

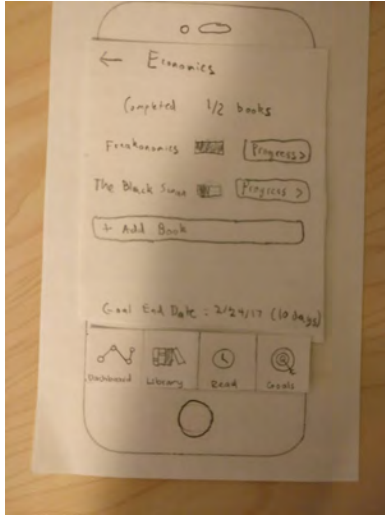
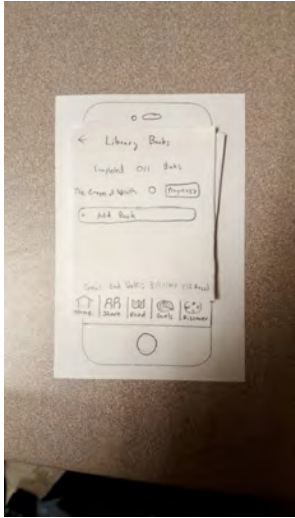


Assignment 3c: Heuristic Evaluations

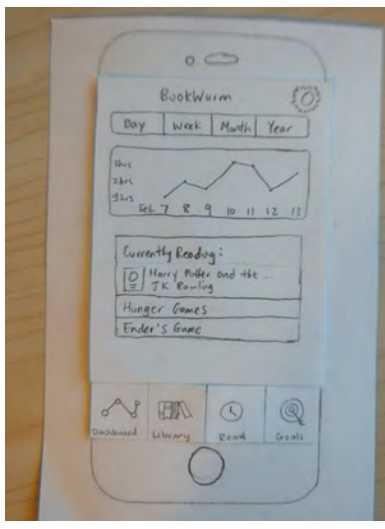
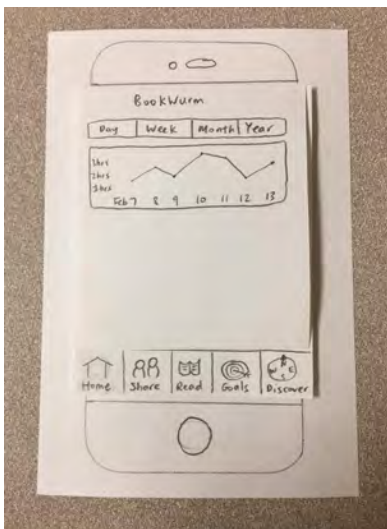
Issues identified from heuristic evaluations:

Before	After	Incident
		<p>Matching system to the real world (Severity 3)</p> <p>Confusing titles make it difficult to identify the purpose of certain tasks. In our heuristic evaluations, one group expressed confusion with the label “Enter subject” for the goal creation screen, as the relation of subjects to goals was not immediately clear. The naming of the goal violates the heuristic of matching the system to the real world, as the labeling is not instantly understandable. It would likely be more informative to label the text box “Enter goal name” to give a clearer idea of what purpose the text box served. We have updated the title of the text box accordingly.</p>



Matching system to the real world (Severity 2)

Progress bar's shape does not do a good job of indicating what it does - Making the progress bar shaped like an empty circle was a source of confusion during one of our heuristic evaluations. When it's empty, it looks like the number 0, suggesting that it might be a counter of some sort. This again violates the heuristic of matching the system to the real world, as a circle is not generally the shape that progress bars take. It might be helpful to change the progress bar's shape into a rectangle. We have updated the shape of the progress bar accordingly.



Flexibility and efficiency of use (Severity 3)

In this instance, our heuristic evaluators commented that they were unable to quickly identify what books were in their library, or even how they might go about switching the bookmark to another book. For this, we made two significant changes. The first came in the form of introducing an updated menu, with one of the primary items being a library link. The second was to introduce quicklinks on the

		front page, allowing for participants to switch between recent books.
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First Usability Test


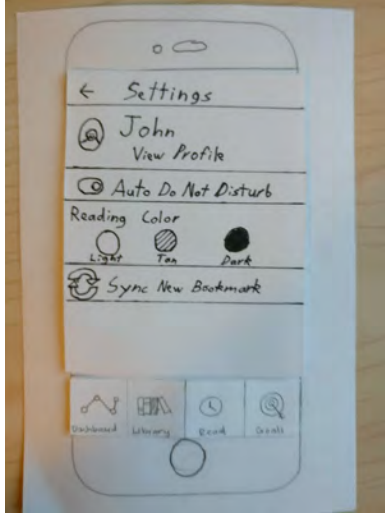
Our first usability test was conducted with a male, 20 years old, pursuing an HCI degree. We performed the usability test inside of the technology exploration lab of Mary Gates Hall. For the usability study, we compiled a list of tasks, which we asked the participant to perform from our application. We had one individual read the script and tasks to the participant, while another was responsible for performing the necessary “wizard of oz” tasks. The additional two team members took notes during the process. The participant was asked to think aloud while walking through the tasks, which included:

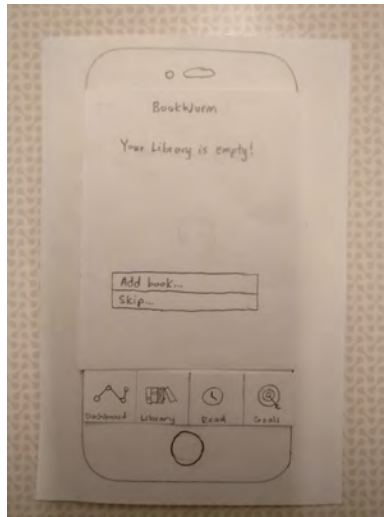
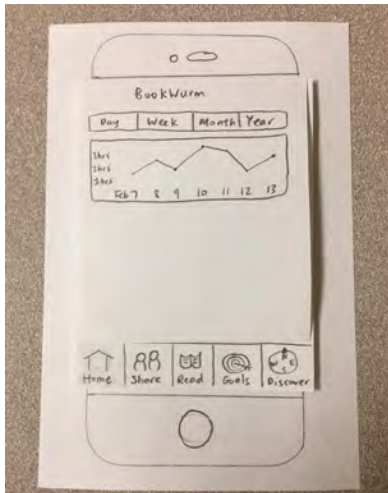
- Syncing the bookmark to the application
- Skipping adding a book so they could explore the application
- Adding a new book
- Check upon an existing goal
- Check books that have been read
- Correct information about a mistimed reading session

We chose environment of Mary Gates Hall because it was one in which the participant felt at ease, and we were able to remain relatively undisturbed during the work.

A note about the process itself: we discovered that some of the tasks did not make sense in the order in which they were presented (such as asking the participant to state what books they were reading, when the interface did not show any, and the task to add a book was introduced later). For that reason, this will be a primary point of work for the next set of usability tests, to make sure that our prototype and the ordering of tasks make sense.

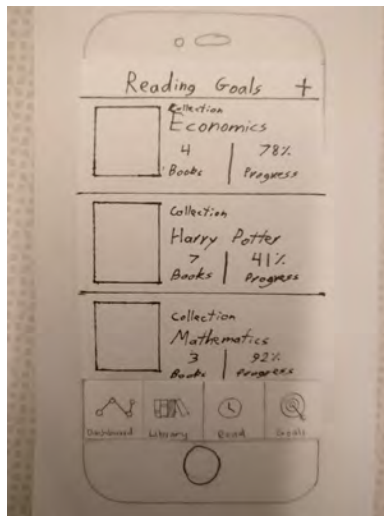
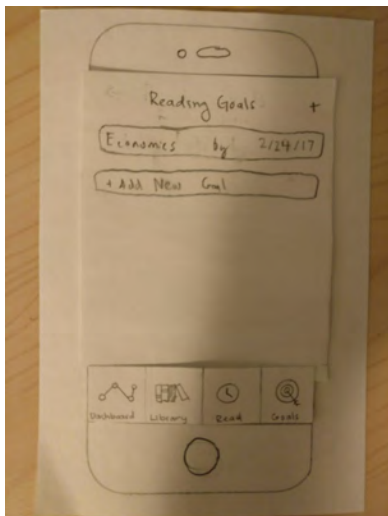
Issues identified from usability study:

Before	After	Incident
	<p>N/A</p>	<p>Simple Bookmark Interface A positive point in going through the usability test with our participant was the bookmark interface. For the participant, he noted that it was really simple and straightforward. He also noted that it took a significant portion of the work out of trying to record the time spent reading.</p>
<p>(No page existed for this previously)</p>		<p>Settings Page (Severity 3) A point of concern for our participant was in how they would connect to their bookmark, or how it is that they might go about connecting to a brand new wearable if they were to lose the old one. For this change, we focused on introducing a settings page, with very little in terms of added functionality, but made the necessary features available when necessary.</p>



Getting Started (Severity 3)

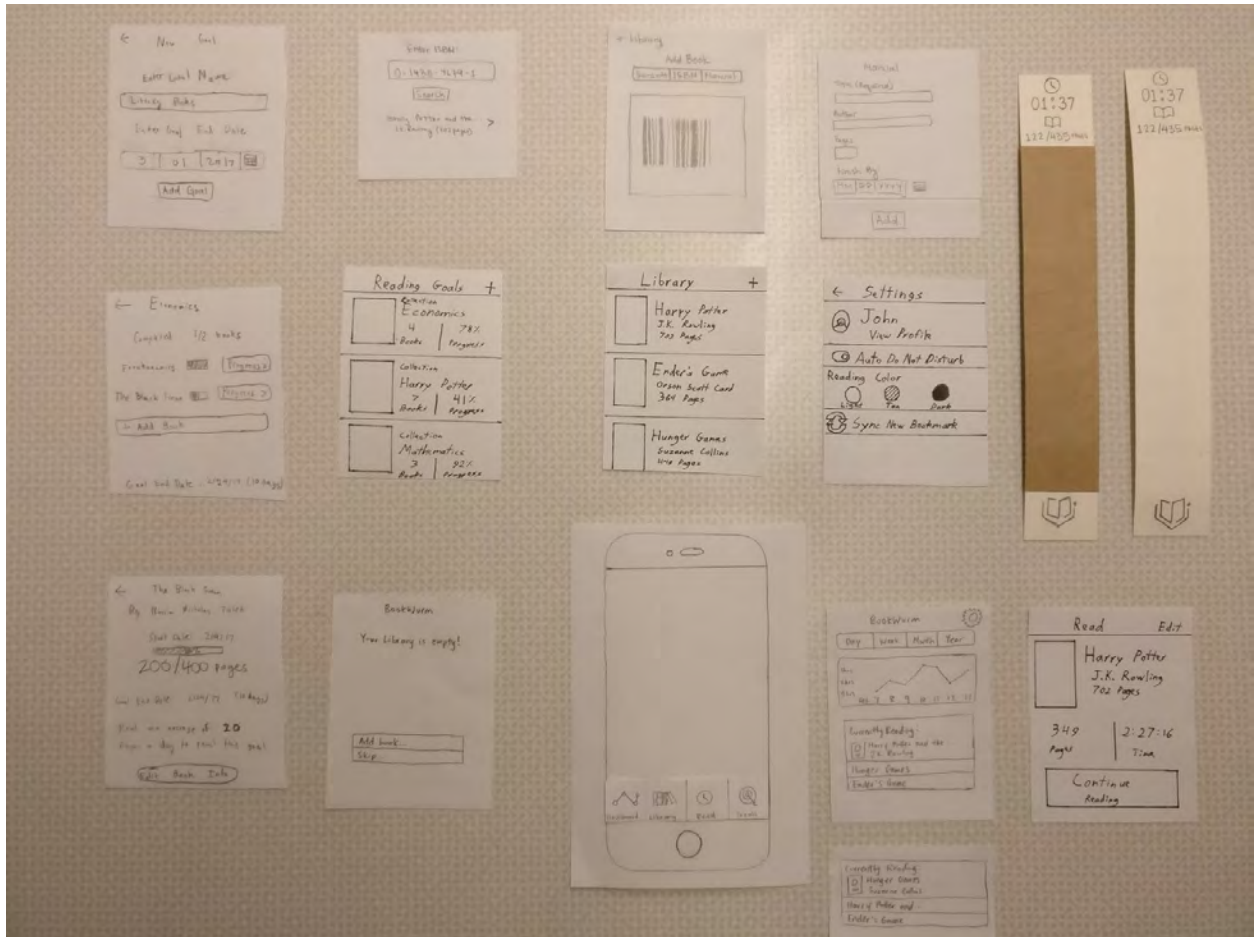
Our participant identified that when the application first opened up, it was not immediately clear as to how they should get started. To remedy this, we opted to include a getting started page. This page opens on the option to sync a new device, followed by a prompt, asking the participant whether they would like to add a new book.



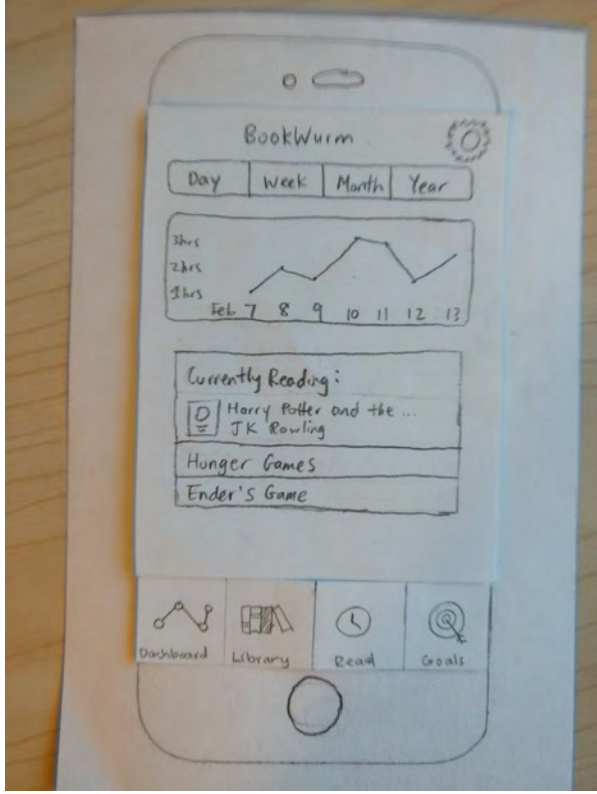
Categories Unclear (Severity 3)

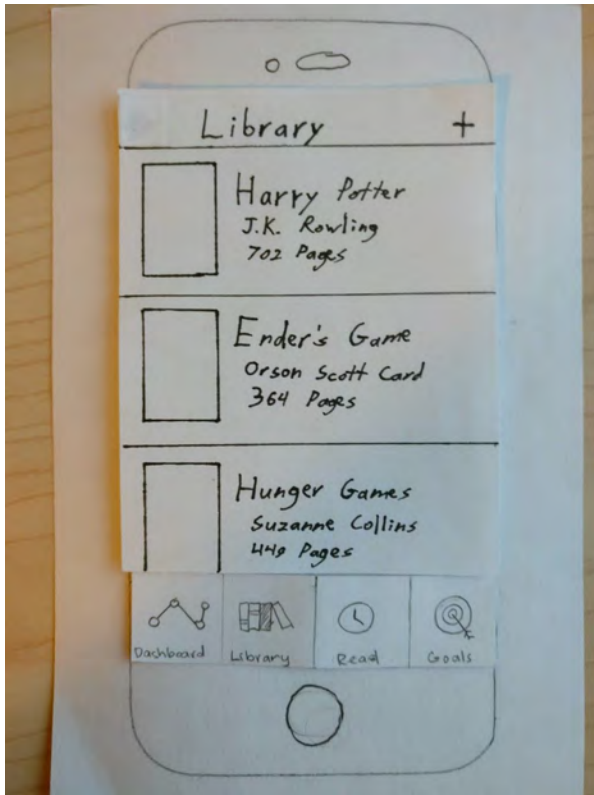
During the course of the usability study, when the participant first saw the goal page they confused the goal category of "Economics" for a book. To this end, we thought it would be helpful to label each section clearly as a collection, as well as showing the total number of books for that goal, as well as the participant's overall progress.

Current Prototype

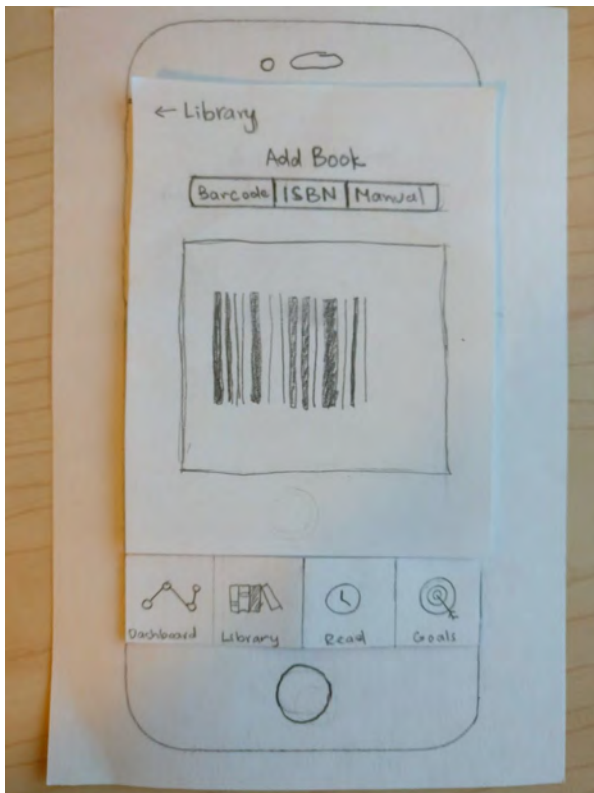


Task 1: Add a book and track progress

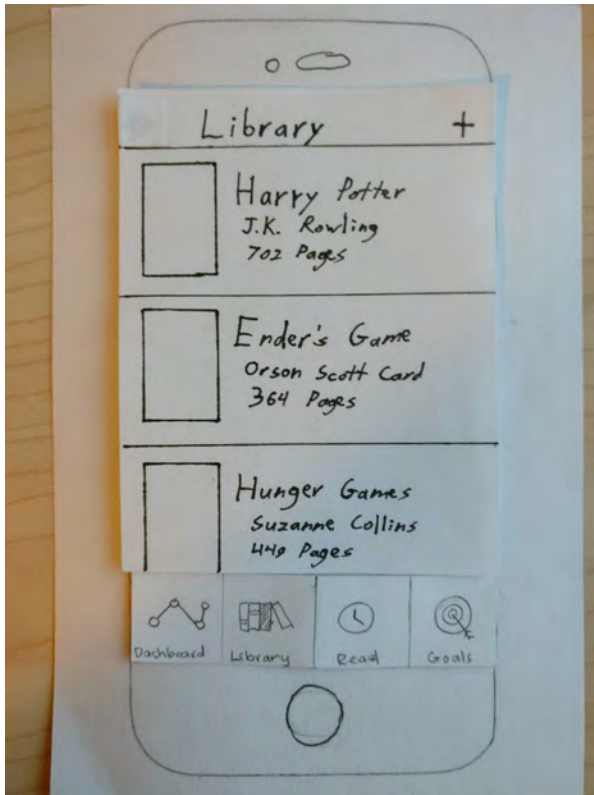
Screen	Step Description
 <p>The image shows a hand-drawn mobile application interface for 'BookWorm'. At the top, the app name 'BookWorm' is written, followed by a gear icon for settings. Below this is a filter bar with four tabs: 'Day', 'Week', 'Month', and 'Year'. A line graph displays reading progress over time, with the y-axis labeled 'hrs' (1hrs, 2hrs, 3hrs) and the x-axis labeled 'Feb 7 8 9 10 11 12 13'. The graph shows a fluctuating line representing hours read. Below the graph is a section titled 'Currently Reading:' containing a list of books: 'Harry Potter and the ...' by 'JK Rowling', 'Hunger Games', and 'Ender's Game'. At the bottom, there is a navigation bar with four icons and labels: 'Dashboard' (line graph icon), 'Library' (bookshelf icon), 'Read' (clock icon), and 'Goals' (target icon). A circular home button is located at the very bottom center.</p>	<p>On the home screen, the participant can see their reading habits thus far as well as the books in their library thus far. The participant clicks "Library".</p>



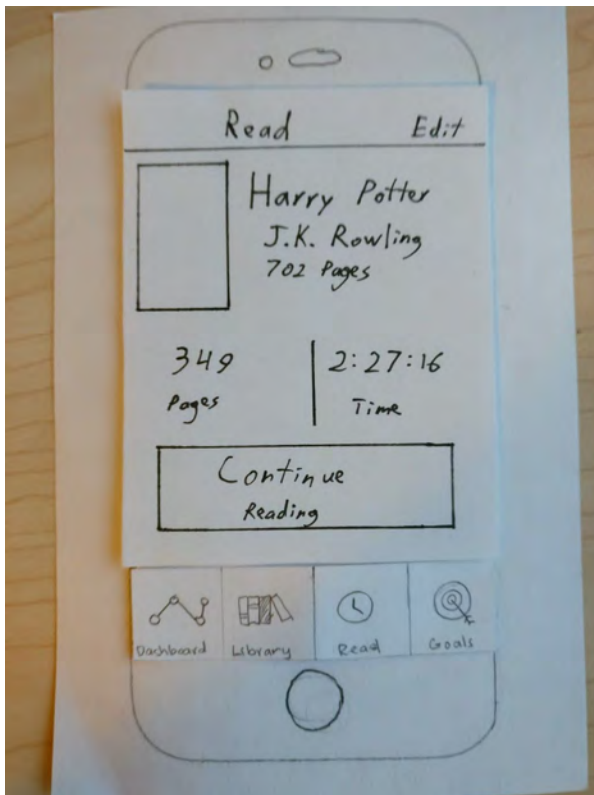
The participant is then taken to their library of books. The participant wishes to start a new book and would like to add a book to the library. The participant clicks the plus (+) button in the upper right corner.



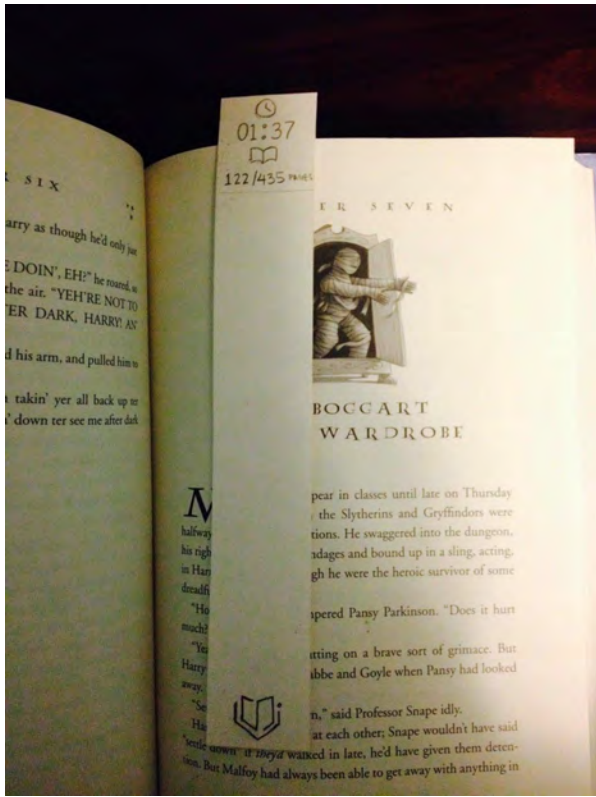
The participant adds the book they would like to read by scanning its barcode (there was also an option to enter an ISBN or to enter the book information manually).



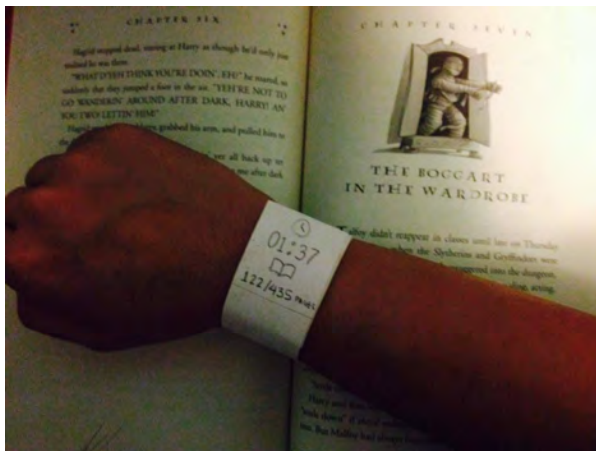
The participant is taken back to their library. The book they scanned is now visible in the library. The participant would like to read it while tracking progress with the smart bookmark. They click the row representing the newly added book.



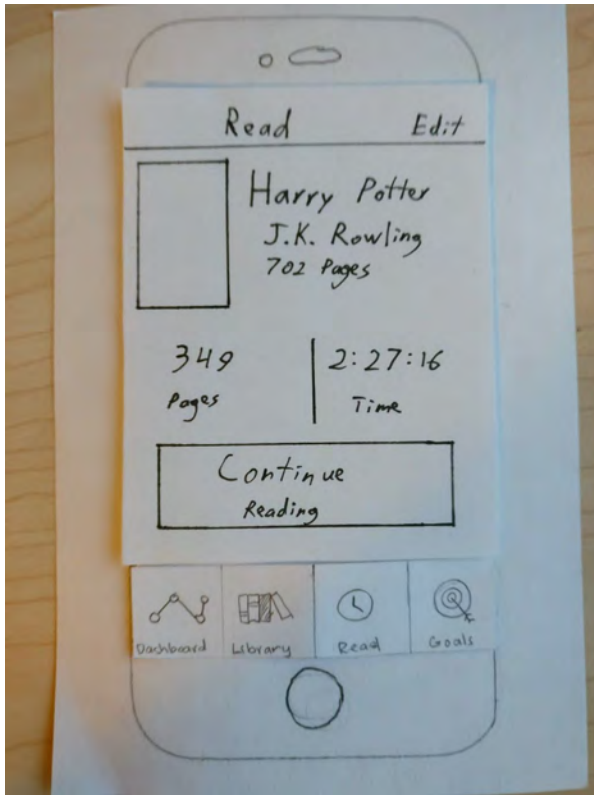
The participant clicks "Continue Reading".



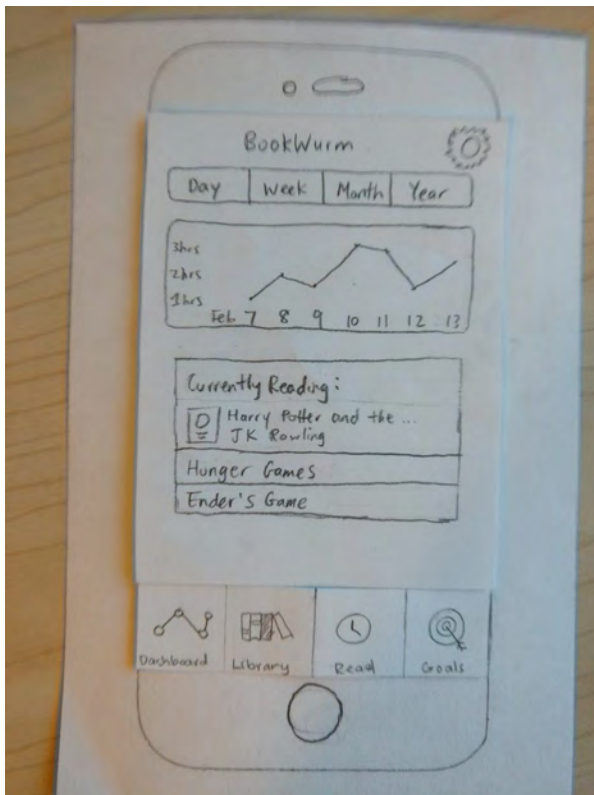
The participant opens the book.



The participant puts on the bookmark which begins timing and tracking the reading session. The participant then reads as normal.

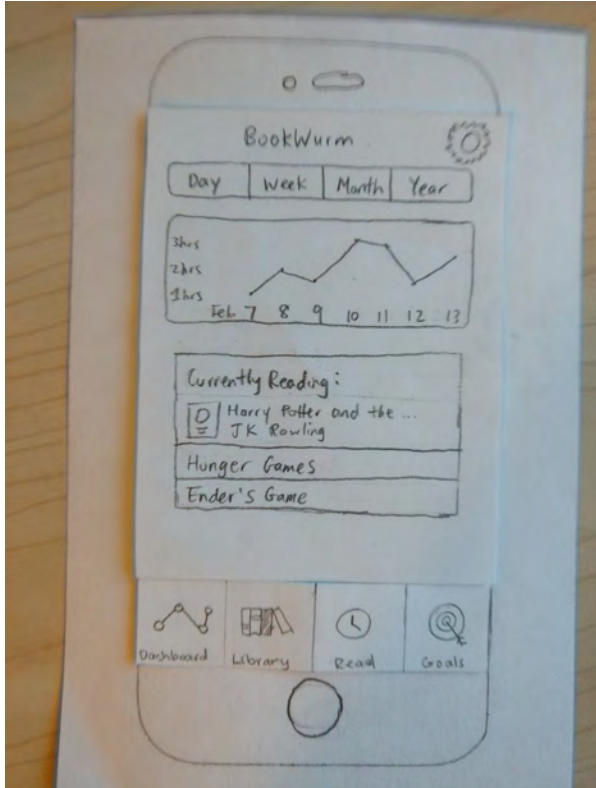


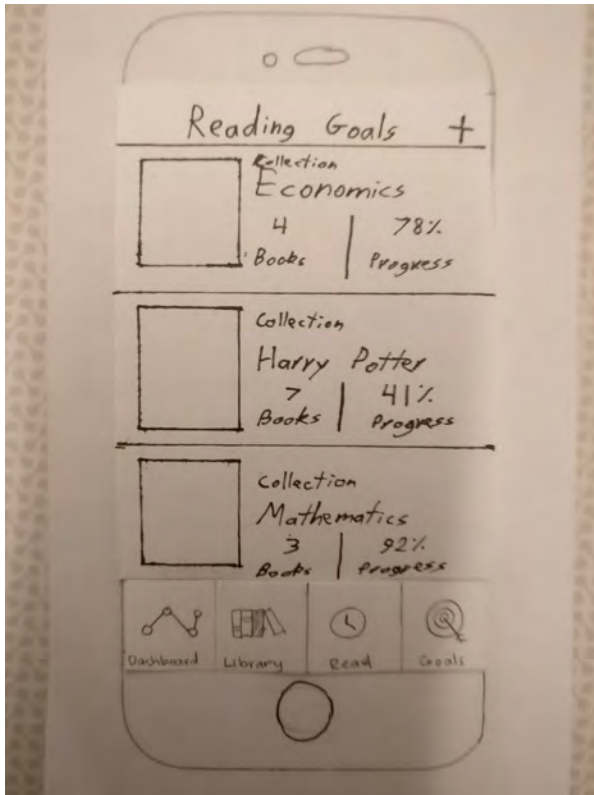
At the end of the reading session, when the bookmark is taken off, the participant is taken back to the book page and shown stats about their reading session. The user clicks the dashboard button to return to the home screen.



The user has completed the task and finds that the graph displayed on the dashboard has been updated with information about their most current reading session.

Task 2: Check progress of an existing goal

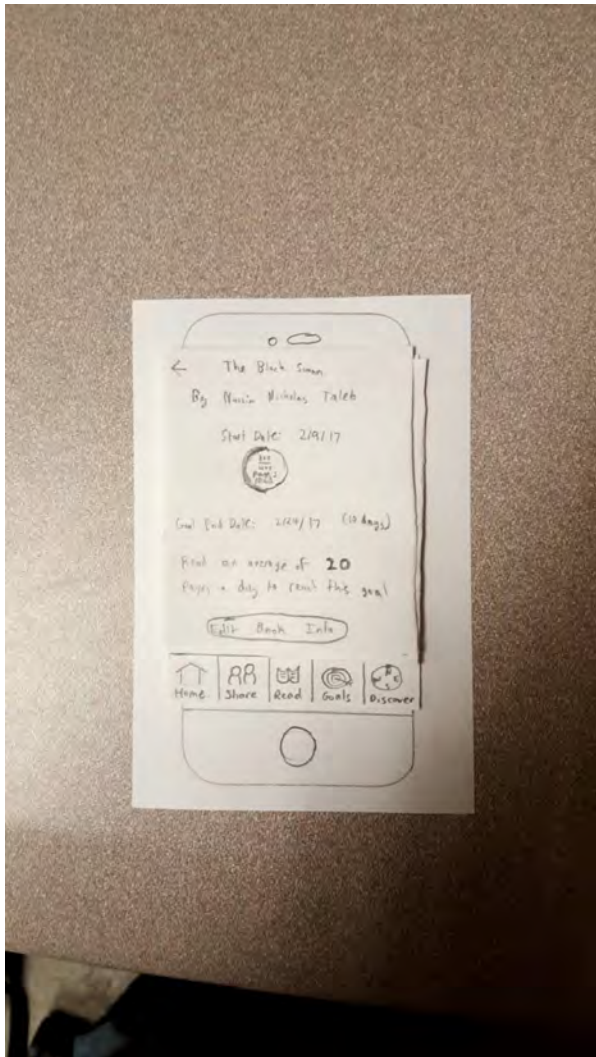
Screen	Step Description
 <p>The image shows a hand-drawn mobile app dashboard for 'BookWurm'. At the top, there's a title 'BookWurm' and a settings gear icon. Below that is a filter bar with 'Day', 'Week', 'Month', and 'Year' options. A line graph displays reading hours over time, with the y-axis labeled 'hrs' (1, 2, 3) and the x-axis labeled 'Feb 7 8 9 10 11 12 13'. The graph shows a peak of 3 hours on Feb 10. Below the graph is a section titled 'Currently Reading:' containing a list of books: 'Harry Potter and the ...' by 'JK Rowling', 'Hunger Games', and 'Ender's Game'. At the bottom is a navigation bar with four icons: a line graph for 'Dashboard', a bookshelf for 'Library', a clock for 'Read', and a target for 'Goals'. A home indicator circle is at the very bottom.</p>	<p>On the dashboard of the home screen, the participant clicks "Goals".</p>



On the “Reading Goals” screen, the participant clicks on the “Economics” goal to check their progress thus far.



Upon reaching the “Economics” goal page, the participant can see their desired end date, as well as the books associated with the goal. In order to check their progress on the book “The Black Swan”, the participant clicks the progress button next to the title of the book they desire to confirm the progress of.



The participant has completed the task of checking the progress on their goal. On this page the participant can check how many pages they need to read per day in order to reach their goal, and can edit information about progress if it was mischaracterized by clicking the “Edit Book Info” button.

Plan for future usability tests

For the remaining usability tests, we will be revising our existing script for participants so that the tasks are clearer, and follow along better with the variations of the prototype (such as not showing any books currently being added). For example, we will try to limit ourselves to directing the participant with more explicit goals, such as “Add a new book to read”, or “track reading progress” rather than asking the participant to explore a feature.

Additionally, if possible we would like to divide up notetaking in a way that we can record all that is said rather than summarizing the statements of the participant. This way we can be more confident that our data has not been altered by any personal bias. We also think it would be useful if we provided relevant props for our usability study, such as books that matched the books listed on the prototype, in order to make the prototype more believable. We also hope to

possibly expand the demographic of our usability test to include a wider variety of participants, potentially by changing the location at which we conduct them.

Some goals that we have for future usability tests is to make the purpose of each page more immediately clear to the participant. For example, our participant for this usability test did not immediately understand the purpose of the “goals” page. We would like to explore how to make the purpose and use of pages like these more clear upon their introduction, in addition to the changes we have made so far, in case further issues arise. We will likely keep the same dynamic we used for conducting the initial usability test going forward with the same group members playing the role of facilitator, “wizard of oz”, and notetakers.