Clarkson Integrator:

UX Report

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Table of Contents:

Introduction:

        The Clarkson Integrator was once a physical newspaper that reflected the mindset of students on the Clarkson University campus. The former Clarkson Integrator never changed from using physical copies into the digital age and lost many readers because of it. After disbanding a couple years ago, I decided to create a prototype of the newspaper in order to bring it back. The prototype I constructed is an application in which the user is able to read, comment, and share articles written by college students on the Clarkson University campus.

        My plan started by creating an account function for non-students such as parents, alumne, prospective students, and faculty. They would fill out information into the create account form and then move onto the interests screen where they would select topics that the user finds interesting such as campus life, events, sports, opinion, and music. After establishing the background of the user, the homepage would pop up with all of the headlines from the latest issue ordered by interest. Clicking on a headline would take you to the article to read and scrolling to the bottom there would be functions such as share, like, and comment. I wanted the new Clarkson Integrator to foster an environment where there is discussion on the articles therefore, I added a comment section where users can share their thoughts and opinions. I set out to make this first prototype with all of this information in mind.

        This first prototype enabled users to do all of the tasks listed above. I took inspiration from other wireframes in order to put mine together. I chose widely understood icons such as arrows, check marks, search, menu, share, and like. I used Clarkson green (#004F42) as my accent color and used shades of grey, black, and white as the base colors. As a news based application, I chose fonts which I thought to be the most readable such as Monserrat for headings, Roboto for smaller text, and Poor Richard for the Clarkson Integrator logo.

        After creating the application, I had to test the prototype on potential users. The purpose of my test was to measure the usability of my prototype. The prototype revolves around the user, therefore being able to measure whether or not the user will be able to understand the application is important. I chose to analyze the time each user spends on each screen in order to see how long the user takes to complete each task. Longer times meant that the user was struggling on that page and that page would need to be reworked. I found five potential users to test and timed them as they went through each screen. The testing protocol can be found in the appendix.

Results:

The pre-test questionnaire gave me a better understanding of what background each user was coming from. All users I tested were under the age of 22 which means they are most likely technologically efficient. All users were currently in college pursuing their bachelor's degree which means they should all have strong intelligence. None of the users were avid readers of the news, seen below. This means they are less likely to use my prototype.

Do you read the news?
5 responses

- Religiously
- Often
- Sometimes
- Occasionally
- Not at all
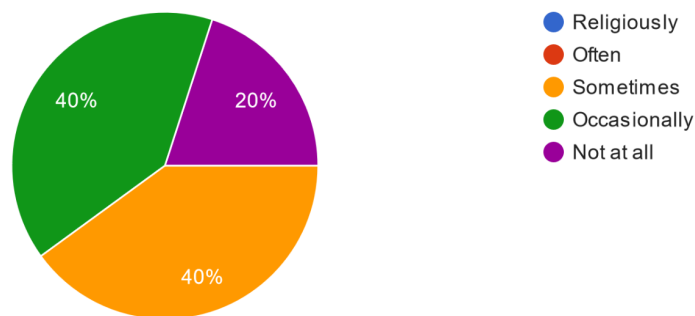
I was surprised to find out that 3 of the users use applications such as Google news and Apple news as one of their sources for information. Three users also admit to using social media as a news source which means an application based around being social could be beneficial in gaining users. Each of these findings are shown below.

How do you hear about the news?
5 responses
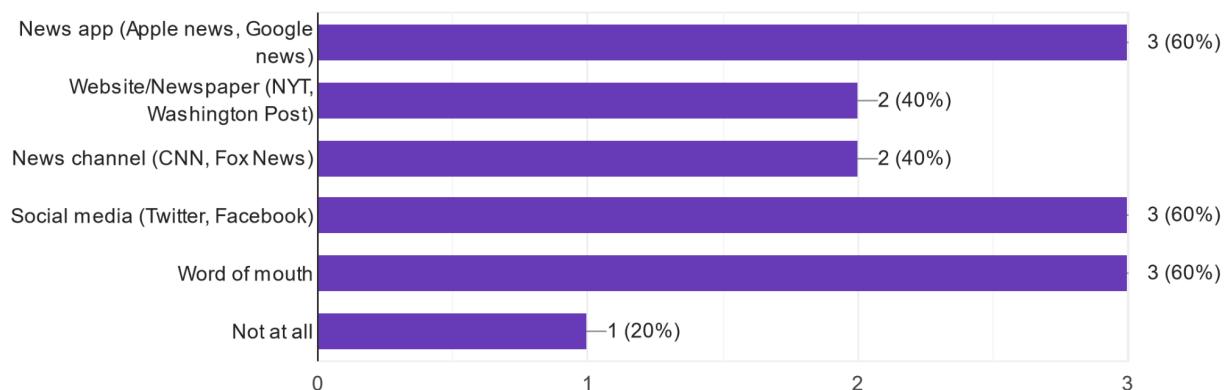
During the test, I noticed that many users spent more time on the creating profile screen than any other screen. I also noticed that users spent more time on the commenting section. I started off my testing by trying to give as little guidance as possible in order to ensure each user could figure out the application by their own accord. However, after conducting the first test I realized that it was hard for them to remember what they needed to do in the scenario, therefore from then on I verbally guided them through each task.

After the test, I gave them a post-test questionnaire in order to gather data about the usability of my application. Only 2 users said they strongly agreed that they would use this system frequently. This could be due to the fact that most of my test subjects do not frequently use the news at all.

I think that I would like to use this system frequently.
5 responses
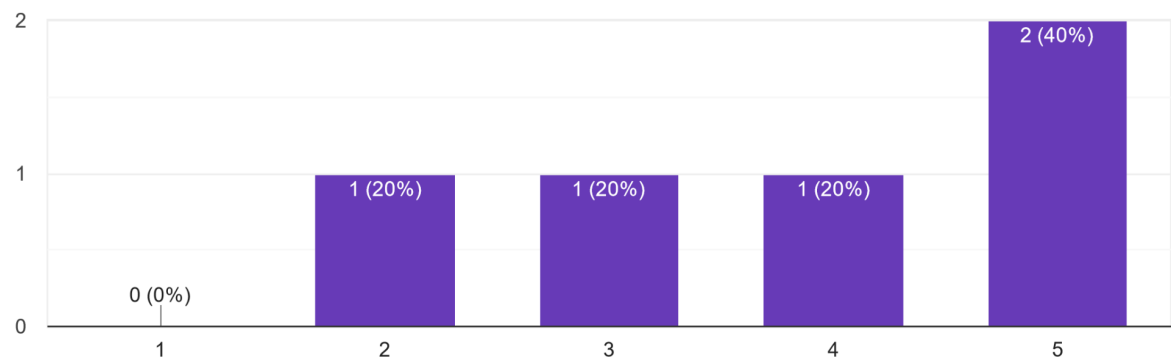
All subjects were positive in their feedback of the ease of use and integration of the application. Additionally, all users agreed that the typography was easy to read and the icons were easy to understand. These results are shown below.
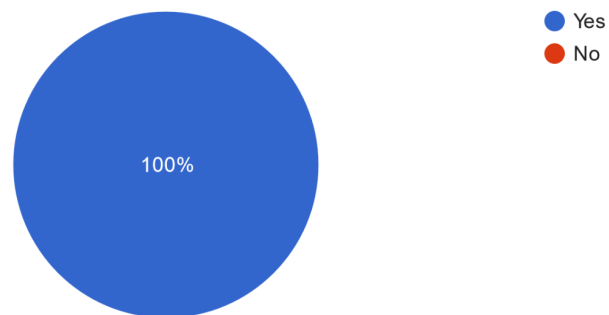
Was it easy to read the typography?
5 responses

Legend:
- Yes
- No

100%
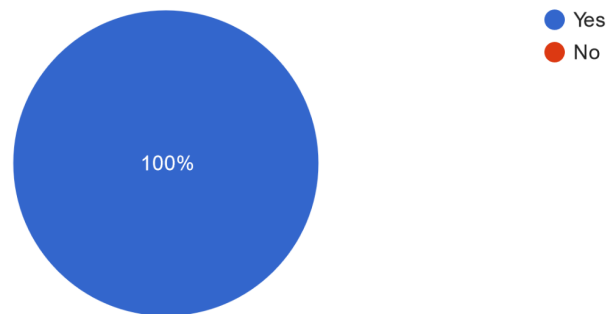
Were the icons easy to understand?
5 responses

Legend:
- Yes
- No

100%
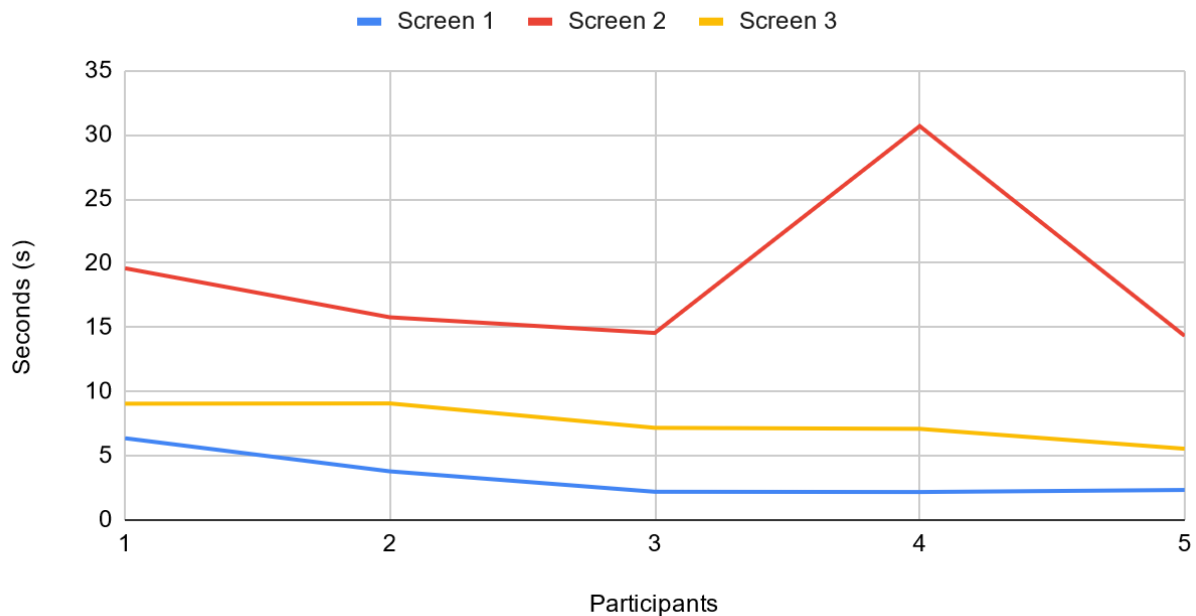
After asking what the hardest function of the prototype was, 2 of the participants described the drop down menu labeled "Relation to Clarkson." We can see that all of the participants spent significantly more time on this section because of this drop down menu. While watching each participant take the test they all struggled on this section. The chart below shows the time spent on

each screen by participant and as we can see, the creating account screen (red line), reflects this data.

Time Spent per Screen - Scenario 1

Legend: ▬ Screen 1   ▬ Screen 2   ▬ Screen 3

A line chart with the y-axis labeled "Seconds (s)" ranging from 0 to 35 in increments of 5, and the x-axis labeled "Participants" ranging from 1 to 5.

Two participants also described the button that leads to the comment section as confusing. Both agreed that the current label "View Discussion," was confusing for the user if they were looking to comment on the article. Both participants suggested changing the label to "Comment" in order to better reflect the task at hand.

Analysis:

One of the main limitations of my test is the diversity of my participants. I was only able to test users in COMM:229 which means the users were all under 22, in college, and were taking a course that focuses on UX design. Most of my users would be under 22 and in college so I think that that feedback is helpful, however monster users do not have the same background of taking a course in user experience. I would instead open my test up to participants with no background knowledge of UX in order to gain a better understanding of the flaws in my prototype.

I would also like to acknowledge my own flaws in testing. After handing out my first test, I noticed that my script was too long and hard to follow. I also noticed that the participants would struggle without any input from myself reminding them of their task. With each participant I would fluctuate on how to help each participant through their test which may have had an effect on the feedback I received. In the future, I would have a card with each task on it so the user would not have to

rely on my contribution. This would be helpful in knowing whether their struggle was on trying to remember what they had to do or on the task itself.

Conclusion:

After analyzing each participant's feedback I can better understand how to improve my prototype. In order to make the drop down menu stand out I would add a thin border around the button. Each section above has a thin border and I believe that because the drop down menu does not, most participants passed over it and moved on. I also think that adding a negative feedback screen would be helpful. For example, after missing a section on a form there is usually a star with red text that states "Required." I could add this into my prototype to ensure that information is not missed and that the user will be able to understand what they missed.

In addition, I would also change the comment button. Due to the feedback, I was able to understand that labeling the comment button as "View Discussion," was confusing to the user if they were intent on leaving a comment. Therefore, I would change the label to say either "View Comments" or "Leave a Comment." This wording indicated to the user that they will be able to actively engage with their peers and comment on the article.

The pre-test questions were also helpful in understanding the main users of this application. Most will be under 22 and are therefore likely to be technologically proficient. Three of them say that one of their news sources is social media (Twitter, Facebook, Instagram). This indicates to me that focusing on the social media aspect of this application is important. In the future, I would like to add more functions that would increase the social aspect such as sharing an article and posting it directly on a user's instagram story. With these changes I believe the prototype will be better equipped and ready to be tested for the next set of users.

Appendix 1

Testing Protocol:

Instructions:

     For each test I conducted I loosely followed the script below in order to ensure consistency throughout all test subjects. I start by thanking the participants with a brief introduction, give the pre-test questionnaire, lead them through 2 scenarios, and give them my post-test questionnaire.

Script:

     "Thank you for agreeing to participate in this test. My name is Hannah and I'll be conducting this test today. Before we start I am going to read through some information. Feel free to ask questions when needed. The prototype you are going to look at is a news based application called "The Clarkson Integrator." It is a college newspaper made by students and catered towards students. It is intended to be a social platform as well as a news hub for all happenings on campus. I am going to assess how easy it is to interact with my platform, therefore I am going to record your screen and audio. Please do not let this information hinder you, as I would like you to go through this app as an explorer. There is no pressure to perform and no wrong questions. You may ask questions throughout the test and talk throughout the test.

First, I am going to give you a short questionnaire in order to gauge your background.
(give pre-test questionnaire)

*To begin, I am going to ask you to **create an account** using the application. This task will only have 4 screens: login, create account, selest topics of interest, and home. Please take your time to look over each screen before moving on to the next and feel free to ask questions throughout. Do you have any questions before we start? (give prototype)*

(after first trial ask for questions)

Any questions so far?

*The second task I will be asking is to **login** to your account and to **like** and **comment** on an article. To do so you will move through 4 screens: login, home, article, and comment section. Take your time through each section and feel free to talk and ask questions throughout. Do you have any questions before we start?*

(give second trial and ask for questions)

Thank you for your continued participation. Now I will be giving you a questionnaire in order to better improve this prototype. I would like to be as honest as possible with your feedback. The goal of this test is to find ways to improve this prototype and the only way to do so is to criticize each detail.

(give post test questions)

Thank you so much!"

Scenarios:

I conducted this test with two scenarios in mind. First, I wanted the participant to create an account. They would do this by going through 4 screens: login, create account, select topics of interest, and home feed. The second I asked them to login to their account and then like and comment on a news article. The participants followed the second scenario by going through 4 screens: login, home feed, news article, and comment section.

Matrices:

While conducting each scenario, I recorded the time it takes for each participant to go through each screen. By measuring the time spent I could see which screens took the longest and figure out why.

Participants	1	2	3	4	5
Scenario 1 - Screen 1 (s)	6.37	3.79	2.20	2.18	2.34
Scenario 1 - Screen 2 (s)	19.61	15.79	14.57	30.68	14.34
Scenario 1 - Screen 3 (s)	9.06	9.08	7.18	7.10	5.55
Total Time Scenario 1 (s)	**35.04**	**28.66**	**23.95**	**39.96**	**22.23**
Scenario 2 - Screen 1 (s)	3.34	5.97	3.46	7.98	3.44

Scenario 2 - Screen 2 (s)	3.28	2.18	3.73	6.35	2.56
Scenario 2 - Screen 3 (s)	9.54	15.14	7.67	7.57	8.21
Scenario 2 - Screen 4 (s)	6.30	5.78	7.30	11.54	6.36
Total Time Scenario 2 (s)	**22.46**	**20.93**	**22.16**	**33.44**	**20.57**

Interview:

 In order to better understand each participant, I asked them a series of questions in order to gauge their background knowledge. In the pre-test questionnaire I asked them: their name, age, schooling, if they read the news, and where they get their news source from. With this information I would be able to better understand where each participant is coming from. After giving them the prototype I gave each person a post-test questionnaire to gauge the usability of my application. After the test, I asked them to rank: if they would use the system frequently, if they found it unnecessarily complex, if it was easy to use, if the various functions were well integrated, if they would imagine that most people would learn to use this system very quickly, and if they needed to learn a lot of things before they got going. Then I asked a series of open ended questions. Was the typography easy to read? Were the icons easy to understand? How does this news site compare to your preferred news site? What was the easiest function? What was the hardest function? Any feedback? These questions were helpful to provide valuable feedback.

Appendix 2

Pre-test Questionnaire:

Name *

Short answer text

Age *

◯ Under 18

◯ 18-22

◯ 23-35

◯ 35-60

◯ 60+

Schooling *

◯ None

◯ Some highschool

◯ Highschool diploma

◯ Some college

◯ Associate's degree

◯ Bachelor's degree

◯ Master's degree

◯ Doctorate

If you selected "Some college", what year are you?

○ Freshman

○ Sophomore

○ Junior

○ Senior

Do you read the news? *

○ Religiously

○ Often

○ Sometimes

○ Occasionally

○ Not at all

How do you hear about the news? *

☐ News app (Apple news, Google news)

☐ Website/Newspaper (NYT, Washington Post)

☐ News channel (CNN, Fox News)

☐ Social media (Twitter, Facebook)

☐ Word of mouth

☐ Not at all

☐ Other…

Appendix 3

Post-test Questionnaire:

I think that I would like to use this system frequently. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I found the system unnecessarily complex. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I thought the system was easy to use. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I found the various functions in this system were well integrated. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I would imagine that most people would learn to use this system very quickly. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I needed to learn a lot of things before I could get going with this system. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

Was it easy to read the typography? *

○ Yes

○ No

○ Other…

Were the icons easy to understand? *

○ Yes

○ No

○ Other…

How does this news site compare to your preferred news site? *

Short answer text

What was the easiest function in the prototype? *

Short answer text

What was the hardest function in the prototype? *

Short answer text

Any other feedback? *

Short answer text

Bibliography

https://www.usability.gov/how-to-and-tools/methods/system-usability-scale.html