented temporary challenges to the user, with the user even becoming mildly to moderately frustrating on two occasions during the field study. The frustration never lasted past the point of successfully completing the particular task. The overall mood of the user remained very good throughout the field study.

Due to the nature of the small screen, the study required very close proximity between the observer and the observed. It did seem that the user experienced an “observer effect” as a result. The user seemed hesitant at times of uncertainty to simply click around, and appeared to want every click to be a meaningful click.

Field Study 3

Field Study 4

Mental Models

In general, the users’ tended to model the system as... this reflected the reality of the system well in that...

Summary

From the interviews and field studies, several key findings were identified...

- Current satisfaction
- Inadequacies
- Evidence

Requirements

Based on the data gathered from the interviews and field studies, a set of clear requirements for the mobile D2L system was formed based on the needs of the users. These requirements will allow the new mobile D2L system to support more tasks desired by the users, and allow easier and more efficient execution of tasks. The requirements are listed below.

1. The system shall...
2. User shall be able to...
3. Another
4. Another
5. Another
6. Another – probably 20-30 of these

Appendix A – Interview Results – #1

1. What are the most common reasons you use D2L?

Check my grades

Check course material - slides

Submit assignments to the dropbox

2. Do you ever have trouble navigating the desktop version of D2L?

Not too much. I'm comfortable with the things I use it for.

3. What features of the desktop version of D2L do you think work well?

Course material and grades are intuitive to use and navigate.

4. What features of the desktop version of D2L would you like to see improved?

Announcements/news – they are distracting and I didn't know how to dismiss them until today. I also don't like how some of the course content opens within the window, there's so many title bars that it tends to get squished. The "open" behavior for content also seems to change depending on what browser I'm using and what the file is.

5. Have you ever used the mobile version of D2L?

Yes, a few times, but then I found the "desktop version" link at the bottom and I usually just switch to that. When I was going through it I wasn't sure how to use it, it looked like it was under construction.

If NO complete Q6 - Q10

If NO: 6. Why haven't you used the mobile version?

If NO: 7. What do you envision the mobile version to be like?

If NO: 8. Why do you think you would use the mobile D2L over the desktop version?

If NO: 9. What do you think you would use the mobile version the most for?

If NO: 10. Aside from not owning a smartphone, can you think of any reasons why you would not like to use a mobile version of D2L?

If YES complete Q11 - Q18

If YES: 11. How do you feel the mobile version compared to the standard version?

Definitely room for improvement in the mobile version, it seems less mature, less user friendly, I also noticed it's missing some things I'm used to in the desktop version.

If YES: 12. Were things where you expected them?

No, not for the mobile version. I didn't expect the tools icon to open the main menu and it took me a long time to figure out how to use the main dropdown to switch classes.

If YES: 13. Did you have any trouble navigating the mobile version?

Yes, again I didn't expect the tools icon and wasn't clear how to navigate from the home page. Once I learned the tools thing, it wasn't as bad, but still felt awkward. Also, the back button didn't always seem to work, sometimes it takes me to the course home, while sometimes it just went back to the last page.

If YES: 14. Did you encounter any technical difficulties using the mobile version?

Not really.

If YES: 15. What are the most useful D2L features in a mobile version?

Grades and course content are the main things I use it for. I'd like a quick way to access course news and updates – instead of going to course home, it would be nice if this was all on the d2l home page. I'd like to view and dismiss new grades from the start page too – it'd be nice if they were treated like a news item.

If YES: 16. What sort of environment (times, places, environmental conditions) would/do you most likely use the mobile version of D2L in?

Sitting in the back of class when the professor says grades are posted – need to be fast and discrete. At work to check news for the course before I commute – typically in a noisy, busy cubicle environment in the afternoon.

If YES: 17. Would you recommend the mobile version to other D2L users? Why or why not?

Not so much, it wasn't very intuitive at first. Once you get the hang of it it's useful, but it's still worse than the desktop version.

If YES: 18. Do you have any other comments about your experience using the mobile version of D2L?

Again I'd like to mention how the appearance does not imply it is fully working, it feels incomplete and the initial navigation is confusing. I usually prefer the desktop version.

Appendix B – Interview Results – #2

1. What are the most common reasons you use D2L?

She uses it mostly to check her grade and if assignments are updated/posted.

2. Do you ever have trouble navigating the desktop version of D2L?

No, It's pretty easy to find everything she needs.

3. What features of the desktop version of D2L do you think work well?

She likes the 'unread' notification that are shown for posts on the main page. That saves her from going through each class and checking if someone posted a discussion topic.

4. What features of the desktop version of D2L would you like to see improved?

When logging into the system it should only display the current systems courses and not every semester, or at least remember what tabs were closed previously.

5. Have you ever used the mobile version of D2L?

Yes, but mostly just to check her grades. She found herself navigating to the desktop version quite frequently.

If NO complete Q6 - Q10

If NO: 6. Why haven't you used the mobile version?

If NO: 7. What do you envision the mobile version to be like?

If NO: 8. Why do you think you would use the mobile D2L over the desktop version?

If NO: 9. What do you think you would use the mobile version the most for?

If NO: 10. Aside from not owning a smartphone, can you think of any reasons why you would not like to use a mobile version of D2L?

If YES complete Q11 - Q18

If YES: 11. How do you feel the mobile version compared to the standard version?

The mobile version is pretty useless, it's too hard to find things that she uses often.

If YES: 12. Were things where you expected them?

No, she had trouble finding most things, it took her forever to realize how to find the list of classes. The top bar doesn't really look click-able.

If YES: 13. Did you have any trouble navigating the mobile version?

She had a lot of trouble and she would normally give up on even trying to use it.

If YES: 14. Did you encounter any technical difficulties using the mobile version?

Mostly just not understanding the layout of the system. Also depending on what phone she was using she couldn't access certain classes.

If YES: 15. What are the most useful D2L features in a mobile version?

Being able to see her grades was the most useful feature.

If YES: 16. What sort of environment (times, places, environmental conditions) would/do you most likely use the mobile version of D2L in?

Usually she would use it if she didn't have her laptop on her and wanted to check if an exam grade was posted.

If YES: 17. Would you recommend the mobile version to other D2L users? Why or why not?

No, because it's inefficient and confusing.

If YES: 18. Do you have any other comments about your experience using the mobile version of D2L?

Not really, I just enjoy the desktop version better.

Appendix C – Interview Results – #3

1. What are the most common reasons you use D2L?

For online classes. Everything's centered around D2L: content, discussions, dropbox, grades etc.

Most onsite classes have a D2L site where the instructor posts the syllabus, articles, and/or PowerPoint slides for upcoming or previous lectures. So, I'll use the site to get to those documents. And/or use the Dropbox and grading modules if the instructor uses those.

2. Do you ever have trouble navigating the desktop version of D2L?

Sometimes I click "Content" or "My Home" when I mean to click "Course Home," which is annoying. I suppose it would be nice if they moved that "Course Home" button onto the navigation area that has Content, Discussions, Dropbox, etc. Also, sometimes I get a little turned around in the Dropbox area. If I want to check if the instructor's read my submissions I'll click on the folder title link, which is wrong, instead of the link in the "Submissions" column which is right.

3. What features of the desktop version of D2L do you think work well?

I like that it lists the number of unread messages in the Discussion area. And, this might not be new, but I like that you can star a conversation in the discussion area so that you can get e-mails when the thread gets updated. The content is all listed, so it's usually easy enough to find what you're looking for there. D2L works, but it's not the best system in the world.

4. What features of the desktop version of D2L would you like to see improved?

I don't know if instructors set this up or what, but I really don't like when I click on a content link (for a PDF, PPT, etc) and it automatically downloads. I like when it pops up in the frame and then from there I can download it or whatever. Sometimes I just want to take a look at the syllabus and not download it again, but it's set up to download then at the end of the semester I end up with, like, 13 syllabus files in my downloads folder. That being said - for the most part, I don't like the frames. You can't resize any of them. And it's weird because - who uses frames anymore? Also - URLs can get a little crazy because D2L appends some garble to the beginning of it, so if I used the little "pop it out of the frame" icon and then wanted to link that site or whatever, it would have the whole uwm-DOT-courses-DOT-blah blah blah thing in front of it, which doesn't work for sharing/revisiting the URL.

5. Have you ever used the mobile version of D2L?

Yes.

If NO complete Q6 - Q10

If NO: 6. Why haven't you used the mobile version?

If NO: 7. What do you envision the mobile version to be like?

If NO: 8. Why do you think you would use the mobile D2L over the desktop version?

If NO: 9. What do you think you would use the mobile version the most for?

If NO: 10. Aside from not owning a smartphone, can you think of any reasons why you would not like to use a mobile version of D2L?

If YES complete Q11 - Q18

If YES: 11. How do you feel the mobile version compared to the standard version?

Less functional - all of the options aren't available. I can't view the dropbox.

If YES: 12. Were things where you expected them?

Not at first. The titles of the sections are the same, but the layout is totally different.

If YES: 13. Did you have any trouble navigating the mobile version?

Yes. It's kind of crazy. It took me a bit to figure out that I had to click on that grey bar to select the class that I wanted to look at and then click on the little tools icon to get to the different options (discussion, content, etc). The discussions are a little odd too - you have to scroll to the bottom of the original post to see the different responses and whether any of them are unread.

If YES: 14. Did you encounter any technical difficulties using the mobile version?

Sort of. The videos posted didn't load at all, but I wasn't really expecting them to.

If YES: 15. What are the most useful D2L features in a mobile version?

Look at grades, view feedback, access content, read/post to discussions, see news from instructor.

If YES: 16. What sort of environment (times, places, environmental conditions) would/do you most likely use the mobile version of D2L in?

During the day, on the bus, at a restaurant, in a car - places that I can't use my computer/get an internet connection

If YES: 17. Would you recommend the mobile version to other D2L users? Why or why not?

I would recommend that they use it if they don't have an internet connection or they aren't near a computer and need to find something out that can only be found on D2L. It's faster and easier to work with the desktop D2L, but the mobile version will work in a pinch.

If YES: 18. Do you have any other comments about your experience using the mobile version of D2L?

I don't like that in the discussion area all of the messages are expanded - I don't just see the title of the post like I do on the desktop site, I see the whole post. Maybe there's a setting somewhere that affects that, but I haven't looked for it.

Appendix D – Interview Results – Name

Appendix F – Field Study – #1

Administrator log in to mobile D2L. Leave site on the first screen, Milwaukee.

TASK 1:

Go to the main page of the class Human-Computer Interaction.

Navigation trail:

Presses Milwaukee

Presses HCI

Task analysis:

___ Was the user able to complete the task directly and quickly? or

__X__ did they complete the task directly but slowly? or

___ did they wander through unnecessary screens? or

___ ask for help?

___ other:

Attitude of the user:

___ frustrated?

x comfortable?

x good mood?

___ bad mood?

x willing?

___ unwilling?

___ other:

Did the user make any comments about the interface as they completed the task?

“Took a while to realize Milwaukee was a dropdown”

Additional observations?

Administrator leave the site on the Human-Computer class home screen.

TASK 2:

For this class, find and view the syllabus in the Course Information folder.

(The point of this task is to note how long it takes them to figure out that these things are in the Contents section and how they navigate there).

Navigation trail:

Checks dropdown

Clicks HCI

Clicks tools button

Clicks Content

Clicks course information

Clicks syllabus

Opens syllabus in PDF viewer

Task analysis:

___ Was the user able to complete the task directly and quickly? or

___ did they complete the task directly but slowly? or

__X__ did they wander through unnecessary screens? or

___ ask for help?

___ other:

Attitude of the user:

___ frustrated?

__x__ comfortable?

__x__ good mood?

___ bad mood?

__x__ willing?

___ unwilling?

___ other:

Did the user make any comments about the interface as they completed the task?

"Maybe it's in the dropdown again" – while trying to find course content

“The tools button feels more like it should lead to a settings page”

Additional observations?

Administrator return to Human-Computer Interaction home screen.

TASK 3:

View the grade for Quiz #1 for this class.

Navigation trail:

Clicks tools

Clicks grades

Clicks quiz 1

Observes quiz grade

Task analysis:

☒ Was the user able to complete the task directly and quickly? or

☐ did they complete the task directly but slowly? or

☐ did they wander through unnecessary screens? or

☐ ask for help?

☐ other:

Attitude of the user:

☐ frustrated? ☒ comfortable?

☒ good mood? ☐ bad mood?

☒ willing? ☐ unwilling?

☐ other:

Did the user make any comments about the interface as they completed the task?

"Once I learned what the tools button did, it was fairly easy"

Additional observations?

Administrator return to Milwaukee home screen.

TASK 4:

View a course announcement of your choice for the Human-Computer Interaction class.

Navigation trail:

Clicks Milwaukee

Clicks HCI

Clicks tools

Clicks news

Clicks classroom change news event

Task analysis:

___ Was the user able to complete the task directly and quickly? or

__x__ did they complete the task directly but slowly? or

___ did they wander through unnecessary screens? or

___ ask for help?

___ other:

Attitude of the user:

___ frustrated?

__x__ comfortable?

__x__ good mood?

___ bad mood?

__x__ willing?

___ unwilling?

___ other:

Did the user make any comments about the interface as they completed the task?

Additional observations?

Administrator leave the site on the chosen course announcement page.

TASK 5:

Go to the Discussion section and post a test message onto the Open Discussion forum.

Navigation trail:

Clicks tools

Clicks discussions

Clicks open discussion

Clicks compose

Types "test" for subject

Types "Test message" for message

Presses save

Task analysis:

___x___ Was the user able to complete the task directly and quickly? or

_____ did they complete the task directly but slowly? or

_____ did they wander through unnecessary screens? or

_____ ask for help?

_____ other:

Attitude of the user:

___frustrated?

__x__comfortable?

__x__good mood?

___bad mood?

☐_x_ willing?

☐_unwilling?

☐_other:

Did the user make any comments about the interface as they completed the task?

Additional observations?

Administrator return to Human-Computer Interaction home screen. (Don't forget to delete posting using desktop interface. There is no ability to delete a posting on the mobile version.)

TASK 6:

Go to the class Content section and *bookmark then view* the Chapter 2 Slides found in the Requirements folder of the Lecture Slides folder.

Navigation trail:

Clicks tools

Clicks content

Clicks Lecture Slides

Clicks Requirements

Clicks Chapter 2 slides

Clicks bookmark icon

Clicks PPT file – file opens in PPT viewer

Task analysis:

☐_Was the user able to complete the task directly and quickly? or

☐_x_ did they complete the task directly but slowly? or

☐_did they wander through unnecessary screens? or

☐_ask for help?

☐_other:

Attitude of the user:

___frustrated? _x_comfortable?

_x_good mood? ___bad mood?

___willing? ___unwilling?

___other:

Did the user make any comments about the interface as they completed the task?

"I'm assuming bookmark is this unfilled bookmark icon?"

Additional observations?

Administrator leave the site on the Chapter 2 slides.

TASK 7:

Go back to the table of contents.

(This task is designed to see if they recognize the breadcrumb trail above the slides folders vs. using the Tools icon at upper left of screen.)

Navigation trail:

Clicks Content at the top of the breadcrumb trail.

Task analysis:

__x_Was the user able to complete the task directly and quickly? or

___did they complete the task directly but slowly? or

___did they wander through unnecessary screens? or

___ask for help?

___other:

Attitude of the user:

___frustrated? _x_comfortable?

_x_good mood? ___bad mood?

_x_willing? ___unwilling?

___other:

Did the user make any comments about the interface as they completed the task?

"My first thought was to press the back button"

Additional observations?

Administrator leave the site on the Table of Contents page.

TASK 8:

Find but do not open the D2L system news.

Navigation trail:

Clicks D2L banner at top

Points to system news bar

Task analysis:

__x__ Was the user able to complete the task directly and quickly? or

___did they complete the task directly but slowly? or

___did they wander through unnecessary screens? or

___ask for help?

___other:

Attitude of the user:

___frustrated? _x_comfortable?

_x_good mood? ___bad mood?

_x_willing? ___unwilling?

___other:

Did the user make any comments about the interface as they completed the task?

Additional observations?

Administrator leave the screen on the D2L system news.

TASK 9:

Go to the chapter 2 slides by using the bookmark you created earlier.

Navigation trail:

Clicks tools

Clicks bookmarks

Clicks HCI

Clicks the Chapter 2 slides

Task analysis:

__x__ Was the user able to complete the task directly and quickly? or

___did they complete the task directly but slowly? or

___did they wander through unnecessary screens? or

___ask for help?

___other:

Attitude of the user:

___frustrated? _x_comfortable?

_x_good mood? ___bad mood?

_x_willing? ___unwilling?

___other:

Did the user make any comments about the interface as they completed the task?

User thought bookmarks were cool – didn't know about them

Additional observations?

Administrator leave the screen on the Chapter 2 slides.

TASK 10:

Find and open the list of Recently Viewed Topics.

Navigation trail:

Clicks tools

Clicks D2I Milwaukee

Clicks content

Clicks HCI

Clicks recently viewed topics

Task analysis:

___Was the user able to complete the task directly and quickly? or

___did they complete the task directly but slowly? or

_x__did they wander through unnecessary screens? or

___ask for help?

___other:

Attitude of the user:

___frustrated? _x_comfortable?

_x_good mood? ___bad mood?

_x_willing? ___unwilling?

___other:

Did the user make any comments about the interface as they completed the task?

"Not sure where to start... don't know what topics are"

"I thought might be under discussions"

Additional observations?

User first clicked tools button

Administrator leave the screen on the Recently Viewed Topics.

TASK 11:

Logout.

Navigation trail:

Clicks D2I banner

Clicks home

Clicks tools

Clicks logout

Task analysis:

___Was the user able to complete the task directly and quickly? or

___did they complete the task directly but slowly? or

☐_x_ did they wander through unnecessary screens? or

☐ask for help?

☐other:

Attitude of the user:

☐frustrated?

☐_x_comfortable?

☐_x_good mood?

☐bad mood?

☐_x_willing?

☐unwilling?

☐other:

Did the user make any comments about the interface as they completed the task?

Additional observations?

- Field Study - #2

Administrator log in to mobile D2L. Leave site on the first screen, Milwaukee.

TASK 1:

Go to the main page of the class Human-Computer Interaction.

Navigation trail:

[Presses Milwaukee](#)

[Presses HCI](#)

Task analysis:

☒ Was the user able to complete the task directly and quickly? or

☐ did they complete the task directly but slowly? or

☐ did they wander through unnecessary screens? or

☐ ask for help?

☐ other:

Attitude of the user:

☐ frustrated?

☒ comfortable?

☒ good mood?

☐ bad mood?

☒ willing?

☐ unwilling?

☐ other:

Did the user make any comments about the interface as they completed the task?

Additional observations?

[Seemed quite easy for the user .](#)

Administrator leave the site on the Human-Computer class home screen.

TASK 2:

For this class, find and view the syllabus in the Course Information folder.

(The point of this task is to note how long it takes them to figure out that these things are in the Contents section and how they navigate there).

Navigation trail:

Clicks tools button

Clicks Content

Clicks course information

Clicks syllabus

Opens syllabus in PDF viewer

Task analysis:

___ Was the user able to complete the task directly and quickly? or

__X__ did they complete the task directly but slowly? or

___ did they wander through unnecessary screens? or

___ ask for help?

___ other:

Attitude of the user:

___ frustrated? __x__ comfortable?

__x__ good mood? ___ bad mood?

__x__ willing? ___ unwilling?

___ other:

Did the user make any comments about the interface as they completed the task?

Additional observations?

User was initially confused. Spent some time gazing around the screen looking for what to click.

Administrator return to Human-Computer Interaction home screen.

TASK 3:

View the grade for Quiz #1 for this class.

Navigation trail:

Clicks tools

Clicks grades

Clicks quiz 1

Observes quiz grade

Task analysis:

☒ Was the user able to complete the task directly and quickly? or

☐ did they complete the task directly but slowly? or

☐ did they wander through unnecessary screens? or

☐ ask for help?

☐ other:

Attitude of the user:

☐ frustrated?

☒ comfortable?

☒ good mood?

☐ bad mood?

☒ willing?

☐ unwilling?

☐ other:

Did the user make any comments about the interface as they completed the task?

Additional observations?

Task went smoothly and quickly

Administrator return to Milwaukee home screen.

TASK 4:

View a course announcement of your choice for the Human-Computer Interaction class.

Navigation trail:

[Clicks Milwaukee](#)

[Clicks HCI](#)

[Clicks tools](#)

[Clicks news](#)

[Clicks classroom change news event](#)

Task analysis:

☒ Was the user able to complete the task directly and quickly? or

☐ did they complete the task directly but slowly? or

☐ did they wander through unnecessary screens? or

☐ ask for help?

☐ other:

Attitude of the user:

☐ frustrated?

☒ comfortable?

☒ good mood?

☐ bad mood?

☒ willing?

☐ unwilling?

☐ other:

Did the user make any comments about the interface as they completed the task?

Additional observations?

[Smooth and quick](#)

Administrator leave the site on the chosen course announcement page.

TASK 5:

Go to the Discussion section and post a test message onto the Open Discussion forum.

Navigation trail:

Clicks tools

Clicks discussions

Clicks open discussion

Clicks compose

Types "test" for subject

Types "Test message" for message

Presses save

Task analysis:

☒ Was the user able to complete the task directly and quickly? or

☐ did they complete the task directly but slowly? or

☐ did they wander through unnecessary screens? or

☐ ask for help?

☐ other:

Attitude of the user:

☐ frustrated?

☒ comfortable?

☒ good mood?

☐ bad mood?

☒ willing?

☐ unwilling?

☐ other:

Did the user make any comments about the interface as they completed the task?

Additional observations? [Smooth and quick](#)

Administrator return to Human-Computer Interaction home screen. (Don't forget to delete posting using desktop interface. There is no ability to delete a posting on the mobile version.)

TASK 6:

Go to the class Content section and *bookmark then view* the Chapter 2 Slides found in the Requirements folder of the Lecture Slides folder.

Navigation trail:

Clicks tools

Clicks content

Clicks Lecture Slides

Clicks Requirements→Clicks Chapter 2 slides→Clicks bookmark icon→Clicks PPT file – file opens in PPT viewer

Task analysis:

____ Was the user able to complete the task directly and quickly? or

__x__ did they complete the task directly but slowly? or

____ did they wander through unnecessary screens? or

____ ask for help?

____ other:

Attitude of the user:

_X__ frustrated? __comfortable?

x good mood? __bad mood?

X willing? __unwilling?

____ other:

Did the user make any comments about the interface as they completed the task?

"worst icon ever for a bookmark."

Additional observations? User became mildly frustrated trying to figure out how to bookmark

Administrator leave the site on the Chapter 2 slides.

TASK 7:

Go back to the table of contents.

(This task is designed to see if they recognize the breadcrumb trail above the slides folders vs. using the Tools icon at upper left of screen.)

Navigation trail:

Clicks [Content](#) at the top of the breadcrumb trail.

Task analysis:

☒ Was the user able to complete the task directly and quickly? or

☐ did they complete the task directly but slowly? or

☐ did they wander through unnecessary screens? or

☐ ask for help?

☐ other:

Attitude of the user:

☐ frustrated?

☒ comfortable?

☒ good mood?

☐ bad mood?

☒ willing?

☐ unwilling?

☐ other:

Did the user make any comments about the interface as they completed the task?

Additional observations? [Smooth and quick. Everything sort of seemed like a race—effect of user being observed](#)

Administrator leave the site on the Table of Contents page.

TASK 8:

Find but do not open the D2L system news.

Navigation trail:

Clicked drop down arrow

Scrolled down and up

Clicks D2L banner at top

Points to system news bar

Task analysis:

 X Was the user able to complete the task directly and quickly? or

 did they complete the task directly but slowly? or

 did they wander through unnecessary screens? or

 ask for help?

 other:

Attitude of the user:

 frustrated?

 x comfortable?

 x good mood?

 bad mood?

 x willing?

 unwilling?

 other:

Did the user make any comments about the interface as they completed the task?

"I think I found it."

Additional observations? Went quick, but did have to look around a bit.

Administrator leave the screen on the D2L system news.

TASK 9:

Go to the chapter 2 slides by using the bookmark you created earlier.

Navigation trail:

Clicks tools

Clicks bookmarks; went back and forth multiple times clicking tools and bookmarks

Clicks HCI→Clicks tools→Clicks bookmarks

Task analysis:

___ Was the user able to complete the task directly and quickly? or

__X__ did they complete the task directly but slowly? or

__X__ did they wander through unnecessary screens? or

___ ask for help?

___ other:

Attitude of the user:

X frustrated?

___ comfortable?

___ good mood?

X__ bad mood?

x willing?

___ unwilling?

___ other:

Did the user make any comments about the interface as they completed the task?

“not letting me do this. Tries taking me into news. Ok I had to go into the course. Wish they give a message.”

Additional observations? User become frustrated and almost gave up.

Administrator leave the screen on the Chapter 2 slides.

TASK 10:

Find and open the list of Recently Viewed Topics.

Navigation trail:

Clicks tools

Clicks tools

Clicks content

Clicks recently viewed topics

Task analysis:

☒ Was the user able to complete the task directly and quickly? or

☐ did they complete the task directly but slowly? or

☒ did they wander through unnecessary screens? or

☐ ask for help?

☐ other:

Attitude of the user:

☐ frustrated? ☒ comfortable?

☒ good mood? ☐ bad mood?

☒ willing? ☐ unwilling?

☐ other:

Did the user make any comments about the interface as they completed the task?

Additional observations?

User first clicked tools button

Administrator leave the screen on the Recently Viewed Topics.

TASK 11:

Logout.

Navigation trail:

[Clicks tools](#)

[Clicks logout](#)

Task analysis:

☒ Was the user able to complete the task directly and quickly? or

☐ did they complete the task directly but slowly? or

☐ did they wander through unnecessary screens? or

☐ ask for help?

☐ other:

Attitude of the user:

☐ frustrated?

☒ comfortable?

☒ good mood?

☐ bad mood?

☒ willing?

☐ unwilling?

☐ other:

Did the user make any comments about the interface as they completed the task?

["yay it worked!"](#)

Additional observations?

[Noticed an observer effect throughout fieldstudy. Researcher had to be right up in user's business to observe. User seemed to behave as though fieldstudy was a personal test of the user's skill and seemed to want to succeed at tasks as quickly as possible. User was preoccupied by researcher field-note-taking.](#)

