

HathiTrust Mobile: A Survey of Mobile Reading Habits

SI622 001 Group 5 – Kate Davies, Kyle Donnellon, Melody Ku, JP Obley

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Executive Summary

This survey was intended for a broad audience and hoped to gather data about their reading habits using mobile devices. Once the survey was concluded, we looked at the results and used them to direct recommendations for the HathiTrust Mobile site. Despite the setback of having the link to the survey removed from the HathiTrust website, we managed to get 45 completed surveys. The results of the survey might be biased because of the methods used for distributing it, but they will provide us with a good framework for designing the upcoming usability study.

The key findings included:

- Most people read on a web browser.
- Users want to be able to make notes and highlight in document.
- Users are most dissatisfied with “Navigation within the document,” “In-text search,” “Document storage and organization” in current applications.
- People do not stick to one program for all their reading.

The recommendations for these findings included:

- Conduct research into HathiTrust Mobile usability on a wide variety of browsers and devices.
- Maintaining a web-based mobile application.
- Adding note-taking features to PageTurner.
- Enabling the Collections feature on HathiTrust Mobile
- Offering more eBook formats.

We found that most people who answered the survey owned at least one iOS device. This statistic supports the analytics of the HathiTrust Mobile site, which state that most people access it on an iOS device. Another interesting finding was that few people stated being “very familiar” with HathiTrust. Finally, 77% of the respondents answered “Yes” to the question that asked if they accessed the same document from multiple devices. This would support our earlier recommendation of making the collections feature available on the mobile site.

Introduction

The system we are evaluating is HathiTrust (HT) Mobile (<http://m.hathitrust.org/>): the mobile web application for HathiTrust Digital Library (<http://www.hathitrust.org/>), a large-scale repository of digitized content from the collections of major research libraries and institutions. HathiTrust is a collaborative effort of more than 60 contributing institutions that are dedicated to securely preserving human knowledge for use today and in the future.

HathiTrust Mobile is a version of the HathiTrust Digital Library website optimized for use on mobile devices. A project of the University of Michigan Library UX Department, HathiTrust Mobile focuses on the catalog search and full-text reading (referred to as PageTurner) functions of the main site. It also allows users associated with its partner institutions to download full-text materials in PDF or EPUB formats. Because the mobile application is web-based, it is intended to be accessible across all platforms and mobile devices, such as phones, tablets, laptops and desktops.

HathiTrust Mobile was launched in the fall of 2011. However, the staff of the UX Department was unable to test the site as extensively as they would have liked, and consistently finding bugs. The goals of our project are to identify and remove additional bugs, recommend design ideas to improve the site's current navigation, and gauge how well users are being served by the site.

The current users of the HathiTrust regular site are largely academics—librarians, professors, students and researchers—as well as hobbyists interested in topics ranging from genealogy to boat restoration. Although the user base for the mobile site is less clear, HathiTrust Mobile is not designed for researchers as it lacks the full-text search function of the regular site; its users are likely members of the general public who are interested in reading digitized content from a mobile device.

Previous studies provided an interaction map, personas, a comparative evaluation, and a heuristic analysis. We investigated and gained insights into the users' characteristics, goals, motivations, behaviors, and preferences. We also made recommendations to improve HathiTrust Mobile's features and functions.

All of our prior studies involved selected users, the competitors, and ourselves but for this study we expanded the scope and scale to target real users. Because the deployment of HathiTrust Mobile is still in its infancy, there are many imperfections, a small user population, and minimal usability testing results. Therefore, this study's intention was to target potential users instead of the current users.

Our goal was to effectively reach a vast number of potential users that more accurately represents our target audience. This new study was quantitative: a structured survey that validated the user's true characteristics, usage and preferences. We aimed to gather objective information about these users, their needs, and their general reading habits using mobile devices. We provided them with questions related to technological

characteristics, behavior, and attitude; based on their feedback, we made recommendations for improving the next design phase.

Methods

We surveyed users who own mobile devices (i.e. cell phone, iPad, tablet) and use an e-reader, but might not currently use HathiTrust Mobile.

We chose Qualtrics.com to create and distribute the survey. We integrated interviews and findings from previous studies to develop our survey, which consisted of 22 questions. These involved profiling aspects such as usage characteristics, behavior, satisfaction, and preferences. The survey was mostly multiple-choice and was capable of being completed within 10 minutes. Questions consisted of the following:

1. User's demographics
2. Usage patterns and behavior (frequency, objectives, and what applications and features they use)
3. Satisfaction
4. Desired features and improvement

The majority of the survey questions were binary (yes/no) or mutually exclusive. We used a 7-option Likert scale for relevant questions involving satisfaction ratings. The only open ended questions were for optional comments. The last two questions of the survey were not directly related to this study outcome, but asked the user if they would like to participate in the next phase of usability testing.

After producing the initial questionnaire, we conducted 4 pilot tests to ensure that it was clear and easy to complete. We also measured the time taken for each survey to be completed. Each team member randomly selected a volunteer to perform the test. Based on their feedback, we made further modifications/revisions relevant to the survey impact and outcome.

The survey was distributed through multiple channels: social media, email, and UX-SIG Listserv (users of HathiTrust's regular site), which was provided by the client. We provided a link to a questionnaire and received 60 respondents. Out of these 60, 45 were completed. This corresponded with the typical number of responses in a standard survey (Kuniavasky, 2003). The survey also had an incentive for participation: a \$50 cash prize was randomly awarded to one of the respondents.

The timeline from when we sent out the survey to when we collected the data spanned one week. The results were collected and compiled into relevant categories using Qualtrics. Because of limited time and data distribution, we did not perform comprehensive statistical analyses other than determining the majority of the users' preferences and desires. We also determined correlations of the users' behavior and characteristics.

Findings and Recommendations

Summary Results

45 surveys were completed over the course of a week. The ages of participants ranged from under 22 to 60, with the average age falling in the 23-30 range. A significant majority of the participants were in the 23-30 range, which could lead to biased results. A more worrisome point is that we had zero participants that were over the age of 60.

The HathiTrust Mobile analytics show that the overwhelming majority of visitors are using an iOS device. This statistic is supported by our survey, which shows that most users own and access the Internet on one or multiple iOS devices; this includes the iPod touch, iPhone, and iPad. Another finding that is supported by the HathiTrust Mobile analytics is that Android systems are a close second behind iOS devices. One interesting point is that our survey does not show much cross-pollination. Only 1 participant who owned one or more iOS devices also owned an Android powered device.

#	Answer		Response	%
1	Work		2	5%
2	Pleasure		5	12%
3	Both		35	83%
	Total		42	100%

Table 1: *People read for both work and pleasure.*

Table 1 shows that 83% of our participants responded that they read on their mobile device for both work and pleasure; just about half of those also listed their occupation as “student.” The idea that students are on the go and using the same devices in different capacities is not new, but it might provide new ideas for future versions of the HathiTrust Mobile site. There was a general lack of awareness among all participants regarding HathiTrust, though. 82% of the participants were either “not very familiar” or “not at all familiar” with HathiTrust. This is interesting because 68% of the participants listed their occupation as either “student” or “librarian.” HathiTrust is a cooperative effort among many different university libraries in the United States so it would seem that students and librarians would be among the most familiar with HathiTrust. In fairness, though, 5 of the 7 participants who responded to being “very familiar” with HathiTrust were a mix of students and librarians. It would be beneficial for HathiTrust to make an effort to advertise among students, staff, and faculty on all the campuses that are a part

of the project. As people leave these universities they will bring their familiarity of HathiTrust with them and, hopefully, tell others about it

Key Findings

Finding 1: The majority of survey respondents use their mobile web browser to read documents online. Of this majority, most read on iOS devices.

Of 45 respondents who completed the survey and indicated that they own an internet-capable mobile device, 22 respondents (52%) indicated that they use their mobile web browser for reading purposes, along with native reading applications. (A 23rd respondent who is not included in the percentage used the “Other” option to indicate “whatever the iphone comes,” which could be inferred as the Safari web browser, which comes installed on all iOS devices.) Additionally, 13 of those 22 respondents indicated that they use their mobile web browser to read daily, more than twice as many respondents as indicated that they use any other reading application daily. (The next most frequently used application was the Kindle application, which 6 respondents indicated that they use daily. See Figure 1 below.)

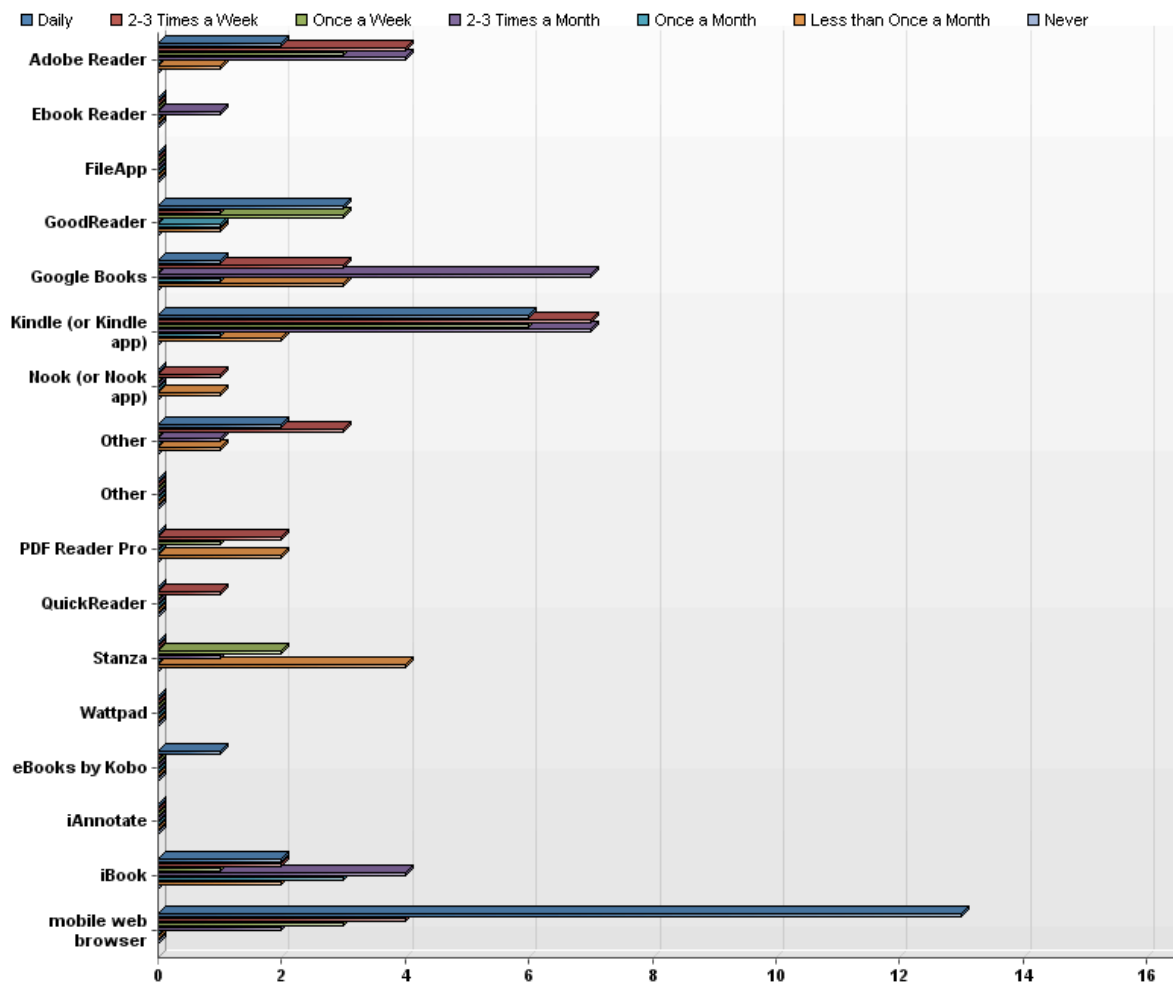


Figure 1: Distribution of reading application use.

Of the 22 respondents who use mobile web browsers to read on their devices, 70% own an iOS device (iPhone, iPad, or iPod Touch). This percentage was significantly larger than the percentage of total respondents who own an iOS device, which was 62%.

Recommendation 1A: Remain a web-based mobile application!

The high statistics for reading on a mobile web browser validate HathiTrust's decision to develop a web-based mobile application rather than an application native to one or more operating systems. The fact that the majority of respondents indicated that they use their mobile web browsers for reading, either exclusively or in addition to native mobile reading applications, makes HathiTrust a viable option for mobile reading. Due to this finding, and to the potentials costs of developing native applications for multiple platforms, we recommend that HathiTrust Mobile remain a web-based application.

Recommendation 1B: Conduct research into HathiTrust Mobile usability on a wide variety of browsers and devices.

While there are other possible explanations for the correlation between iOS users and reading with a mobile web browser, this finding raises the possibility that the experience of reading on a web browser is better on iOS devices than other devices. In addition, because iOS devices come with Safari installed, it is likely that most iOS users use Safari, raising the possibility that the experience of reading on Safari is better than on other web browsers. Because of these possibilities, and our heuristic evaluation, during which we found that the HathiTrust Mobile site does not function properly on the HTC T-Mobile G2 device, we recommend that HathiTrust Mobile conduct further research into usability across devices and web browsers to ensure a consistent reading experience.

Finding 2: Users want to be able to make notes and highlight within a document.

We asked participants to tell us, in their words, how their experience reading on a mobile device could be improved. A few things that came up consistently were bookmarking, note taking, and note saving in documents for access across multiple devices. Currently, HathiTrust Mobile does not have features for making notes in documents, nor does it allow users to save files in collections for accessing at a later time. Instead, users are required to download the files to their computer or device, and then make any notes in their preferred reading application. These remarks were supported

by a question that was asked earlier in the survey regarding whether or not the user accessed the same document form different devices. Figure 2 shows that an

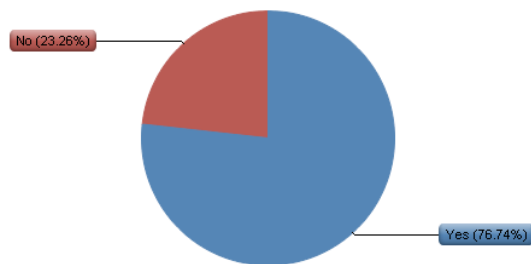


Figure 2: Most users access the same document from different devices.

overwhelming 77% of the participants responded “yes” to accessing the same document for different devices.

Recommendation 2: Add note-taking features to PageTurner.

The top two reading programs listed by respondents both allow note taking and highlighting while reading. Saving marks and highlights in a document may be beyond the capabilities of PageTurner, but due to the open-source nature of PageTurner, modifications may be possible that change the code to include highlighting and note taking that will persist across not only devices, but software applications, too.

Finding 3: Users are most dissatisfied with “Navigation within the document,” “In-text search,” “Document storage and organization” in their current preferred mobile reading applications.

To obtain data on how satisfied current users are with various aspects of their mobile reading applications, we asked participants to rate their satisfaction with “Magnification control (zoom),” “Text/view customization,” “Bookmarking or place saving,” “Document storage and organization,” “Document notation and markup,” “Page advancement,” “In-text search,” and “Navigation within the document.” Of these aspects, respondents were most dissatisfied with “Navigation within the document,” “In-text search,” and “Document storage and organization,” indicating that these are aspects that can be improved across mobile reading applications (See Figure 3).

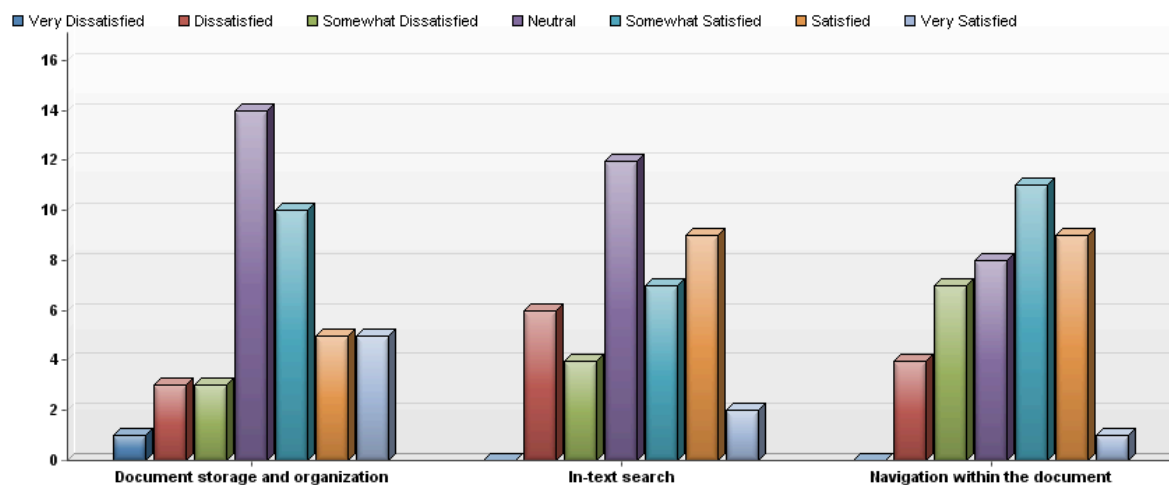


Figure 3: Breakdown of satisfaction for three categories.

Recommendation 3: Enable the Collections feature on HathiTrust Mobile

HathiTrust already has features that allow for in-text search (via a search function in PageTurner) and navigation within the document (via a progress bar at the bottom of the document and a view that shows readers a hyperlinked table of contents of the document). HathiTrust Mobile may also want to investigate how satisfied current users are with those particular features. However, a more severe problem is its current lack of any mechanism for storing and organization documents within the system; the high levels of dissatisfaction with “Document storage and organization” among survey

respondents indicate that HathiTrust Mobile's lack of a storage and organization feature could be a potential barrier to use.

HathiTrust Mobile should enable users to store and manage documents via the Collections feature that is currently available on the HathiTrust regular site but not on HathiTrust Mobile. This would allow users to create collections of documents or edit their current collections in order to save materials for later use and organize them for easy access. This feature would not only have the benefit of attracting general users who read on their mobile devices, since our survey indicates that they are currently dissatisfied with this feature, or a lack thereof, on their current mobile reading applications, it would also attract current users of the HathiTrust regular site who might be more likely to access HathiTrust Mobile on the go if their collections were available.

Finding 4: People use multiple programs for reading files.

Among the 23 participants who indicated that they own an iPad, PDF and eBook files were listed as the most frequently read file types. These participants also indicated that the programs they used most frequently to read documents were Amazon's Kindle App, Apple's iBook app, and a web browser, respectively. Figure 2, above, shows the break down of which applications people use most.

eBook is a general term applied to many different file types; the Kindle app requires a .AZW file, and the iBook app requires a .IBA file. Since many file types are proprietary, and most applications do not read every file type, it is not surprising that users list three different applications for reading eBooks.

Recommendation 4: Offer more eBook formats.

HathiTrust currently offers .PDF and .EPUB for downloading books, which are both open standards. In order to give users the most freedom of access, HathiTrust should offer more file types to accommodate more reading applications. For example, Project Gutenberg offers upwards of 8 file types for each book. HathiTrust does well to use open standard formats, but if a user downloads one of the files, they may not be able to open the file in their preferred application. To do so they would have to convert the file to the appropriate type, which may result in formatting errors. Furthermore, converting files may be a skill set that some users do not have. At the very least, HathiTrust should consider offering formats for the most used applications, Kindle and iBook.

Discussion

Although we were able to obtain significant findings from our survey, our findings are subject to several limitations pertaining to a sample bias among our survey respondents, as well as the structure and language of the survey itself.

In terms of sample bias, the sample for this survey was not representative of our target population, which consisted of people who read on their mobile devices. Out of 43 respondents who completed the survey and indicated that they own mobile devices that they use to read (2 respondents were bounced to the end of the survey because they

indicated that they did not own an internet-capable device and 15 did not complete the survey after starting it), 20 indicated that they were in the 23-30 age group. While we were unable to obtain reliable statistics on mobile reading habits by age group, it is unlikely that this is representative of our target population of mobile readers; our survey results likely under-represent the 31-40, 41-50, 51-60 and 61 and up age groups (See Figure 4).

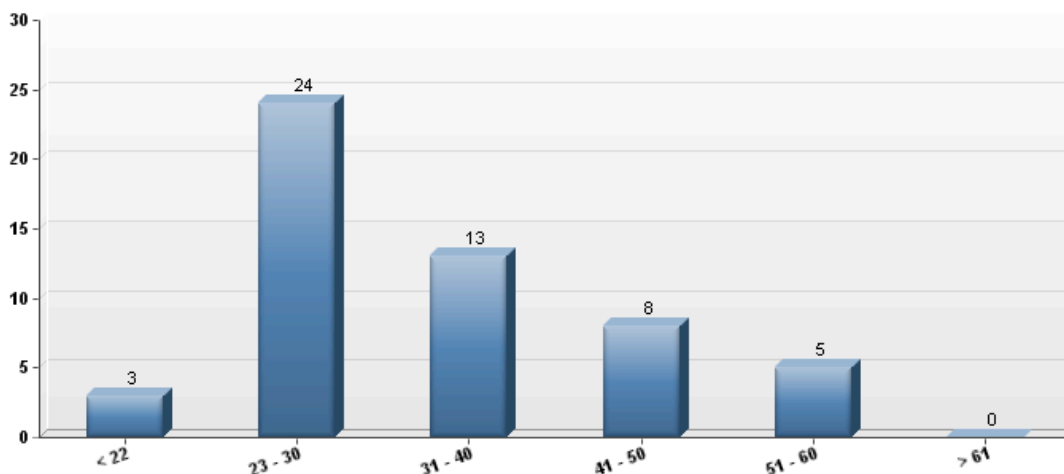


Figure 2: *Distribution of ages.*

Additionally, out of the 43 respondents who completed the survey and indicated that they own mobile devices that they use to read, 18 were students and 12 indicated that they worked as librarians in some capacity. While students and librarians are certainly among our target population, mobile readers from other occupations are not fairly represented in our survey data. This limitation is due to our survey deployment methods, which included a link on the HathiTrust Mobile site, a tweet on the HathiTrust Twitter account, an email to the UX-SIG listserv, and a link on the Facebook page of one of our group members.

Our findings are also subject to limitations due to survey development, including confusion due to the language used on some questions and the structure of one particular question. Throughout the survey, we asked respondents questions about their habits pertaining to reading on internet-capable mobile devices; however, based on some responses it may not have been clear what we mean by “internet-capable mobile devices.” When we asked what internet-capable devices respondents owned, 3 checked “Other” and used the text input field to indicate that they owned laptops or a netbook. While we were not intending to gather data about respondents reading habits on laptops or netbooks, the fact that this was not clear to all respondents may have resulted in collecting that data.

We also included one particular question (Q14: How often do you do the following tasks when reading on your mobile device(s)?) that we later decided was not a well-

constructed question. We surveyed respondents about how often they completed 7 tasks (including “Email content to yourself and others” and “Customize your view of the document (e.g., zooming, changing font)” and asked them to indicate how often they did each on a 7-point scale ranging from “Never” to “Daily.” We were hoping to get a better idea of what the most-used features of current mobile reading applications are. However, we later realized that some respondents might indicate they never, for example, email content to themselves or others while reading on a mobile device because they use a reading application that does not enable this feature, which would bias data towards features that are more widely available across mobile reading applications. We also realized that it would be very difficult for respondents to report how often they do these tasks since these are not behaviors many people keep track of or are even aware of. After noting the flaws in this question, we decided against using it for analysis, which limited the findings we could draw from this survey.

Conclusion

The goal of this survey was to compile usage statistics about reading on mobile devices. We were concerned that focusing the survey on HathiTrust would not provide sufficient findings, so we decided to field a broader survey investigate reading on mobile devices; only 1 question was related to HathiTrust. The findings here support our previous findings and recommendations regarding a collections feature for mobile, device statistics, in-text navigation, and general HathiTrust awareness but also make new issues salient such as general lack of awareness of HathiTrust and that most users read on a web browser, so the need for a native application may not be necessary at this time. The findings from this survey will give us a good idea of how to design our usability study, and what to look for when we analyze the data.

References

Kuniavasky, M (2003) *Observing the User Experience: A Practitioner’s Guide to User Research*. San Francisco: Morgan Kaufmann.

Appendices

As we mentioned in the methods, a broad survey was used to gather information about the reading habits of people using mobile devices. The following appendix includes the survey we used, as well as the raw data. It should be noted that the raw data has been redacted to exclude the names and emails of the respondents.

Appendix A – Survey

Default Question Block

Welcome to our survey! This survey is designed to collect data regarding your habits, preferences, and attitudes toward reading documents on mobile devices (e.g., smart phones, tablets, and dedicated e-readers). The data collected from this survey will remain anonymous.

To thank you for your participation in this survey, we would like to enter your name in a drawing to win a \$50 Amazon.com gift card! If you wish to be entered in the drawing, please make sure to enter your contact information when prompted at the end of the survey.

The survey should take approximately 10 minutes to complete. We appreciate your time and thank you for your participation!

We are a group of Master's students at the University of Michigan School of Information studying usability issues. If you have any questions or comments about the survey, please contact Kate Davies at kpda@umich.edu.

Browser Meta Info

This question will not be displayed to the recipient.

Browser: **Chrome**

Version: **17.0.963.83**

Operating System: **Intel Mac OS X 10_6_8**

Screen Resolution: **1280x800**

Flash Version: **11.1.102**

Java Support: **1**

User Agent: **Mozilla/5.0 (Macintosh; Intel Mac OS X 10_6_8) AppleWebKit/535.11 (KHTML, like Gecko) Chrome/17.0.963.83**

Safari/535.11

Which gender do you most identify with?

- Female
- Male
- Prefer not to say

What is your age?

- < 22
- 23 - 30
- 31 - 40
- 41 - 50
- 51 - 60
- > 61

What is your occupation?

Which of the following Internet-enabled mobile devices do you own?

- Android smart-phone
 - E-reader (For example, Nook, Kindle, etc.)
 - Tablet PC
 - iPod Touch
 - iPhone
 - iPad
 - Other
-
- I do not own an Internet-enabled mobile device.

How often do you access the Internet on your mobile device?

	Never	Less Than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
» Android smart-phone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» E-reader (For example, Nook, Kindle, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Tablet PC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» iPod Touch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» iPhone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» iPad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» I do not own an Internet-enabled mobile device.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you read any of the following types of files on your mobile device(s): eBooks, PDF, Text files?

- Yes
- No

For each of the following mobile devices, please indicate which types of documents, if any, that you read using that device.

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	eBooks	PDF files	Text files	Other types of documents	None of the above
» Android smart-phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
» E-reader (For example, Nook, Kindle, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
» Tablet PC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
» iPod Touch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
» iPhone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
» iPad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
» Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
» I do not own an Internet-enabled mobile device.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

When you read on your mobile device(s), do you prefer PDFs, eBooks, or Plain Text?

- PDF
- eBook (This includes Kindle, Nook, etc.)
- Plain Text
- No preference

Do you read on your mobile device(s) for work, pleasure, or both?

- Work
- Pleasure
- Both

Do you typically read the whole document or parts of documents on your mobile device(s)?

- Whole document
- Part of the document
- It depends on the context

- I don't know

Please specify which applications you use for reading on your mobile device(s).

- | | |
|---|---|
| <input type="checkbox"/> Google Books | <input type="checkbox"/> Stanza |
| <input type="checkbox"/> GoodReader | <input type="checkbox"/> Wattpad |
| <input type="checkbox"/> Kindle (or Kindle app) | <input type="checkbox"/> eBooks by Kobo |
| <input type="checkbox"/> Nook (or Nook app) | <input type="checkbox"/> Ebook Reader |
| <input type="checkbox"/> iAnnotate | <input type="checkbox"/> QuickReader |
| <input type="checkbox"/> iBook | <input type="checkbox"/> mobile web browser |

Page advancement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In-text search	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Navigation within the document	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How could your experience of reading on a mobile device be improved?

How familiar are you with HathiTrust?

- Very familiar
- Somewhat familiar
- Not familiar at all

Do you have any other comments?

Would you be interested in participating in a usability study for compensation?




- Yes
- No

Please enter your name and contact information in order to be entered into the raffle for the \$50 Amazon.com gift card. Entering your information is entirely optional; click Next to continue without entering any personal information.

Name	<input type="text"/>
E-mail	<input type="text"/>
ZIP Code	<input type="text"/>






Appendix B – Raw Survey Data (Redacted)

1. Which gender do you most identify with?

#	Answer		Response	%
1	Female		35	65%
2	Male		18	33%
3	Prefer not to say		1	2%
	Total		54	100%

Statistic	Value
Min Value	1
Max Value	3
Mean	1.37
Variance	0.28
Standard Deviation	0.52
Total Responses	54

2. What is your age?

#	Answer		Response	%
1	< 22		3	6%
2	23 - 30		24	45%
3	31 - 40		13	25%
4	41 - 50		8	15%
5	51 - 60		5	9%
6	> 61		0	0%
	Total		53	100%

Statistic	Value
Min Value	1
Max Value	5
Mean	2.77
Variance	1.18
Standard Deviation	1.09
Total Responses	53

3. What is your occupation?

Text Response

jeff's friend

library ux

Manager of Web Design

librarian and web manager

librarian

Librarian

Librarian

user researcher

public servant

student

Student

Manager

Programmer

IT tech and trainer

Web Designer

student

PhD Student

AT&T

Student

librarian

student

medical librarian

research

Librarian

Student

Librarian

student

IT

user experience designer

marketing operations specialist

grad student

Student

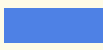




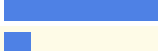


Student

Student

Web Developer
Graduate Student
Grad Student / Library Assistant
Grad Student
Marketing
Student
Veterinarian
Graduate student
Student
student
Software devrloper
digital librarian
librarian
Librarian
User Experience Librarian
Student
student

Statistic	Value
Total Responses	51

4. Which of the following Internet-enabled mobile devices do you own?

#	Answer		Response	%
1	Android smart-phone		15	28%
2	E-reader (For example, Nook, Kindle, etc.)		20	38%
3	Tablet PC		3	6%
4	iPod Touch		15	28%
5	iPhone		29	55%
6	iPad		23	43%
7	Other		4	8%
8	I do not own an Internet-enabled mobile device.		2	4%

Other
laptop
laptop
you can make a checkbox mutually exclusive in qualtrics.
Netbook

Statistic	Value
Min Value	1
Max Value	8
Total Responses	53

5. How often do you access the Internet on your mobile device?

#	Question	Never	Less Than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily	Responses	Mean
x1	Android smart-phone	1	1	0	0	1	4	8	15	5.87
x2	E-reader (For example, Nook, Kindle, etc.)	3	6	1	2	3	2	2	19	3.53
x3	Tablet PC	0	0	1	2	0	0	0	3	3.67
x4	iPod Touch	2	2	0	3	3	1	4	15	4.47
x5	iPhone	0	0	0	1	0	2	23	26	6.81
x6	iPad	0	0	0	1	1	5	14	21	6.52
x7	Other	0	0	0	0	0	1	2	3	6.67
x8	I do not own an Internet-enabled mobile device.	0	0	0	0	0	0	0	0	0.00

Statistic	Android smart-phone	E-reader (For example, Nook, Kindle, etc.)	Tablet PC	iPod Touch	iPhone	iPad	Other	I do not own an Internet-enabled mobile device.
Min Value	1	1	3	1	4	4	6	-
Max Value	7	7	4	7	7	7	7	-
Mean	5.87	3.53	3.67	4.47	6.81	6.52	6.67	0.00
Variance	3.55	4.26	0.33	4.70	0.40	0.66	0.33	0.00
Standard Deviation	1.88	2.06	0.58	2.17	0.63	0.81	0.58	0.00
Total Responses	15	19	3	15	26	21	3	0

6. For each of the following mobile devices, please indicate which types of documents, if any, that you read using that device.

#	Question	eBooks	PDF files	Text files	Other types of documents	None of the above	Responses
x1	Android smart-phone	5	6	4	5	3	23
x2	E-reader (For example, Nook, Kindle, etc.)	15	9	4	1	1	30
x3	Tablet PC	1	3	0	1	0	5
x4	iPod Touch	5	4	3	1	8	21
x5	iPhone	11	17	14	10	1	53
x6	iPad	17	19	11	10	0	57
x7	Other	1	3	3	3	0	10
x8	I do not own an Internet-enabled mobile device.	0	0	0	0	0	0

Statistic	Android smart-phone	E-reader (For example, Nook, Kindle, etc.)	Tablet PC	iPod Touch	iPhone	iPad	Other	I do not own an Internet-enabled mobile device.
Min Value	1	1	1	1	1	1	1	-
Max Value	5	5	4	5	5	4	4	-
Total Responses	13	18	3	14	24	21	3	0

7. Do you read on your mobile device(s) for work, pleasure, or both?

#	Answer		Response	%
1	Work		2	5%
2	Pleasure		5	12%
3	Both		35	83%
	Total		42	100%

Statistic	Value
Min Value	1
Max Value	3
Mean	2.79
Variance	0.27
Standard Deviation	0.52
Total Responses	42

8. Do you typically read the whole document or parts of documents on your mobile device(s)?

#	Answer		Response	%
1	Whole document		16	37%
2	Part of the document		10	23%
3	It depends on the context		17	40%
	Total		43	100%

Statistic	Value
Min Value	1
Max Value	3
Mean	2.02
Variance	0.79
Standard Deviation	0.89
Total Responses	43

9. Please indicate how often you use each of the following applications to read on your mobile device.

#	Question	Daily	2-3 Times a Week	Once a Week	2-3 Times a Month	Once a Month	Less than Once a Month	Never	Responses	Mean
x1	Google Books	1	3	0	7	1	3	0	15	3.87
x2	GoodReader	3	1	3	0	1	1	0	9	2.78
x3	Kindle (or Kindle app)	6	7	6	7	1	2	0	29	2.86
x4	Nook (or Nook app)	0	1	0	0	0	1	0	2	4.00
x5	iAnnotate	0	0	0	0	0	0	0	0	0.00
x6	iBook	2	2	1	4	3	2	0	14	3.71
x7	Adobe Reader	2	4	3	4	0	1	0	14	2.93
x8	PDF Reader Pro	0	2	1	0	0	2	0	5	3.80
x9	FileApp	0	0	0	0	0	0	0	0	0.00
x10	Stanza	0	0	2	1	0	4	0	7	4.86
x11	Wattpad	0	0	0	0	0	0	0	0	0.00
x12	eBooks by Kobo	1	0	0	0	0	0	0	1	1.00
x13	Ebook Reader	0	0	0	1	0	0	0	1	4.00
x14	QuickReader	0	1	0	0	0	0	0	1	2.00
x15	Other	2	3	0	1	0	1	0	7	2.57
x16	Other	0	0	0	0	0	0	0	0	0.00
x17	mobile web browser	13	4	3	2	0	0	0	22	1.73

Statistic	Google Books	GoodReader	Kindle (or Kindle app)	Noon (or Noona app)	iAnnotate	iBook	Adobe Reader	PDF Reader Pro	FileApp	Stanza	Wattpad	eBooks by Kobo	Book Reader	QuickReader	Other	Other	mobile web browser
Min Value	1	1	1	2	-	1	1	2	-	3	-	1	4	2	1	-	1
Max Value	6	6	6	6	-	6	6	6	-	6	-	1	4	2	6	-	4
Mean	3.87	2.78	2.86	4.00	0.00	3.71	2.93	3.80	0.00	4.86	0.00	1.00	4.00	2.00	2.57	0.00	1.73
Variance	2.41	3.19	2.12	8.00	0.00	2.84	1.92	4.20	0.00	2.14	0.00	0.00	0.00	0.00	3.29	0.00	1.06
Standard Deviation	1.55	1.79	1.46	2.83	0.00	1.68	1.38	2.05	0.00	1.46	0.00	0.00	0.00	0.00	1.81	0.00	1.03
Total Responses	15	9	29	2	0	14	14	5	0	7	0	1	1	1	7	0	22

10. How often do you do the following tasks when reading on your mobile device(s)?

#	Question	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily	Responses	Mean
1	Mark-up or make notes in the document	24	5	4	0	3	4	3	43	2.47
2	E-mail content to yourself or others	9	6	7	8	2	6	5	43	3.60
3	Save ebooks, pdfs, or other files to a reading application	13	7	4	6	6	5	2	43	3.19
4	Save ebooks, pdfs, or other files to a cloud-based service (e.g. Dropbox)	18	6	3	7	4	4	1	43	2.74
5	Access a digital library catalog to locate materials	14	9	6	6	3	4	1	43	2.79
6	Customize your view of the document (e.g. zooming, changing	4	5	4	8	3	6	13	43	4.65

	font)									
7	Bookmark particular places within a document or mark the place where you left off reading in a given session	11	7	4	4	2	5	9	42	3.71

Statistic	Mark-up or make notes in the document	E-mail content to yourself or others	Save ebooks, pdfs, or other files to a reading application	Save ebooks, pdfs, or other files to a cloud-based service (e.g. Dropbox)	Access a digital library catalog to locate materials	Customize your view of the document (e.g. zooming, changing font)	Bookmark particular places within a document or mark the place where you left off reading in a given session
Min Value	1	1	1	1	1	1	1
Max Value	7	7	7	7	7	7	7
Mean	2.47	3.60	3.19	2.74	2.79	4.65	3.71
Variance	4.40	4.20	3.92	3.58	3.17	4.42	5.62
Standard Deviation	2.10	2.05	1.98	1.89	1.78	2.10	2.37
Total Responses	43	43	43	43	43	43	42

11. Do you ever access the same document from different devices?

#	Answer	Response	%
1	Yes	33	77%
2	No	10	23%
	Total	43	100%

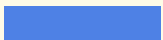




Statistic	Value
Min Value	1
Max Value	2
Mean	1.23
Variance	0.18
Standard Deviation	0.43
Total Responses	43

12. When you read on your mobile device(s), do you prefer PDFs, eBooks, or Plain Text?

#	Answer	Response	%
1	PDF	16	37%
2	ePub (This includes Kindle, Nook, etc.)	19	44%
3	Plain Text	2	5%
4	No preference	6	14%
	Total	43	100%

Statistic	Value
Min Value	1
Max Value	4
Mean	1.95
Variance	1.00
Standard Deviation	1.00
Total Responses	43

13. How do you search for content to read on your mobile device?

#	Answer		Response	%
1	Search within a reading application (e.g. searching for content on the Kindle store within the application)		19	45%
2	Browse within a reading application (e.g. browsing recommended books or documents)		13	31%
3	Search using a mobile web browser		22	52%
4	Search using a web browser on a computer, and save content to access on a mobile device (e.g. accessing on-line bookstores and purchasing content from your PC)		23	55%
5	Other		4	10%

Other

I don't understand the question. Is it about searching for content on the internet in general? What is the context of this question?

I don't need to search for documents on my mobile device because I don't often read them on my mobile. When I want to have an access to my document on the mobile, I would just save it the one of the folders in my Dropbox and I always know where it is.

Recommendations from others

also just move content straight onto the device - via the PC - from a thumb drive

Statistic	Value
Min Value	1
Max Value	5
Total Responses	42

14. In general, how satisfied are you with your reading experience on your mobile device?

#	Answer	Response	%
1	Very Dissatisfied	1	2%
2	Dissatisfied	2	5%
3	Somewhat Dissatisfied	2	5%
4	Neutral	4	10%
5	Somewhat Satisfied	15	36%
6	Satisfied	13	31%
7	Very Satisfied	5	12%
	Total	42	100%

Statistic	Value
Min Value	1
Max Value	7
Mean	5.12
Variance	1.91
Standard Deviation	1.38
Total Responses	42

15. How satisfied are you with the following aspects on your preferred mobile reading application?

#	Question	Very Dissatisfied	Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Satisfied	Very Satisfied	Responses	Mean
1	Magnification control (zoom)	1	2	2	5	9	12	9	40	5.28
2	Text/view customization (e.g. font size, different layout)	1	2	4	14	8	5	6	40	4.63
3	Bookmarking or place saving	0	3	2	12	9	10	4	40	4.83
4	Document storage and organization	1	3	3	14	10	5	5	41	4.56
5	Document notation and mark-up	1	3	3	18	7	4	4	40	4.38
6	Page advancement	0	1	3	9	8	11	8	40	5.23
7	In-text search	0	6	4	12	7	9	2	40	4.38
8	Navigating within the document	0	4	7	8	11	9	1	40	4.43

Statistic	Magnification control (zoom)	Text/view customization (e.g. font size, different layout)	Bookmarking or place saving	Document storage and organization	Document notation and markup	Page advancement	In-text search	Navigat ion within the document
Min Value	1	1	2	1	1	2	2	2
Max Value	7	7	7	7	7	7	7	7
Mean	5.28	4.63	4.83	4.56	4.38	5.23	4.38	4.43
Variance	2.36	2.24	1.84	2.15	1.98	1.82	2.14	1.84
Standard Deviation	1.54	1.50	1.36	1.47	1.41	1.35	1.46	1.36
Total Responses	40	40	40	41	40	40	40	40

16. How could your experience of reading on a mobile device be improved?

Text Response

Specifically for e-books - would like more books available and would like to see the price of ebooks lesser than or equal to the price of print books.

Often when I'm reading iBooks on my Touch I put the device in my pocket and it accidentally moves to another part of the text. If I haven't bookmarked my spot recently it can take quite a bit to find my way back to where I was. Also, when I do go to my bookmarks, the most recent one should be at the top, I shouldn't have to scroll down (often through many bookmarks) to see my most recent one).

Make it prettier!! With Amazon books, you never know what you're going to get. Formatting is often really awful.

Phones are not good for extended reading, the copyright issues and DRM limitations on some ebooks are a real pain

I would like my progress within a document to be synced across devices. Also, I would love to get the new iPad with the increased resolution.

I am satisfied with Kindle. But I am not satisfied with PDF. when I try to read pdf file, some contents were missing.

Depends on the content, difficult to say! Might be nice to be able to reflow pdf files.

I guess if I am using an iPad, my reading experience on mobile device may be better since the screen is a lot more bigger and there are more useful iPad reading applications than Android phone which allows me to bookmark, take a note or highlight something easier.

In-browser find would be a huge help.

It would be best if sites recognized all devices more seamlessly. For instance, this survey looks like it was created for a bigger device than I have so requires a lot of scrolling on my iPhone.

Different apps have different features I like. I love knowing the number of pages left before the end of the chapter in iBooks, since I'll flip pages in a physical book to answer this question. The Kindle app on the iPad doesn't offer this function. On the other hand, iBooks doesn't let me highlight or annotate, but Kindle does. I've also found all pdfs are not created equal. Scanned pages from a book are particularly difficult, since I can't highlight. Those pdfs also take longer to load each page.

Larger screen.

Still not sure laptop would be a mobile device or not...But if it can be improved, support different type of file would be beneficial to me.

If Hathi worked like Google Books. I'm pretty happy with GB except sometimes it forgets where I left off, or if I haven't read something in awhile I have to re-save it to my device. Also not all the Google Books have text flow capabilities to be able to make the text larger. But other than that I'm really happy with them.

the ability to sync information

I think I would prefer an I-Pad to an Iphone. Reading on my phone is a last resort if I don't have my Kindle along.

I'd like to have the text-to-audio functionality, so I can listen to books on the go.

Bigger screen. Smart apps. Connections among devices to track location within text.

kindle

i'm not sure - but reading on it is always a pain, and I always hate it! it seems like the font size is never optimized

if it were easier to zoom in pdfs and maintain the clarity of the original size

Page numbers

The Kindle app doesn't seem to allow for easy re-reading of a book. That is, it constantly wants to advance you to the farthest you've read, instead of marking where you most recently accessed the text. Also, the Kindle app for Apple devices doesn't allow you to easily shop in the Amazon store right from the app.

The zoom function is not saved between pages when using iBook on an iphone. I have to re-zoom every time I turn the page, which on an iphone, is often. I would like a continuous scroll function.

Easier ways to get content onto app. Now I use google reader which is really built for desktop.

Better search feature

OCR !!!!!!!!!!!!! For all documents!!!!!!!!

The sw is good but the screen need to be bigger

I like functionality that enables freezing of page content. I don't like it when my page orientation moves back and forth in the ibooks app. Kindle app seems to have a lock page feature that helps. Maybe I just haven't found it on the ibook app.

I'm sure I'll get over this - but I still miss knowing "where I am" in a book - visually, just by looking at the thickness. There are other visual keys you give up with ereading - like even having a good sense of how long/thick a book is! Metadata exists for the print - size, shape, etc. Again, I'll probably get over it or get used to the way it is handled in eform the more I read, but so far I tend to read books under 200pages. Also - if the book has a table of contents or index - navigating back and forth is pain - at least it was on the kindle app the last time i tried to look at a referency type book.

improvement on key-word searching

Statistic	Value
Total Responses	32

17. How familiar are you with HathiTrust?

#	Answer	Response	%
1	Very familiar	7	18%
2	Somewhat familiar	18	45%
3	Not familiar at all	15	38%
	Total	40	100%

Statistic	Value
Min Value	1
Max Value	3
Mean	2.20
Variance	0.52
Standard Deviation	0.72
Total Responses	40

18. Do you have any other comments?

Text Response
no
This quiz had manu questions that I did not understand. What does saving into an application mean? How can you do that? I know that you can open a file in an application (for example, you can use Reader to open a PDF document) or you can safe a file to the file system. I also had to rate features that my reading application does not have, so you should have put "not applicable" as an option. You might have also wanted to ask about why people do not want to use proprietary eReader applications and other DRM restricted stuff. Also, is "reading" different than "browsing"?
Nope
Nope.
No
No, just that the experience really does stink. And with such small screen space, it is difficult to say how it could be improved
Thanks!
No
For the books that are available through Hathitrust, I'm not very likely to want to read extensively on my mobile device though I would like to find it and save some indication of it for later viewing when I'm back at my desk environment.

Statistic	Value
Total Responses	9

19. Would you be interested in participating in a usability study for compensation?

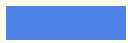

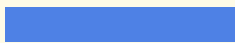









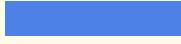
Statistic	Value
Min Value	1
Max Value	2
Mean	1.38
Variance	0.24
Standard Deviation	0.49
Total Responses	45

20. Do you read any of the following types of files on your mobile device(s): eBooks, PDF, Text files?

#	Answer		Response	%
1	Yes		43	91%
2	No		4	9%
	Total		47	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.09
Variance	0.08
Standard Deviation	0.28
Total Responses	47

21. Please specify which applications you use for reading on your mobile device(s).

#	Answer		Response	%
1	Google Books		15	35%
2	GoodReader		9	21%
3	Kindle (or Kindle app)		29	67%
4	Nook (or Nook app)		2	5%
5	iAnnotate		0	0%
6	iBook		14	33%
7	Adobe Reader		14	33%
8	PDF Reader Pro		5	12%
9	FileApp		0	0%
10	Stanza		7	16%
11	Wattpad		0	0%
12	eBooks by Kobo		1	2%
13	Ebook Reader		1	2%
14	QuickReader		1	2%
15	Other		7	16%
16	Other		0	0%
17	mobile web browser		22	51%

Other	Other
Instapaper	
Don't know	
Papers	
Instapaper	
whatever comes with the iphone	
GoodReader	
instapaper	

Statistic	Value
Min Value	1
Max Value	17
Total Responses	43