Usability Evaluation Report for *Goodreads.com*

INFO20004 Usability Evaluation Methods

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Executive Summary

This report presents a plan for evaluating the usability of the running version of Goodreads.com on 26th to 29th September. Goodreads is a widely popular web-based social platform specifically made for readers. It is primarily used for reviewing and rating literary works, getting book recommendations and tracking books that one wants to read, is reading or has read. Goodreads' founder and developer, Otis Chandler, says that the site aims to help users find and share books that they love. (Goodreads, 2020)

A total of 6 users were recruited through a screener questionnaire to participate in a live usability test and our Optimal Workshop treejack[1] test. Another 14 users were recruited to participate solely in the treejack test. The target user of Goodreads.com is book-readers. We constructed a recruitment matrix to recruit users that fit the characteristics of Goodreads users:

- Avid reader (Reads 3 books or more per month)
- Occasional reader (Reads 1-2 books every two months)
- Regular technology user (Uses technology daily)
- Infrequent technology user (Uses technology less than once a week on average)

The live usability test sessions were conducted remotely due to the imposed COVID-19 restrictions. Tools used for the study include Zoom, Loop11 and Optimal Workshop. This suite of tools allowed the group to perform user observation as normal. All users participated in the test from their homes, and during the session, we encouraged them to use the think-aloud method, and speak their thoughts while completing tasks.

The study aims to uncover underlying usability issues within the site, and suggest potential solutions and recommendations to further improve the user experience of the site by gathering qualitative and quantitative data from our usability test sessions and treejack study. Our usability goals are derived from Quesenbery's 5Es (2004) - Efficient, effective, engaging, error-tolerant, easy to learn.

Participants for our live usability test sessions were given 5 tasks to complete, while asked to "think out loud", which is to verbalising and describing their thoughts during the tasks. The tasks were presented to them through imaginary scenarios. They were asked to fill out a post-task questionnaire after every task. At the end of the session, participants completed the System Usability Scale questionnaire. Each usability test lasted around 35 minutes on average.

Additionally, we conducted a treejack study that consisted of 10 tasks with 20 participants, where each task outlined a feature on the Goodreads website. Participants were instructed to click on the name of the page where they would most likely find that feature.

Goodreads is a site optimised for regular readers and technology users. Users had positive comments about the rating controls, search bar and the 'Ask the Author' feature during the usability test session.

However, the site scored a SUS score of **45** out of 100 according to our users. The study revealed certain aspects of the site impeded their ability to succeed at the tasks. These included (1) information architecture, (2) visual design and layout, and (3) conciseness of content. The table below shows our 3 of our key findings ranked in order of severity, along with a brief description of our recommendations.

Theme	Finding	Recommendation
Information Architecture	The current site structure is convoluted and the navigation bar hasn't been optimised to help users navigate.	→ Design a page that lets users browse preview content of each page.
Visual Design and Layout	The poorly designed laid out buttons, links, and textual content of the site affect users' ability to complete tasks on the site.	→ Simplify and standardise page layout, place focus on buttons and controls → Implement a style guide
Conciseness of Content	Users were overwhelmed by the amount of content on the pages.	→ Enlarge book covers → Remove excess text on page, use more concise wording → Group similar genres together

This report describes the objectives of the usability study, the characteristics of the user population identified for this test, the scenarios, and finally the findings along with recommendations.

[1] The Optimal Workshop treejack test evaluates the information architecture of the site. In the test, participants find information by navigating the site structure without the influence of navigation aids or design elements.

Introduction

Goodreads was acquired by Amazon in 2011 and has since become a social book reading platform for the customers of the e-seller as well as other users. The social integration gave the e-seller an advantage over its competitors. With the connection to the e-reading device Kindle, also by Amazon, the user base of the site has grown to 90 million (Goodreads, 2020) as of August of 2020, amassing a mixture of occasional readers, avid readers and e-book users.

Before conducting the usability tests, we referred to research from Throsby et al. to find out more about reading and book-sharing habits. The research states that word of mouth and browsing in bookstores are by far the most common ways that Australians discover books to read. (2017) Additionally, occasional readers rely more heavily on mainstream social media when finding books to read online. In contrary to frequent readers, who are much more likely to visit the websites of online book retailers and Goodreads, where they can access a book database. They also prefer visiting bookstores and libraries when looking for books in person. [See Appendix 2, fig. 30, 31]

As mentioned, readers form the majority of the user population on Goodreads, and their primary motive is to track down their reading habits, give book reviews, and get book recommendations, which falls in line with the mission statement of Goodreads. Facilitating these goals for Goodreads users will form the basis of our study.

By conducting usability tests on Goodreads.com, we aim to identify issues regarding the usability of the site, and come up with potential solutions and recommendations to further improve the user experience of the site. We define our usability goals with Quesenbery's 5Es (2004):

1. *Efficient*
    - → Can users navigate the website and find what they're looking for?
    - → Are users able to complete a task without assistance?
2. *Effective*
    - → Are users able to successfully rate and review a book?
    - → Can users search for books they're looking for?
3. *Engaging*
    - → Do users find book-logging the experience enjoyable or fulfilling?
    - → Are the features of the site usable? (Pleasant and easy to use)
4. *Error tolerant*
    - → Do users recover from errors quickly? Are error messages present and clear?
5. *Easy to learn*
    - → Does the system have a steep learning curve?
    - → Do users' abilities to do tasks improve as they become familiar with the system?
    - → Does the system architecture match the user's mental model?

The group's hypothesis based on preliminary inspection through expert-based methods heuristic evaluation and cognitive walkthrough is that users will have some difficulties information architecture and the user interface of the site. Also, competent users of technology who read regularly (target user group of Goodreads) will be able to perform tasks easily.

It's important to note that Goodreads is also available as a mobile application on both Android and iOS platforms. However, in this study we will narrow down the scope and only focus on the web version, evaluating it through desktop clients.

Method

Overview of the Evaluation Method

The live usability test was conducted as moderated sessions by our group. During the sessions, users were prompted and instructed to do tasks by a primary facilitator throughout the whole study. In addition, an observer was also present during the live session. The role of the observer was to take notes of the behaviour and actions of the participant during the session. Each live session has been screen recorded, capturing the verbal interaction between the facilitator and the participant as well.

This evaluation is task-based. All 6 users were instructed to carry out 5 task scenarios on the Goodreads website in separate usability sessions. At the end of each task scenario, the user was prompted to answer questions about the ease of use of certain parts of the site. At the end of the test, all users completed the SUS questionnaire. (Brooke, 1996)

All test were run in accordance with the test protocol [see Appendix 1 for test procedure] to ensure that we have accurate and valid results for analysis. Finally, each recording was analysed and by a group member.

Methodological Basis (Deviation from Test Plan)

Since we only have a small pool of participants for our live usability test, all six users will be performing all 5 tasks, making our test a within-subjects study. This will inevitably cause transfer of learning, where users find out things about the system from a previous task, and as a result, completes a subsequent task successfully because of this knowledge. To prevent this, we stated in our test plan that we will use the counterbalancing technique of randomizing the order of the tasks. (Rubin et al., 2008, p. 75) However, due to software limitations, we deviated from our test plan, and had all our participants complete the tasks in the same sequence.

The usability testing platform Loop11 did not allow us to randomise tasks, but it provides information such as task time, user device specifications, and it integrates the usability testing window and questionnaires. The positives outweigh the negatives of using Loop 11. So we chose to conduct our test on the platform, but take into account the possibility of transfer of learning when discussing findings.

Test Environment

Each usability test was conducted remotely using the usability testing platform Loop11 and video conferencing software Zoom. Remote usability testing meant that participants were in a natural setting, at their own home. The test sessions were held during a time suggested by the participants, where they have at least an hour to spare.

Goodreads is realistically used whenever users have time to read leisurely, most likely in a quiet, secluded setting. Therefore we tried to emulate this environment with our participants by requesting them to complete the test in a distraction-free zone with good internet connection. Each participant provided their own device for the test.

Participants were asked to turn on their camera, share their screen and consent to video recording the test usability session. All participants completed the test on a desktop through the web browser Google Chrome to avoid any compatibility issues with Loop11.

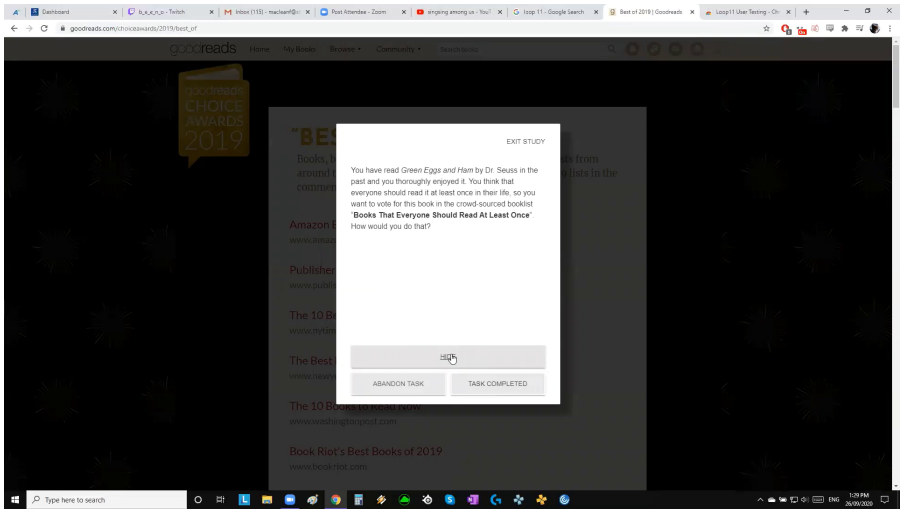

Figure 1. *Screenshot of test session through Zoom window (Loop 11 extension showing task 4 scenario)*

Collection of Data

The following data will be collected to in order to evaluate the 5Es: Efficient, effective, engaging, easy to learn and error-tolerant. (Quesenbery, 2004)

Objective	Qualitative data	Quantitative data
Efficient - *Can users navigate the website and find what they are looking for?*	→ Ease of use overall → Ease of accessibility	→ Number of tasks completed successfully → Number of times user asked facilitator for assistance → SUS score
Efficient - *Are the users able to complete a task without assistance?*	→ Ease of accessibility	→ Percentage of tasks completed correctly with and without prompts or assistance
Effective - *Are users able to successfully rate and review a book?*	→ Ease of use overall	→ Percentage of successful completions
Effective - *Can users search for books they're looking for?*	→ Ease of use overall → Ease of reading text on the screen	→ Percentage of successful completions
Engaging - *Do users find book-logging the experience enjoyable or fulfilling?*	→ Usefulness of the product → How well product matched expectations	→ N/A
Engaging - *Are the features of the site usable?*	→ Ease of use overall → Ease of reading text on the screen	→ Number of times user asked facilitator for assistance → SUS score
Engaging - *Do users recover from errors quickly? Are error messages present and clear?*	→ Ease of recovery	→ Number of times user recovered from an error → Time needed to recover from error(s)
Easy to learn - *Does the system have a steep learning curve?*	→ Ease of learning overall	→ Task times → Comparison of tasks completed successfully between the two participant groups
Easy to learn - *Do users' abilities to do tasks improve as they become familiar with the system?*	→ How well product matched expectations → Ease of learning overall → Ease of tasks - if they are easier towards the end or not	→ Comparison of tasks completed successfully between the two participant groups
Easy to learn - *Does the system architecture match the user's mental model?*	→ How well product matched expectations	→ User ratings in post-task questionnaire

Participants

Background research

Book reading is a widespread activity undertaken by people in different countries around the world regardless of age and gender. Therefore, we expect that there's a wide variety of users on Goodreads. To recruit prospective test participants representative of Goodreads users, we used a web analytics tool named SimilarWeb, and referred to academic studies. In the end, we discovered a few key demographic characteristics of Goodreads:

- US-based users form nearly half of the user population. (SimilarWeb, 2020)
- Most users are English speaking countries, including United Kingdom, Canada and Australia. (SimilarWeb, 2020)
- From a random sample of 50,000 members, 75% of users are female and 25% are male. (Thelwall & Kousha,
- 2016, p. 978)
- Librarians engage extensively with most features of the site. (Thelwall & Kousha, 2016, p. 978)

From our research, we constructed two recruitment matrixes and defined the characteristics of our target users.

- Regular technology users: Uses technology daily, people who use e-readers fall into this category
- Infrequent technology users: Uses technology less than once a week on average
- Avid readers: Reads 3 or more books per month on average, librarians will most likely fall into this category
- Occasional readers: Reads 1-2 books every two months on average

By targeting two different types of readers and technology users for both tests, we hope to notice patterns and trends between each group in our test result analysis. We aimed to target essentially 4 different user groups so that there's minimal bias in the test results. (e.g. Regular technology users who frequently might find the tasks easy to complete due to having more knowledge in the domain than others)

According to Rubin et al., 4 to 5 people are needed to expose around 80% of usability deficiencies for that user group. (2008, p. 72) We chose to recruit 6 users for our live usability test and 20 for our treejack study. Participants for both usability tests were sourced through convenience sampling due to limited resources and connections. We made sure each of our participants fell into one specific user group according to our recruitment matrix. [See below] In the end we were able to recruit the exact number of participants we specified earlier for each user group.

Recruitment Matrix (Live usability test)

	Regular technology users	**Infrequent technology users**
Avid readers	2	1
Occasional readers	2	1

Recruitment Matrix (Optimal Workshop test)

	Regular technology users	**Infrequent technology users**
Avid readers	8	2
Occasional readers	8	2

A total of 36 individuals filled out our screener questionnaire, and exactly 20 participants matched one of the four target user groups. We also found that 9 out of 20 of our participants have previously used Goodreads through our screener questionnaire. A common main motivation for using Goodreads was to look for books to read. [See Appendix 2, fig. 22, 23 for questionnaire responses]

All participants for our live usability test consented to being recorded and the internal publication of results from the study on the condition that full anonymity is maintained. [See Ap 1.1.3] Hence, we have anonymised all our users for this report by identifying them through their participant ID. (P1, P2, etc.)

Participant Profiles (Live usability test)

Participant ID	Type of technology user	Type of reader	Date of interview	Length of interview	Location	Operating system	Used *Goodreads* before?
P1	Regular user	Avid reader	26/09/2020	32:45	Melbourne, AU	Windows 10 NT 10.0	Y
P2	Regular user	Occasional reader	26/09/2020	27:02	Melbourne, AU	Mac OSX 10.14.6	N
P3	Regular user	Occasional reader	26/09/2020	33:49	Surrey, UK	Windows 10 NT 10.0	N
P4	Regular user	Avid reader	27/09/2020	30:57	Melbourne, AU	Windows 10 NT 10.0	N
P5	Infrequent user	Occasional reader	29/09/2020	34:52	Melbourne, AU	Mac OSX 10.15.6	Y
P6	Infrequent user	Avid reader	29/09/2020	39:54	Melbourne, AU	Mac OSX 10.14.6	N

Participant Profiles (Optimal Workshop)

Participant ID	Type of technology user	Type of reader	Time taken	Operating system	Used *Goodreads* before?
P1	Regular user	Occasional reader	00:05:07	Chrome 79.0.3945.136	Y
P2	Regular user	Avid reader	00:03:29	Chrome 85.0.4183.102	N
P3	Regular user	Occasional reader	00:03:01	Safari 14.0	N
P4	Regular user	Avid reader	00:03:47	Safari 14.0	N
P5	Regular user	Occasional reader	00:02:44	Chrome 75.0.3770.100	Y
P6	Regular user	Avid reader	00:03:07	Chrome 85.0.4183.102	N
P7	Regular user	Avid reader	00:03:15	Safari 13.7	N
P8	Regular user	Occasional reader	00:02:00	Chrome 85.0.4183.102	N
P9	Regular user	Avid reader	00:02:41	Safari 13.1.1	N
P10	Regular user	Occasional reader	00:15:41	Safari 13.1.2	Y
P11	Regular user	Occasional reader	00:04:29	Chrome 85.0.4183.102	N
P12	Regular user	Avid reader	00:04:25	Chrome 79.0.3945.136	Y
P13	Regular user	Occasional reader	00:03:15	Chrome 85.0.4183.101	Y
P14	Regular user	Avid reader	00:03:43	Chrome 85.0.4183.121	N
P15	Regular user	Occasional reader	00:07:03	Chrome 85.0.4183.102	Y
P16	Regular user	Avid reader	00:04:13	Chrome 85.0.4183.121	Y
P17	Infrequent user	Occasional reader	00:08:14	Chrome 85.0.4183.102	N
P18	Infrequent user	Occasional reader	00:09:27	Chrome 85.0.4183.127	Y
P19	Infrequent user	Avid reader	00:02:23	Chrome 85.0.4183.127	N
P20	Infrequent user	Avid reader	00:21:08	Safari 13.1.1	Y

Scenarios

According to Goodreads, core tasks of the site include (1) tracking books the one has read, is currently reading, or wants to read, (2) discovering books through community ratings and reviews, and (3) interacting with other users on the platform. (2020) We created task scenarios for each of these critical tasks to make sure that the core functionality of the site is covered by our usability test. We additionally included two practical feature-oriented tasks, to see how users will interact with the niche features typically used only by expert Goodreads users. Participants were asked to complete a total of five tasks during the test. The tasks were introduced to them as scenarios.

Scenario 1

Task	Page or function to test	Scenario
Logging in, rating and reviewing a book	1. Homepage 2. Signing in 3. Search bar 4. Book description page 5. Rating controls 6. Commenting features	You've just finished a science fiction novel named The Hunger Games written by Suzanne Collins and you really disliked it because of the terrible writing style. You would like to share your opinion with people who haven't read the book before. You go online to find the best platform for this, and you find a website named Goodreads. You try to write a book review on the platform.

This essential task will take the user through many of the core functionalities of the site. Therefore we expect the users will spend more time completing this task compared to the other four tasks. This task also introduces the users to the website without exposing too many features and functionalities to prevent them from getting lost and overwhelmed. We kept the task as simple as possible, to prevent between-task learning from occurring. (Rubin et al., 2008, p. 75) It must also be mentioned that logging in is a crucial step that a user has to take before they can access the main features of the site. Therefore, all users will perform this task to start.

Scenario 2

Task	Page or function to test	Scenario
Putting a book into a bookshelf	1. My Books page 2. Book description page 3. Bookshelves feature	You have been wanting to read *To Kill a Mockingbird* by Harper Lee for a while, and you finally got to start reading it. You want to add this book to your Currently Reading shelf.

A metaphor for readers' actual bookshelves, the bookshelves feature on Goodreads allows users to gain access to a collection of books that the one has read, is currently reading, or wants to read. This task requires users to search up a book, and add it to one of their bookshelves, which is a task frequently undertaken by both experienced and novice users of the site. The inclusion of this task will allow us to evaluate the labelling of buttons and links, and see if they match the users' mental models. (Nielsen, 2010)

Scenario 3

Task	Page or function to test	Scenario
Track progress	1. My Books page 2. Book description page 3. Progress tracking controls 4. Share status feature	You're currently reading chapter 3 (p. 45) of *To Kill a Mockingbird*, and you're enjoying it so far. But you suddenly find yourself other urgent matters to attend to. You want to track your reading progress on Goodreads, in case you forget which page you're on. In the meantime, you would like to share your thoughts on the book to your friends on the site.

The third task targets another goal in the mission statement of Goodreads (2020), which is to create a platform for the users to share their opinions on books to promote interaction. We hope to identify if the progress tracking controls are efficient and intuitive to users, and investigate whether users are able to locate the controls without too much trouble.

Scenario 4

Task	Page or function to test	Scenario
Voting for a book in a specific booklist	1. Navigation bar 2. Booklist page 3. Booklist search feature 4. Voting feature	You have read *Green Eggs and Ham* by Dr. Seuss in the past and you thoroughly enjoyed it. You think that everyone should read it at least once in their life, so you want to vote for this book in the crowd-sourced booklist "Books That Everyone Should Read At Least Once".

This task would be most likely undertaken by regular users of the site, rather than novice users. By including a more complex task that requires users to navigate the site more extensively, it would allow us to investigate whether the information architecture of the site is logical, and if it matches users' mental models (Nielsen, 2010) of the site.

Scenario 5

Task	Page or function to test	Scenario
Find a quote	1. Navigation bar 2. Quotes page 3. Search bar 4. Tag feature	You were writing an essay and you wanted to emphasize the significance of courage in life. You wish to conclude the essay with a nice quote from any book that relates to courage.

Upon preliminary inspection, we've noticed that there are many hidden features on the site that not a lot of users make use of. These features are mostly targeted at regular readers. The quote finder is one example of one of these niche features. Additionally, we found the layout and structure of these pages somewhat inconsistent, and are hard to get to from other pages. From this scenario we hope to find out how users perceive the utility of the feature, and further test the information architecture of the site.

Findings

Goodreads From our post-task questionnaire, the SUS score for this website is 45/100, which is considerably lower than the average score of 68. [See Appendix 2, Table 2] According to Bangor et al., it is classified as a 'poor' score. (2008, p. 589) However, a handful of positive findings emerged from out usability test sessions and treejack study on Optimal Workshop.

Positive Findings

✓ Rating controls

4 out of 5 users thought that the rating system was easy/very easy to use. Users said the "purpose of it was clear" and "it stands out on the page, which is good". It seems to match the mental model that users have of ratings, the star rating system is widely popular and is used for rating a wide variety of items or services on the internet. (For example, food and merchandise)

✓ Optimised for expert users

The site targets frequent users who visit the site regularly. P5 only user in our group of participants that uses Goodreads regularly according to our screen questionnaire results. P5 completed all five tasks without requiring external help. P5 was able to locate features easily and was familiar with the buttons, controls and jargon of the site.

✓ Information architecture (partial)

- → Looking for book clubs
  - Question 9 of the treejack study has a 100% success rate and directness. The amount of time users took to answer the question is also relatively low compared to other questions. [See Ap 4.9] This shows that users are able to associate the word "group" with a page where they can look for book clubs to join.
  - This also confirms that the path Home > Community > Groups is intuitive and direct. Most users chose the correct answer without backtracking. The big circular nodes on the pie tree show that users rarely strayed from the correct path. [See Ap 4.12]
- → Finding books that were previously logged by user
  - Question 5 received an overall score of 8, and a success rate of 90% showing that it was quite well received by users. [See Ap 4.5]
  - Users agree that the My Books tab would contain books that users previously added to a bookshelf.

✓ Search bar

3 out of 6 users said that the search bar made several tasks easier to complete during the test session. Although not all users thought of using the search bar when stuck, P5, a regular user of Goodreads stated, "Whenever I don't know where to find things, my go-to is the search bar." The search bar is able to search up not only books, but authors, lists, quotes, other members, and more.

✓ Ask the Author feature

P1, as an avid reader who has never used Goodreads before, finds the feature exciting, and is happy about the ability to directly send authors messages or questions. P1 said, "I've never seen anything like that. I like that." This feature is a feature that regular Goodreads users would enjoy.

✓ Terminology

3 out of 6 users liked that the site uses the term 'bookshelves', as it speaks to the target readers of the site, regular readers. All users were able to associate organising and sorting books with the feature. Task 2 was successfully completed by all 6 users. [See Appendix 2, Table 1]

- → In task 2, when users were asked which aspects of the site made the task easy for them, P1 and P3 mentioned that the vocabulary was straight-forward and easy to understand, which assisted them in completing the task.

Theme Overview

After conducting thematic coding on transcription excerpts, and carefully analysing the quantitative data we collected, we grouped our findings into three main themes:

Theme 1: Visual Appearance and Layout

Theme 2: Information Architecture

Theme 3: Conciseness of Content (Wordiness and Wording)

Each finding is ranked according to its severity and frequency of occurrence. (Rubin et al., 2008, pp. 262-263) This is to prioritise problems and make sure critical and high-frequency usability issues are addressed first.

Severity ranking	Severity definition
Critical	Causes task failure. The user either is not able to or will not want to use a particular part of the faulty product.
Serious	Significantly noticeable problems that may hinder user. User has to work around problem.
Minor	Possible issue in a working product. Probably will not hinder user but still noticeable.
Irritant	Problem occurs only intermittently and would only affect users in rare cases.

Frequency ranking	Severity definition
Extremely high	Will occur ≥90% of the time the product is used
High	Will occur 51–89% of the time
Moderate	Will occur 11–50% of the time
Low	Will occur ≤10% of the time

Finding 1: The current site structure is convoluted and the navigation bar hasn't been optimised to help users navigate around efficiently.

Theme	Information architecture
Severity	Critical
Frequency	Extremely high

70% of questions on our Optimal Workshop (OW) treejack test received a score of 5 out of 10 or less. This shows that there are major problems with the navigation bar that are preventing users from finding information that they want. This problem is also prominent in our live test. Further inspection shows that this is caused by a variety of reasons, including (1) illogical placement of features, (2) misleading titles, as well as (3) redundancy in the site structure.

Illogical Placement of Features

- **OW Question 3:** 40% of users selected the 'My Books' node and 50% of users selected 'Quizzes'. [See Ap 4.15] This implies that users also expect to find the quiz feature in 'My Books'.
    - Even though the success rate is 50% for this task, the pie tree shows that from the root node 'Goodreads', more users went down the wrong path than the correct path. [See Ap 4.14]
- **OW Question 6:** 40% of users answered 'My Books' rather than 'Home'. Additionally, this question scored a low success rate of only 30%. This suggests that most users agree that the reading challenge should be located in the 'My Books' page instead. [See Ap 4.6]
    - The question has scored 65% for directness and the time taken for users to answer is relatively low compared to the other questions, indicating that users did not hesitate and was certain of their choice.

Misleading Titles

- **OW Question 7:** To look for a list of highly regarded books well-liked by other Goodreads members, 35% of users chose 'Recommendations'. Only 20% of users chose 'Choice Awards'. [See Ap 4.7]
    - Goodreads learns about users' preferences from their ratings and reviews, then generates books recommendations unique to the user, which appears on the Recommendations page. But popular books amongst the Goodreads community are not shown on the page, instead it shows books generated by an automated recommender system on Goodreads.
- **OW Question 8:** 75% of users have a hard time relating the 'List' tab to a group of books. [See Ap. 4.8] Only 25% of users chose the correct answer, and 50% opted for 'Recommendations' and 'Choice Awards'.
    - The path that participant 6 took [see Ap 4.14] was very lengthy and convoluted. 'Recommendations' was the first choice, then the user traversed the tree to look at other pages, coming back to the 'Browse' node a total of 5 times, and then settling with 'Recommendations' as the final answer.
    - This shows that users experience a lot of uncertainty that users experience when they click on the page titles. They are unsure of the content on the pages.
- 3 out of 6 users unable to associate voting on a book list with the 'List' tab hence failed the task. [See Appendix 2, table 1] (1 user required external help from facilitator) Users had trouble understanding the concept of the word 'list' in the context of this site. Since 'List' and 'Choice award' both appear in the drop-down from the 'Browse', in task 4, 2 out of 6 users first clicked on 'Choice Awards' instead.
    - P1 says, "List is like listing all the books in existence, that's what it sounds like to me." He further explained that "It should be like 'Award Lists' or something like that." However, since a Choice Awards page already exists, this could lead to even more confusion.
    - In our post-task questionnaires, 4 out of 6 participants rated somewhat difficult/very difficult for the criteria 'getting to the voting page'. [See Appendix 2, fig. 27]

Redundancy in Site Structure

- **OW Question 10**: 95% of users chose the wrong answer. The time taken to answer the question was at least 10 seconds longer compared to other tasks. [See Ap 4.10]
    - The pie tree is larger and scattered, suggesting that a lot of nodes have been clicked on because users tried to click around the tree but can't seem to settle on an answer. [See Ap 4.13]
    - The pie tree also shows that users cannot reach a consensus on the right answer for this question. The yellow nodes are all small in size.

- This can also be verified by looking at participant's responses. Users chose a range of different answers. [See Ap 4.15]
- No users nominated its parent node 'creative writing' as a correct answer. Users are struggling to figure out the content of each page because there are too many paths to take.

→ Under browse, new release, lists, and recommendations are all methods of discovering new books. The redundancy confuses users.

- During the live test, when participants get stumped and lost in the site, their strategy is to click around all of these three pages in the navigation bar (along with other ones) one-by-one to see if it contains the information, which they all agreed was an inefficient way of browsing.
- P5 mentioned while she was looking for the voting page, that "I don't know why they need to put it here twice, they're exactly the same.

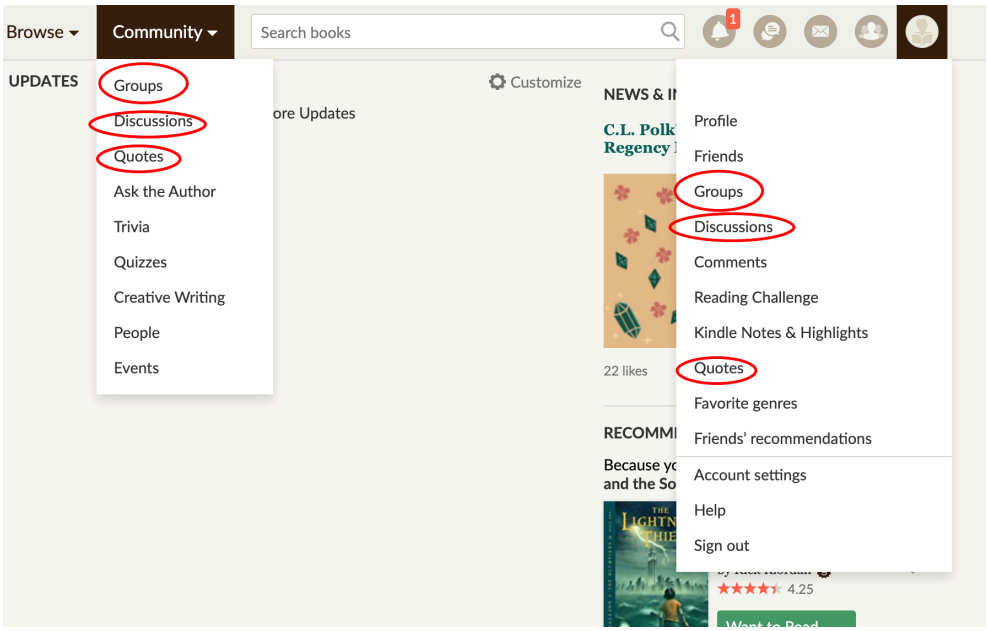

Figure 2. *Redundant pages in navigation bar (circled)*

Recommendation 1a: Add a 'Browse' page

Reducing redundancy in the site structure can be done by adding a browse page that contains glimpses of each of the pages. Also, including clickable links or buttons that lead users to the pages directly to create a navigation that is easier for users to comprehend. Lay out the information clearly and logically using cards and sections to group similar information together. This prevents users from having to jump back-and-forth between different pages just to see if the page contains the information that they're looking for. This also removes the need for a drop down menu containing misleading titles, hence also removing the ambiguities related to wording. The same concept can be applied to the Community tab.

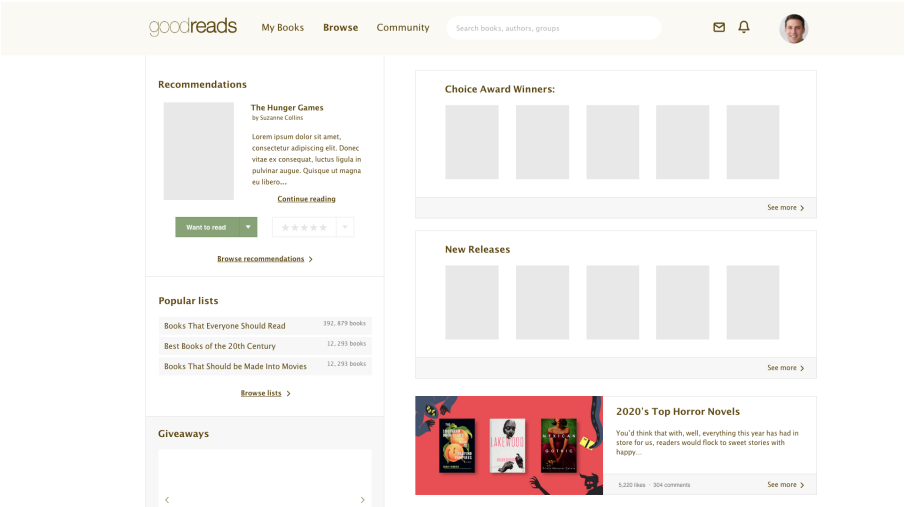

Figure 3. *Mock-up: Browse page*

Finding 2: The poorly designed laid out buttons, links, and textual content of the site affect users' ability to complete tasks on the site.

Theme	Visual design and layout
Severity	Major – Preventing users from using the site
Frequency	Extremely high

The uneven spacing, inconspicuous headings and buttons, and also the overall layout of the site doesn't match most users' mental models of the site. (Nielsen, 2010) Other issues unrelated to layout, include colour schemes and the placement of features across the pages.

- P5 and P6 say that they "don't like the colour scheme" or "don't find it appealing", and agree that there's room for improvement on this aspect of the site.
- During task 1, P5, a regular user of the site, expresses that the 'Write a review' button was "all the way down the page", and "wouldn't have been able to find it if I was new to the site".
- P1 was not able to notice the progress tracking controls on the interface in figure 4. P1 scrolled up and down the page for around 5 seconds, then says "I'm pretty stumped. I have no idea where to find my progress."
    - Currently, the layout of the page contains random clickables all over, and the most important controls on the page, e.g. rating system, progress tracking, reviews are not emphasised to users.
    - Users who completed the task also commented that the tracking controls weren't easy to find.

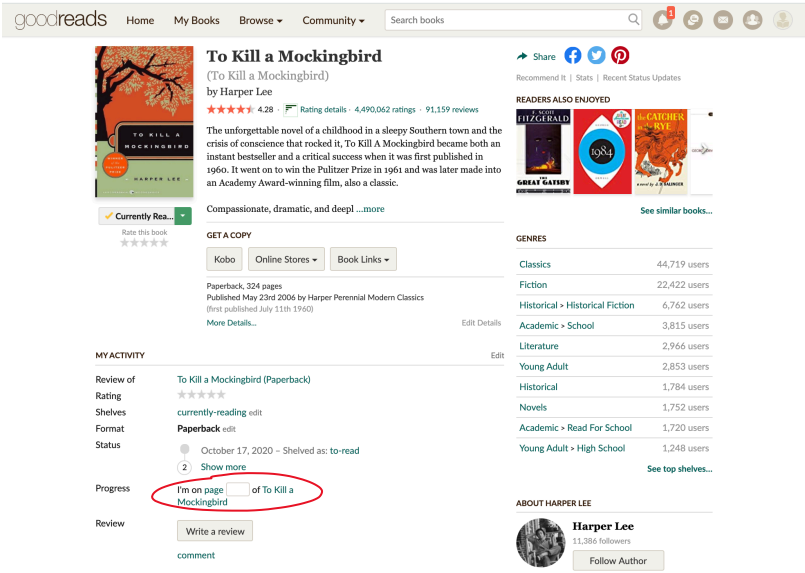

Figure 4. *Progress controls (Shows when user adds book to Currently Reading shelf)*

- While completing task 2 (adding a book to bookshelf), P6's first instinct was to attempt to drag the cover of the book into the Currently Reading link to the left side of the page.
    - She quickly finds out from the lack of feedback that her attempt wasn't successful.
    - She later expresses that the edit button in the 'shelves' column isn't visible enough and the table is uneven, making things difficult for her as an infrequent user of technology.

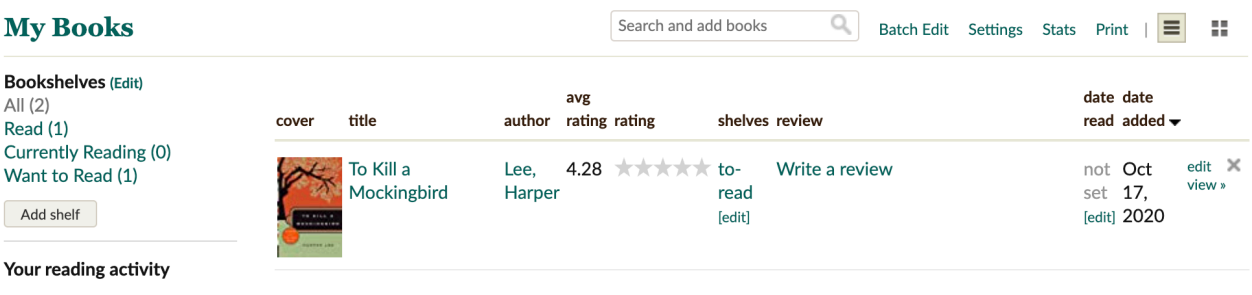

Figure 5. *Controls on My Book page*

Recommendation 2a: Simplify and standardise page layout, place focus on buttons and controls

Simplify and standardise page layout across the site, emphasize headings, and clickables, and only show relevant information instead of cluttering the page with it. Currently, the layout of the site does not have visual hierarchy, therefore users are finding it hard to focus on one element. The focus should be placed on key buttons/controls, headings and navigational features. Increasing the visibility of these features will make the system more efficient and engaging to use. (Quesenbery, 2004)

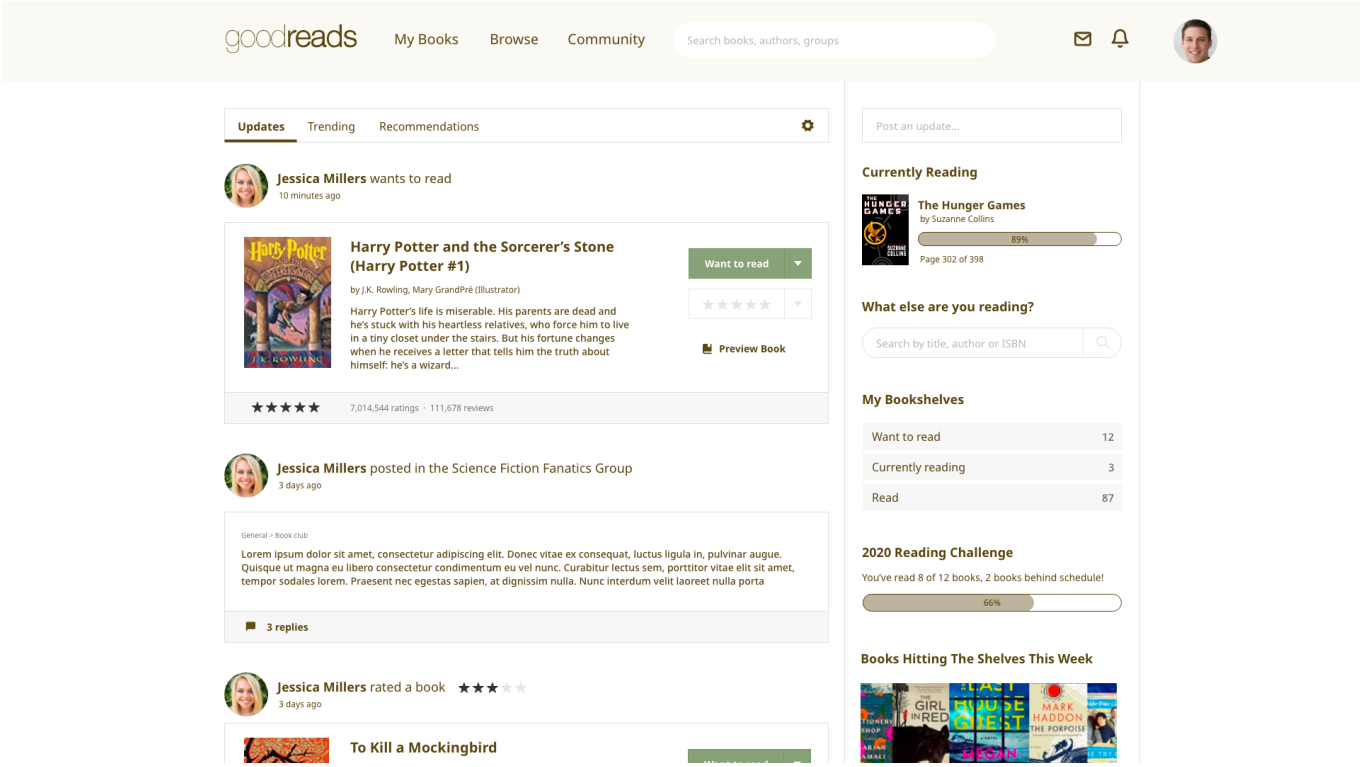

Figure 6. *Mock-up: User homepage with improved page layout*

Recommendation 2b: Implement a style guide

Create a style guide so that consistent visual design can be easily enforced throughout the product. (Laubheimer, 2019) Incorporating many different styles and layout patterns can increase the cognitive load of the user, making them less receptive to the site. A style guide can be used to make the layout and visual design of the pages more consistent, legible and usable.

The following UI components should be considered when implementing a style guide for Goodreads (not exhaustive):

1. Buttons
2. Breadcrumbs
3. Navigational menus
4. Progress and loading indicators
5. Icons
6. Typography
7. Input fields
8. Cards
9. Tables
10. Grid lists of content, media or photos

Finding 3: Users were overwhelmed by the amount of content on the pages.

Theme	Conciseness of content
Severity	Major
Frequency	Extremely high

All across the site, many of the pages are overloaded with content, and key information does not stand out to users. 4 out of 6 users have used the word “overwhelming” when coming across various pages on the site. This hinders users from performing core tasks on the site.

- → In relation to finding 2, due to the lack of visual hierarchy, P1 failed to notice the progress tracking controls on the book listing page and wasn’t able to complete task 3. (fig. 4)
- → P2 commented multiple times that there’s “too much going on” and that the user interface is so confusing that makes it hard to make sense of the purpose of the pages.
- → P1 was not impressed by the large amount of textual information on the page and commented “This is useless to me, it’s just a jumble of colours, I can’t identify what kind of book these are. None of these here (pointing at the grid of books in figure 7) will ever interest me.”
- → In the post-test questionnaire of task 1 (signing in, rating and reviewing a book), users were asked which aspect of the site made it difficult for them to complete the task. The response was unanimously related to the cluttered content.
    - 3 out of 6 users stated that there was too much information across most of the pages that were unnecessary.
    - P2 and P4, who failed the task, said that they didn’t notice the rating controls because they were overshadowed by the large amounts of links and text on the page.

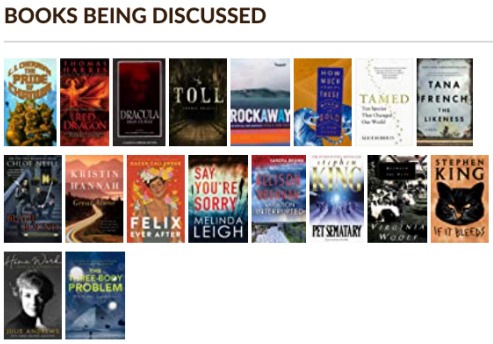

Figure 7. *Cluster of book covers to the side of the page*

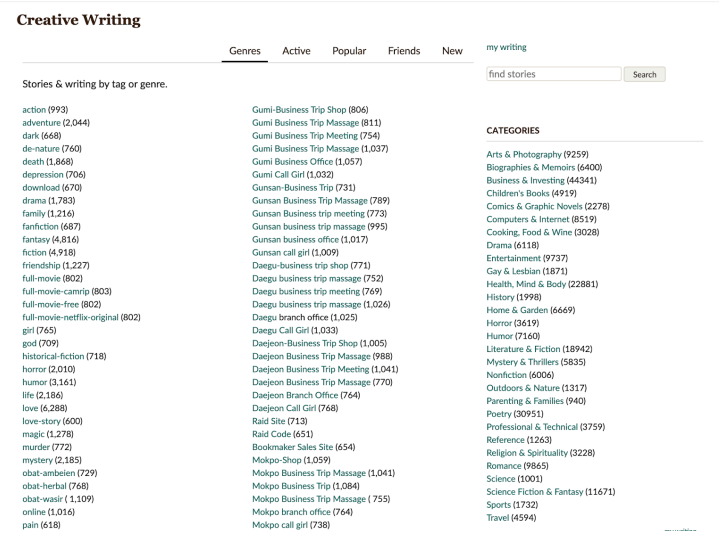

Figure 8. *List of tags/genre on Creative Writing page*

Recommendation 3a: Enlarge book covers

Enlarge book covers on page, and only show 3-5 books to avoid overwhelming the user with book covers. When the user's cursor hovers over a cover, show extra information to the user, in case the book cover doesn't contain a book title, author, etc.

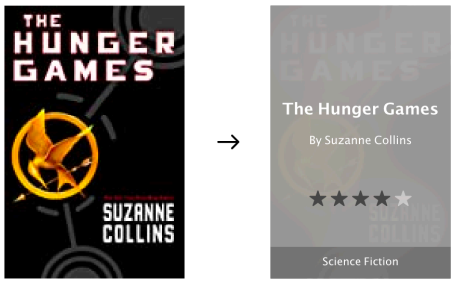

Figure 9. *Mock-up: Sample book cover and information overlay when cursor hovers over it*

Recommendation 3b: Remove excess text on page, use concise wording

Webpages should employ scannable and concise text. This is because users rarely read websites word-by-word, 79% of users only scan new webpages that they come across, according to research by Nielsen. (1997)

By using concise, scannable and objective language, writing meaningful headings, and halving the word count of the current user interface of Goodreads, users are more likely to engage with the website with more enthusiasm and satisfaction. Only show the most essential information, such as instructions, and keep it brief and summarised. This will help to prevent overwhelming users with text and images on a content-heavy site such as Goodreads.

Recommendation 3c: Group similar genres together

On the Creative Writing page, consider using icons and buttons together to add visual interest and break up the text on the page. Group similar genres together to eliminate redundancy and reduce the clutter on the page.

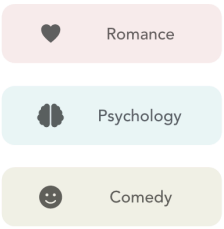

Figure 10. *Mock-up: Genre buttons*

Finding 4: Lack of visible controls to add books to lists for voting.

Theme	Information architecture
Severity	Major
Frequency	Extremely high

On the side of the booklists page, a section providing 5 'Choose a book' links can be seen. (fig. 11) However, when P5 clicked on one of the links, a modal (fig. 12) showed up.

- → P5 gets visibly annoyed when there are no clear controls to search and add a book.
- → P5 clicks on the 'vote for this book' button 3 times, while saying "It looks like it's clickable, but nothing is happening... Can I not choose a book from here?"
    - The modal is a help message, and the button is not actionable.
    - P5 later commented that the help modal "made things more confusing and wasn't helpful at all".
- → P5 voted for the book by scrolling down the list to the 24th listing and clicking the 'vote for this book' button.
- → P4 was the only participant that found the add books to list controls.
- → 3 out of 6 participants failed task 4, 1 required assistance [Appendix 2, Table 1], either because they couldn't find the list page, or they were unable to find the add books to list controls.

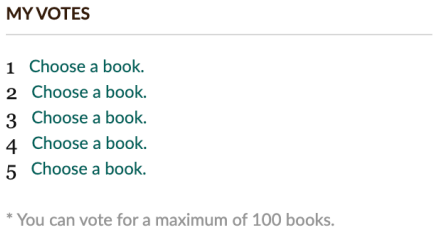

Figure 11. *Hyperlinked text as buttons for main functions*

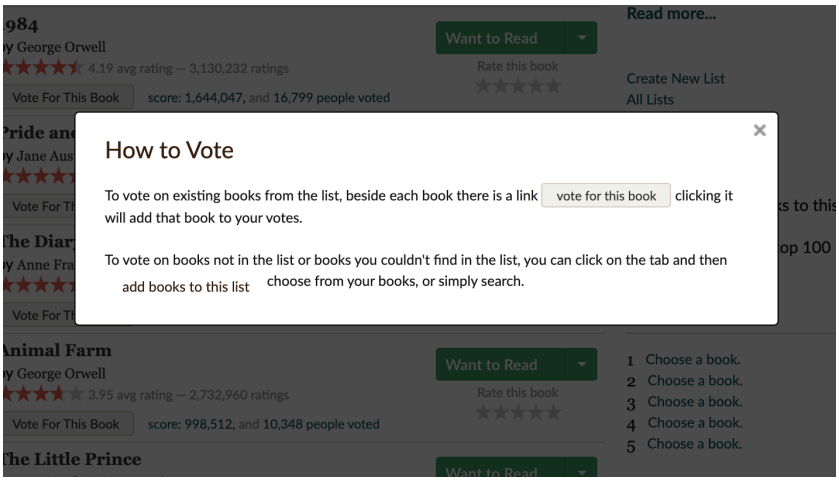

Figure 12. *Help message modal*

To add books to the list for voting, users have to first click on the tab 'Add Books To This List', then click on 'Search' underneath. Again, the buttons are very inconspicuous. P2 and P5 had difficulties finding these buttons as we told them these steps. Then a search bar appears. This is all on a cluttered page where the focal point is not on the two buttons.

Figure 13. *Add books to list controls*

Recommendation 4a: Streamline the process of adding a book to a book list

The links in figure 11 should directly lead users to the 'add book to list' function instead of displaying a lengthy help message.

As outlined in recommendation 2b, the focus should be placed on headings, book covers and navigational features. Increasing the visibility of these features will make the system more efficient and engaging to use. (Quesenbery, 2004).

The main feature on the list page is to vote for books on the list. Currently the "Want to Read" button is emphasised as it is highlighted green at the end of each line, while the "Vote for this book" button is smaller and in grey. This can be more effectively emphasised by rearranging the format of each line in the list by removing the "Want to read" button and replacing it with the "Vote" button. Additionally, we suggest simplifying the wording to "Vote" for better legibility overall.

As for adding new books to the list, users can do so using the controls on the side bar, either by searching up the book, or by clicking the "Add from My Books". Both options should lead user to a page similar fig. 14 for the sake of consistency, where the books are listed on the left, with a vote button next to the title and blurb of each book. If the user hasn't voted for any books in the list, the "My Votes" section would not appear, to prevent confusing users.

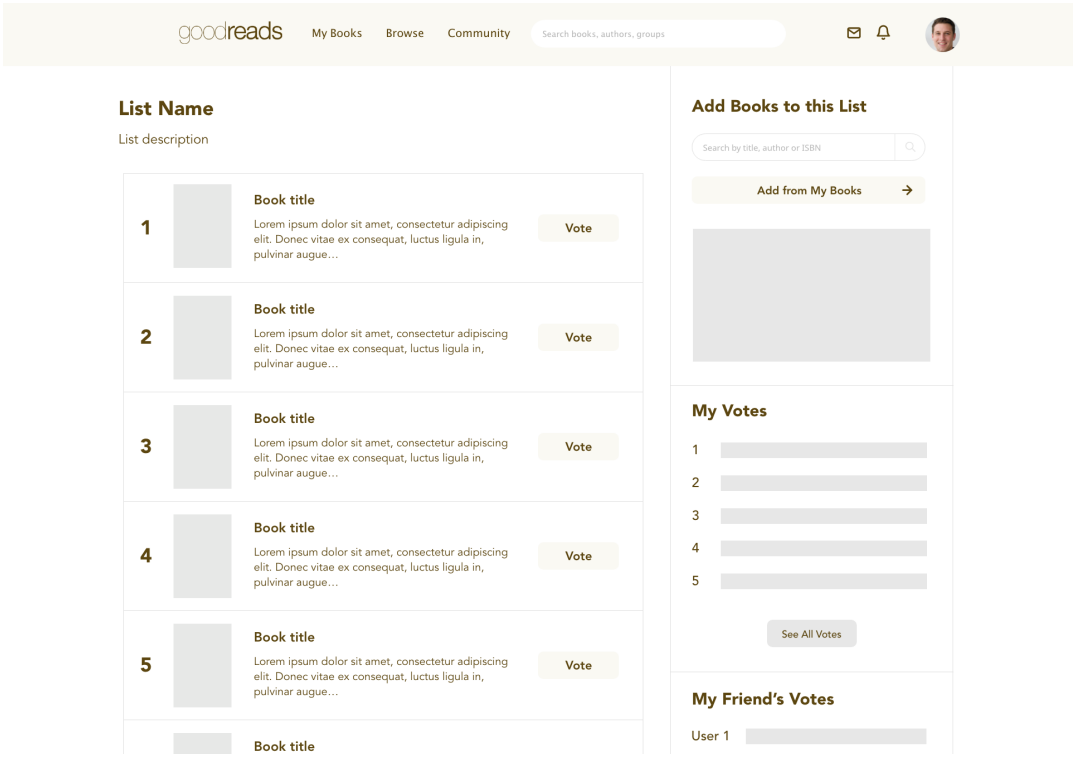

Figure 14. *Mock-up: Redesigned list page*

Finding 5: Users misunderstand the intended functions of certain buttons with confusing labels.

Theme	Information architecture
Severity	Major
Frequency	High

Some key buttons and controls of the site need redesigning so that they are more comprehensible.

Progress Tracking Controls

The segmented control for indicating page number or percentage does not provide clear feedback to users. When asked what aspect of the website made the task 3 difficult, P5 said, "The colour scheme (of the progress tracking controls) is monochromatic making it hard to differentiate between what's greyed out and what is selected."

- 50% of users said the controls were 'difficult' or 'very difficult' to use. [See Appendix 2, fig. 26]
- Although some users didn't explicitly state that they found the controls confusing, we noticed that most of them had to click between the two options or take a moment to double-check if the right options had been selected.

Figure 15. *Side-by-side comparison between selecting '#' (left) and '%' (right)*

The progress tracking controls on a book listing page (Figure 15) also needs redesigning. Users change from entering a page value to a percentage value by clicking on the word 'page' or on the symbol '%'. Which is highly unintuitive.

- P1 was not able to complete the task due to not being able to locate the controls. When told the correct way to use the controls, P1 said "I would've never guessed that's how you do it."

Figure 16. *Progress tracking controls on book listing page*

Add to Bookshelf Function

The method to add a book to a personal bookshelf is also not well designed in terms of ease-of-use.

- Task 2 requires participants to add a book to the "Currently Reading" shelf. It requires users to click on the 'Want to Read' button, then select the correct bookshelf.
- It may not occur to users who have not previously used Goodreads, that they must click on want to read to add a book to their bookshelves on a book listing page. Both P4 and P6 (infrequent technology users) spent more than 1 minute 30 seconds looking for the button. They both also stated is also one of the three aspects of the sites they'd like to improve during the post-test questionnaire.
- Moreover, 2 out of 6 users immediately clicked on the "Add shelf" option instead of the "Currently Reading". However, "Add shelf" is intended for creating a new bookshelf. Users would then be left quite confused for a while, but ultimately was able to recover after seeing the undesired feedback.
- P4 expressed that "The bookshelves should be more accessible and easier to find." Showing that she had trouble associating the "Want to Read" button with adding books to bookshelves.

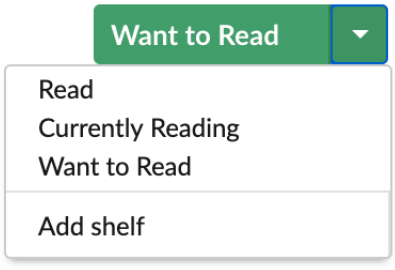

Figure 17. *Dropdown menu under the Want to Read button*

Recommendation 5a: Redesign segmented control

Using the same controls across different pages for consistency. Emphasise the selected option so that it matches users' mental models of how the segmented controls work. (Greyed out background and text – Deselected, light background with bolded symbol – Selected)

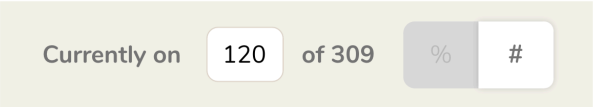

Figure 18. *Mock-up of segmented control*

Recommendation 5b: Use paragraph buttons

According to Laubheimer, split buttons such as the one shown in figure 19 have low discoverability. (2019) Not all users would know that clicking the arrow would reveal all the other bookshelves.

To help users find the add to bookshelf function more easily and reduce the ambiguity in the meaning of the button, use "Add to bookshelf" rather than "Want to Read" as the label, and instead of a split button, implement a paragraph button so that there's no default action and thus more error-tolerant, which is one of our objectives. (Quesenbery, 2004) Also, changing the term "Add shelf" in the dropdown menu to a more informative label such as "Create new bookshelf" would clarify its purpose.

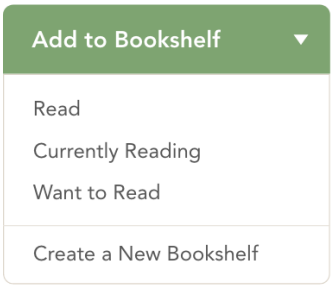

Figure 19. *Mock-up of new add to bookshelf button*

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Finding 6: The typography is inconsistent, causing some users to experience difficulties when going through the content on the page.

Theme	Visual design and layout
Severity	Irritant
Frequency	Extremely high

The site uses blue underlined text to indicate hyperlinks. However, most of the time these links are quite small and not obvious even when it is linking to a main function on the page. During the live test, 6 out of 6 of participants had a lot of difficulty or required external help to complete a task because an element of the site's typography was too small or not prominent enough for them to notice.

- P6 failed to see the track progress button during task 3. The task ended up taking 5 minutes to complete and required external help to complete the task.
- P6 also found it very hard to find the search option when a book has not already been added to your bookshelf see fig below. Again P6 needed external help to complete this task.
- P5 failed to locate the add books to list button during task 4 without external help. This suggests that the current hyperlink method for "My Books" or "Search" is not effective in highlighting these functions.
- P1 had trouble finding the track progress controls during task 3. The track progress has a similar link to P6's issue above.
- P2 raised that Goodreads user interface is too confusing. Suggesting the "text in all caps on the page, is overwhelming, too many links" and that the "headings blend in with informative paragraphs".
- P3 mentioned that the star rating system is too small and scrolled past it and had to look once again.

The site should make the information jump out to the user so they know what they are looking for right away, rather than the user spending too much time reading heaps of links across the whole page. Figure 20 shows a lack of hierarchy and clarity in typography. The button (hyperlink) to 'All topics' is all in lower-case and in a very small font size, which makes it very unnoticeable. The book titles and author's names are in the same size and colour.

Figure 20. *Lack of hierarchy and clarity in typography*

Recommendation 6a: Use a consistent typeface throughout the site, and review capitalisation in headings/subheadings

In conjunction with recommendation 2b, there should be a style guide that includes clear rules for different font styles, sizes and text spacing used in web development. (fig. 21) These styles and sizes should be designed to balance content density while indicating hierarchy. This will also help to clearly distinguish the headings, links and content of the page with different text sizes and keep them consistent throughout the whole site.

Using larger, simpler typefaces such as Avenir (fig. 21) have been proven to improve the overall readability. According to Laubheimer, using larger font sizes in wider variants and avoiding all-lowercase text optimises legibility for anything that needs to be glanceable. (2017) Many pages across the site contain all-lowercase subheadings. These should be revised to title case.

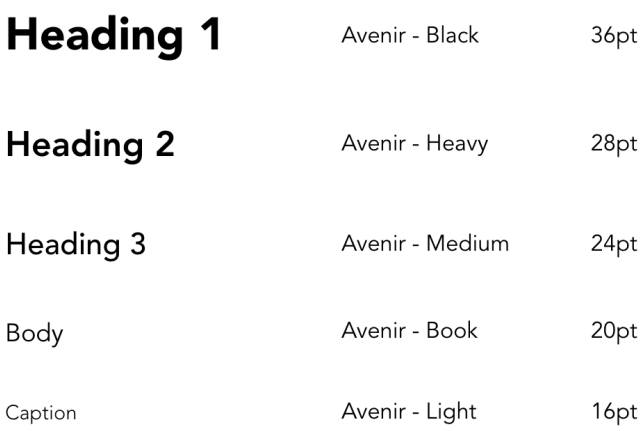

Figure 21. *Sample typography style guide*

Recommendation 6b: Use buttons instead of hyperlinks

Use buttons to highlight important information and functions rather than hyperlinked text. This will make it more intuitive for users to know where to click and what is and isn't clickable on the page and make completing tasks quicker.

Summary of Findings and Recommendations

Finding	Finding description	Theme	Severity	Frequency	Recommendation	Recommendation description
F1	The current site structure is convoluted and the navigation bar hasn't been optimised to help users navigate around efficiently.	Information architecture	Critical	Extremely high	**R1a**	Add a Browse page that lets users preview content on pages under the Browse tab.
F2	The poorly designed laid out buttons, links, and textual content of the site affect users' ability to complete tasks on the site.	Visual design and layout	Major	Extremely high	**R2a**	Increase visibility of clickables and headings to enforce visual hierarchy. Simplify and standardise page layout.
					R2b	Create a style guide for a more uniform and consistent design throughout the whole site.
F3	Users were overwhelmed by the amount of content on the pages.	Conciseness of content	Major	Extremely high	**R3a**	Enlarging book covers and redesigning the way its shown to users.
					R3b	Reconsider what textual information is essential and remove excess text on page
					R3c	Redesigning genre buttons on Creative Writing page.
F4	Lack of visible controls to add books to lists for voting.	Information architecture	Major	Extremely high	**R4a**	Streamline the flow of adding and searching for books on lists for voting.
F5	Users misunderstand the intended functions of certain buttons with confusing labels.	Information architecture	Major	High	**R5a**	Modify the design of the segmented controls used to track reading progress.
					R5b	Implement a paragraph button instead of a split button for the "Want to Read" button.
F6	The typography is inconsistent, causing some users to experience difficulties when going through the content on the page.	Visual design and layout	Irritant	Extremely high	**R6a**	Use a consistent typeface throughout the site, and use title capitalisation in headings/subheadings.
					R6b	Use buttons instead of hyperlinks.

Next Steps

If the development team at Goodreads decides to implement the recommendations listed in the report, it is important to test the effectiveness of these changes with another group of participants. Usability testing a continuous process that forms a part of the development cycle. As Nielsen states, "Iterative design is the best way to increase the quality of user experience." (2012) The team could also consider conducting A/B testing if there are doubts about any of the recommendations. A/B testing would allow the team to monitor users behaviour with different interfaces. This would confirm the more effective and usable solution.

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Appendix

Appendix 1: Full Test Protocol

Ap 1.1.1 Live Usability Test Brief

The remote live usability tests will be conducted over Zoom and Loop11. Two of us will be conducting the test with each participant. One will be the facilitator/moderator, and the other will be the observer. The facilitator will be the person directly engaging with the participant – giving instructions, probing and controlling the flow of the test. The observer will be taking notes of the usability test as it progresses, timing every task, and noting the participant's feelings/ behaviour throughout the whole session. The test will be about 40 minutes long. [See procedure on p.29 for breakdown of time]

Our pre-test questionnaire will serve as an ice-breaker for our users. Even though they have met the criteria in our screener questionnaire, we would like to know more about their reading habits, and shed light on their background so that we get a better understanding of their responses and actions in the test.

We will then ask our users to complete 5 different tasks based on the 5 task scenarios that we will provide. They will be using test accounts for this. We will encourage them to use the think-aloud method to let us know what they're thinking. Afterwards, users will respond to mid-test questionnaires, which are all simple Likert-scale questions.

For our post-test questionnaire, we chose to use a standardized questionnaire, the SUS (System Usability Scale) developed by John Brooke (1986), that uses 10 alternating positive and negative statements. The SUS is dependable and is often compared to industry standards. It can be used to evaluate the usability of any system. If we need further clarification, we will perform retrospective recall for parts of the test with our users at the end. Lastly, we will be recreating our pre-test, mid-test and post-test questionnaires via Google forms for ease of access and edit on both ends.

Analysis
From our screen recordings, user observation notes, questionnaires and general feedback, we will get a mixture of quantitative and qualitative data. We plan to calculate task accuracy by looking at the percentage of participants who perform the task successfully (Rubin et al., 2008, p. 250) at this stage. This will show us where usability problems are on the site. The SUS questionnaire will be scored according to the official scoring guidelines by Brooke. (1986)

Due to the large number of Likert scale questions in our questionnaires, our results may be susceptible to the Error of central tendency (Barnum, 2010, p. 257). This is caused by users avoiding extreme answers. We will take note of this when we analyse the results.

Screener Questionnaire
We will send out screener questionnaires to recruit 6 users according to our recruitment matrix.

1. How often do you use a computer to browse the web?
   a. Daily
   b. Once or twice a week
   c. Never
   d. Others (Please specify): _____
2. How many books do you read in a month? _____
3. Are you a librarian?
   ☐ Yes ☐ No
4. Have you ever used Goodreads[1]?
   ☐ Yes ☐ No (Skip to question 7)
5. What were you using it for?
6. Were you successful in completing the task?
7. In general, how difficult was using Goodreads.com for your purposes? (1 – Very easy, 5 – Very difficult)
8. Have you used sites similar to Goodreads[1] in the past?
   ☐ Yes ☐ No

[1] Goodreads.com is a social platform designed for readers to review and rate books, get book recommendations and track books that they've read.

Procedure
The estimated length of each session will be about 35 minutes long. The test will be conducted in the following order:

- Introduction (3 minutes)
- Informed consent form (2 minutes)
- Pre-test questionnaire (3 minutes)
- Task introduction + Download Loop11 extension (2 minutes)
- Mid-test questionnaire (5 minutes per task, 5 tasks in total)
- Post-test questionnaire (4 minutes)
- Debrief (1 minute)

Observer form
This will be the form the observer uses during usability testing for note-taking purposes.

Participant name:		**Test session date/time:**		
Task ID	**Issue/Problem**	**Additional comments**	**Timestamp**	**Page**

(Barnum, 2010, p. 173)

Facilitator/Moderator checklist
Before the test

- ☐ Email each participant the Zoom meeting link and the consent form.
- ☐ Instruct participant to start screen share on Zoom.
- ☐ Facilitator starts screen recording.

Welcome, pre-test questionnaire, instructions

- ☐ Explain purpose of the test to participant (Introduction)
- ☐ Ask participant to read and sign consent form (via Google forms)
- ☐ Ask participant to complete pre-test questionnaire (via Google forms)
- ☐ Explain think-out-loud method to participant (Task intro)
- ☐ Facilitator sends the participants a link to Loop11
- ☐ Participant downloads the extension for Loop11

After each scenario, post-task questionnaire

- ☐ Make sure participant fills out post-task questionnaire (on Loop11)
- ☐ Give feedback on the quality of the think-out-loud procedure
- ☐ If necessary, encourage more feedback from participant by asking questions about the process

After completion, post-test questionnaire

- ☐ Stop screen recording and save the file
- ☐ Thank participant
- ☐ Debrief

Observer checklist
Before the test

- ☐ Have observer form ready and open
- ☐ Start zoom recording (for backup)

During the test

- ☐ Prepare and send links to Google form questionnaires
- ☐ Observe and record any issues in the observer form
- ☐ Observe and record any notable actions, emotions, tone of voice, etc. of the participant
- ☐ Take general notes
- ☐ Time every task

After the test

- ☐ Stop screen recording and save the file
- ☐ Save notes

Ap 1.1.2 Live Usability Test Script

Introduction

Hello, thank you for taking the time to participate in our usability study. We are University of Melbourne students who are studying the subject Usability Evaluation Methods, and are given the task of evaluating the Goodreads website. We would greatly appreciate it if you would take 40-50 minutes out of your day to complete a live usability test with us.

We are currently aiming to identify issues within the user interface and structure of the Goodreads website. Your participation will give us invaluable user-generated data and allow us to suggest potential solutions to existing issues or recommendations to further improve the user experience of the website.

During the testing, we will provide you with a list of tasks to complete by navigating through the website. Please narrate your experience as you go and feel free to ask any questions at any time.

Please be rest assured that we are not testing your ability to use the system but rather testing the system itself and how you interact with it. Also be mindful that this session is recorded. We will be screen recording the video call while observing your actions throughout the whole usability test session.

The data gathered from this session is for research purposes only and its contents will be kept anonymous and will not be shared with anyone not involved in this study. Please read through the informed consent form and sign it. [See Appendix 1.1.3] Let us know if you have any questions before we begin.

[Pre-test questionnaire]

To begin, please fill out this questionnaire [See Appendix 1.1.4] to help us understand more about your reading habits and experience with relevant technologies.

[Install Loop11 extension]

Task Introduction

Now I'm going to ask you to try doing some specific tasks based on made-up scenarios. I will send you each scenario via Zoom chat and then read it out aloud to you. Please complete the tasks presented in the scenarios and try to speak your thoughts as you go along.

I realize it's not 'normal' to think out loud while working, but doing so will help us get insight into your experience when you share your thoughts this way. For example, you can talk about what you like or dislike about the system, or what you expected or didn't expect to see on the interface. I may remind you to share your thoughts if you fall silent.

We are not evaluating how good you are at completing the task, and we're not the developers of the site so feel free to be frank and direct. Once you have completed each task, I will give you a brief questionnaire to complete.

Scenario 1

You've just finished a science fiction novel named *The Hunger Games* written by Suzanne Collins and you really disliked it because of the terrible writing style. You would like to share your opinion with people who haven't read the book before. You go online to find the best platform for this, and you find a website named Goodreads. You try to write a book review on the platform. Here's the information you will need: [Observer will send to user via Zoom chat]

- Email: dummyemail@gmail.com
- Password: 12345678
- Book title: The Hunger Games
- Author: Suzanne Collins

	Very Easy	Easy	Moderate	Somewhat Difficult	Very Difficult
Signing in to Goodreads					
Understanding the site navigation					
Using the search bar to search for a book					
Using the rating system					
Understanding the steps you need to take to review a book					

→ Which aspects of the site made this task easy for you?
→ Which aspects of the site made this task difficult for you?

Scenario 2

You have been wanting to read To Kill a Mockingbird for a while, and you finally got to start reading it. You want to add this book to your Currently Reading shelf. How would you do that?

	Very Easy	Easy	Moderate	Somewhat Difficult	Very Difficult
Understanding the steps you need to take to add a book to your bookshelf					
Understanding how bookshelves work					

→ Which aspects of the site made this task easy for you?
→ Which aspects of the site made this task difficult for you?

Scenario 3

You're currently reading chapter 3 (p. 45) of *To Kill a Mockingbird*, and you're enjoying it so far. But you suddenly find yourself other urgent matters to attend to. You want to track your reading progress on Goodreads, in case you forget which page you're on. In the meantime, you would like to share your thoughts on the book to your friends on the site.

	Very Easy	Easy	Moderate	Somewhat Difficult	Very Difficult
How difficult was it to use the progress tracking controls of the site?					
Sharing your status to other users					

→ Which aspects of the site made this task easy for you?
→ Which aspects of the site made this task difficult for you?

Scenario 4

You have read *Green Eggs and Ham* by Dr. Seuss in the past and you thoroughly enjoyed it. You think that everyone should read it at least once in their life, so you want to vote for this book in the crowd-sourced booklist "Books That Everyone Should Read At Least Once". How would you do that?

	Very Easy	Easy	Moderate	Somewhat Difficult	Very Difficult
How difficult was it to find the book you wanted to vote for?					
Getting to the voting page					
Voting for a book					

- → Which aspects of the site made this task easy for you?
- → Which aspects of the site made this task difficult for you?

Scenario 5

You were writing an essay and you wanted to emphasize the significance of courage in life. You wish to conclude the essay with a nice quote from any book that relates to courage. How would you find it?

	Very Easy	Easy	Moderate	Somewhat Difficult	Very Difficult
Getting to the quotes page					
Searching for a quote (relating to courage)					

- → Which aspects of the site made this task easy for you?
- → Which aspects of the site made this task difficult for you?

Debrief

Thanks for completing all the tasks. Please now complete the post-task questionnaire [See Appendix 1.1.5], and provide us with as much feedback as you want.

Closing

Thanks again for partaking in our study. We appreciate you taking the time to help us with our research, have a nice day!

- End of test -

Ap 1.1.3 Informed Consent Form

By signing this consent form, you're telling us that you:

- Understand the procedures of the study
- Consent to your actions and responses being recorded throughout the study
- Consent to internal publication of results from this study on the condition that full anonymity is maintained

If you want to withdraw your consent in the future, contact a member of the team who will destroy any personal data we hold about you (such as the recordings). Otherwise, we will delete your personal data after two months.

Signature: _____

Name: _____

Date: _____

Ap 1.1.4 Pre-test questionnaire

Thank you for taking the time to participate in our usability test. Please complete this pre-test questionnaire, so that we have better insight into your experience with relevant technologies and reading habits.

1. Do you use e-readers?
   ☐ Yes ☐ No (Skip to question 3)

2. Why do you read on e-readers instead of physical books?

3. Where do you usually get books from?
   a. Library
   b. Physical bookstore
   c. Online bookstore
   d. Others (Please specify): _____

4. What is usually your reason for starting a book?
   a. Academic purpose
   b. Popularity on social media
   c. Interesting synopsis
   d. Recommendations from family and friends
   e. Good rating and reviews
   f. Others (Please specify): _____

5. Where do you get book recommendations from? (Leave blank if inapplicable)

6. What genre(s) of books do you typically read?

7. When looking for book recommendation, what book features are of most interest to you?

Ap 1.1.5 Post-test questionnaire

Thank you for completing the tasks. Lastly, can you take a few minutes to complete this general feedback survey.

1. Please rate the website on the following scales. (Place a tick in the appropriate box)

	Strongly disagree	**Moderately disagree**	**Neither disagree nor agree**	**Moderately agree**	**Strongly agree**
1. I think that I would like to use this system frequently.					
2. I found the system unnecessarily complex.					
3. I thought the system was easy to use.					
4. I think I would need the support of a technical person to be able to use this system.					
5. I found the various functions in this system were well integrated.					
6. I thought there was too much inconsistency in this system.					
7. I would imagine that most people would learn to use this system very quickly.					
8. I found the system very cumbersome to use.					
9. I felt very confident using the system.					
10. I needed to learn a lot of things before I could get going with this system.					

[Adapted from SUS — System Usability Scale. Developed by John Brooke at Digital Equipment Corporation.]

2. Will you use this site again in the future?

3. Which 3 features of the site has room for improvement in your opinion?

4. Do you have any other comments?

Ap 1.2.1 Optimal Workshop Treejack Test Protocol

From our heuristic evaluation, cognitive walkthrough and general viewing of Goodreads.com, we discovered that the website has a lot of disorganised content, hidden pages in the site structure, and a lack of hierarchy in the navigation bar. The purpose of the pages is not clearly conveyed to users due to ambiguous wording and poor labelling of headings. However this is our subjective opinion, and we hope to conduct a Treejack test to validate these drawbacks.

Therefore, we aim to answer the following questions (Optimal Workshop, 2020) with a Treejack test on Optimal Workshop:

- Do the labels make sense to people?
- Is the content grouped logically to people?
- Can people find the information they want easily and quickly? If not, what's stopping them?

Tree testing will give us insight into users' mental models of the website, and whether they can find the information they need on it. The result will be a list of recommendations for a more well-organised site structure and appropriately labelled content.

Introductory Text

Welcome to this Treejack study, and thank you for agreeing to participate!
The activity shouldn't take longer than 15 to 20 minutes to complete.
Your response will help us to organize the content on the Goodreads website.
Find out how to complete this test on the next page...

Task Questions

Referring to the tree we built in the Treejack test (fig. 21), we plan to set 10 tasks for our test, linking to our testing objectives. Every participant will have the same first question - a simple task to start, and the rest will be randomised.

The tasks in our Treejack study covers all aspects of the existing drop down menus on the Goodreads website, therefore both high and low frequency tasks have been included as part of this study. Four tasks are found in the 'browse' and 'community' tabs, and one in both the 'Home' and 'My Books' tabs.

The tasks created do not explicitly have the name of the correct page in the task scenario and question to avoid giving hints to users.

Task ID	Question	Answer
1	You are a big fan of a particular author and have a question to ask them, where would you do that?	**Community** → Ask the author
2	You are interested in discovering the books that won "Best Fiction" in 2015, on which page would you be able to find that?	**Browse** → Choice awards
3	You want to test your knowledge about a book you have just read, what page is designed to do that?	**Community** → Quiz
4	You are interested in finding out the recommended books for this month, where would you find that?	**Browse** → New releases
5	You want to add a review on a book you have already marked as read on Goodreads, what would be the easiest way to do that?	**My Books**
6	You want to check your progress on your '2020 reading challenge' where would you find that?	**Home**
7	You want to find the most read mystery books of this week, where would you find that?	**Browse** → Explore
8	You want to find a group of books that "Everyone Should Read At Least Once", where would you find that?	**Browse** → Lists
9	Which page would you use to browse different communities and join "Oprah's Book Club"?	**Community** → Groups
10	How do you find recently rated stories & writing from members and authors?	**Community** → Creative writing → Active

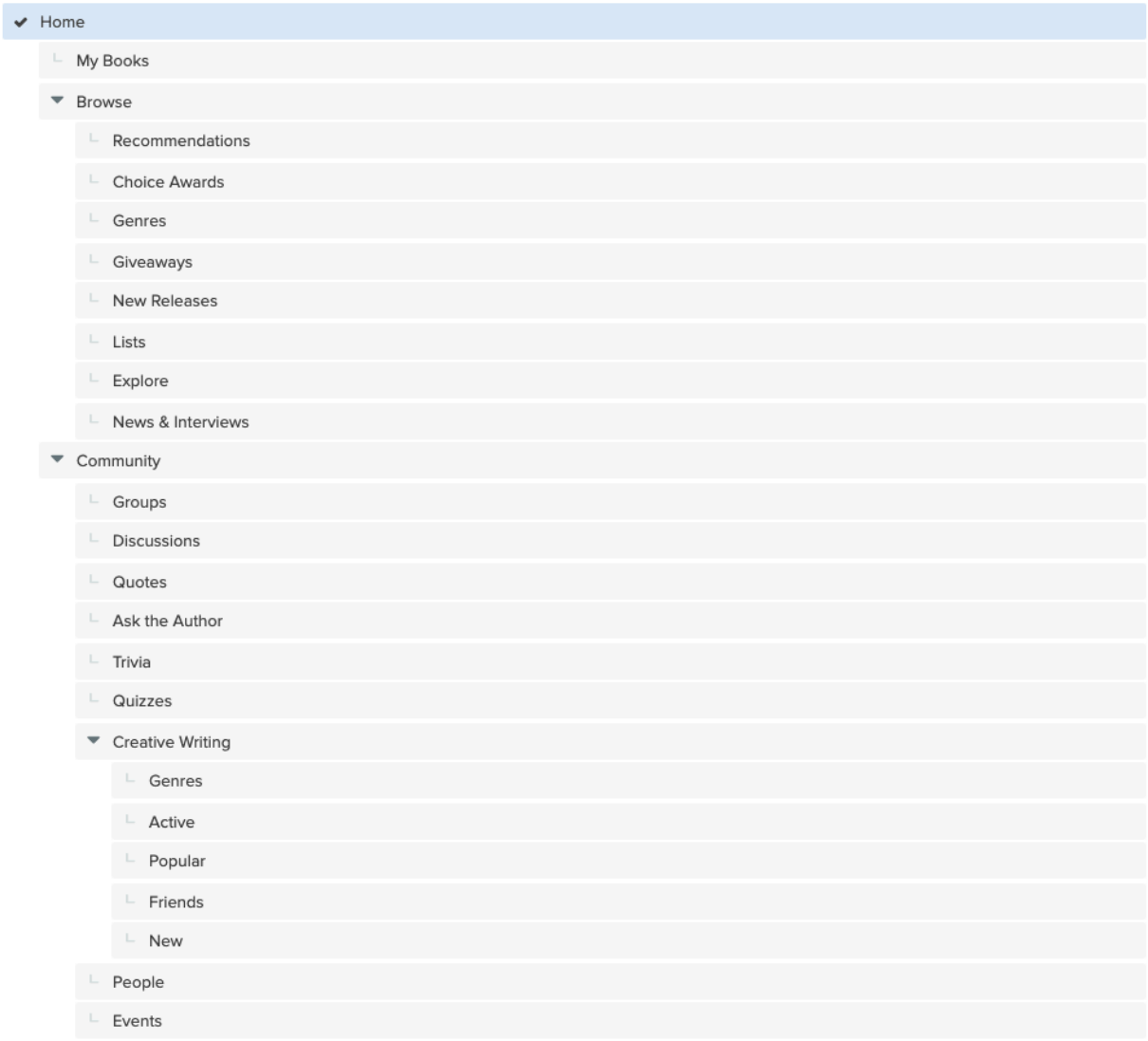


Figure 21. *Optimal Workshop Tree*

Debrief

All done, awesome! Thanks again for your participation. Your feedback is incredibly useful in helping to determine how content on Goodreads should be organized, so we can make our website easier to use. You may now close this window or navigate to another web page.

Analysis

The data we receive from the results will be analysed to indicate whether or not the existing architecture of Goodreads is intuitive for new users. We intend to analyse the results from the Task and Pietree visualizations generated by Optimal Workshop, to see where the navigation bar falls short on our 5 usability goals: Efficient, effective, engaging, easy to learn and error-tolerant. (Quesenbery, 2004)

Appendix 2: Tables, Figures and Supporting Material

Table 1.
Task Completion Table

Task ID	Task Description	P1	P2	P3	P4	P5	P6
1	Sign up, rate and review a book	✓	✗	✓	✗	✓	✓
2	Add a book to personal bookshelf	✓	✓	✓	✓	✓	✓
3	Track reading progress	✗	✓	✓	✗	✓	✗
4	Vote for a book on a book list	✗	✓	✗	✓	✓	✗
5	Find a book quote	✓	✗	✓	✓	✓	✓

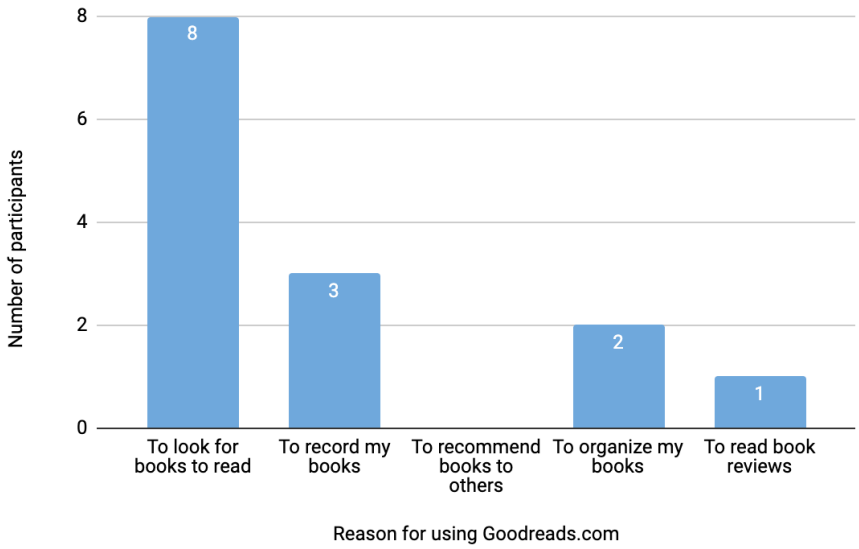
Note: Green – Successfully completed task without help, Yellow – Required external help to complete task, Red – Failed to complete task

Table 2.
Post-test Questionnaire - SUS (System Usability Scale) Results

	P1	P2	P3	P4	P5	P6
I think that I would like to use this website frequently.	SD	SD	A	D	D	A
I found this website unnecessarily complex.	A	SA	A	N	A	A
I thought this website was easy to use.	A	D	A	A	N	N
I think that I would need the support of a technical person to be able to use this website.	SD	N	SD	N	D	D
I found the various functions were well integrated.	A	SD	N	A	SD	N
I thought there was too much inconsistency.	D	SA	N	D	A	A
I would imagine that most people would learn to use this website very quickly.	A	SD	D	D	SD	N
I found this website very cumbersome to use.	SD	A	SD	SD	A	A
I felt very confident using this website.	A	D	A	D	D	N
I needed to learn a lot of things before I could get going with this website.	SD	A	D	A	N	A
Individual SUS Score	**70**	**15**	**50**	**50**	**30**	**45**
Total System Usability Scale (SUS) Score = 45/100						

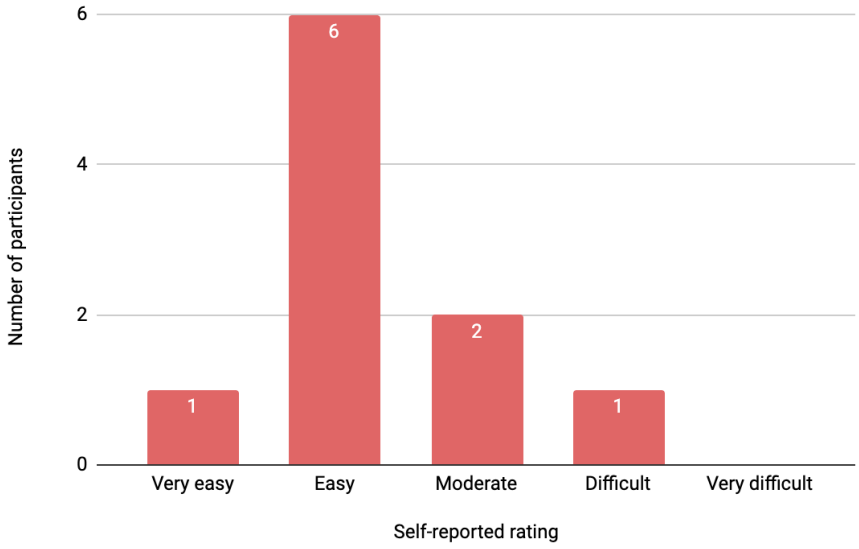
Note: SA = Strongly agree, A = Agree, N = Neither agree nor disagree, D = Disagree, SD = Strongly disagree

Figure 22.
Screener questionnaire question 5: Users self-reported reasons for using Goodreads.com



Note: Question: What were you using Goodreads for?
9 out of 36 of participants who have previously used Goodreads answered this question.

Figure 23.
Screener questionnaire question 7: Self-reported rating of the ease-of-use of Goodreads.com



Note: Question: In general, how difficult was using Goodreads.com for your purposes?
9 out of 36 of participants who have previously used Goodreads answered this question.

Figure 24.
Post-task Questionnaire - User Ratings for Task 1

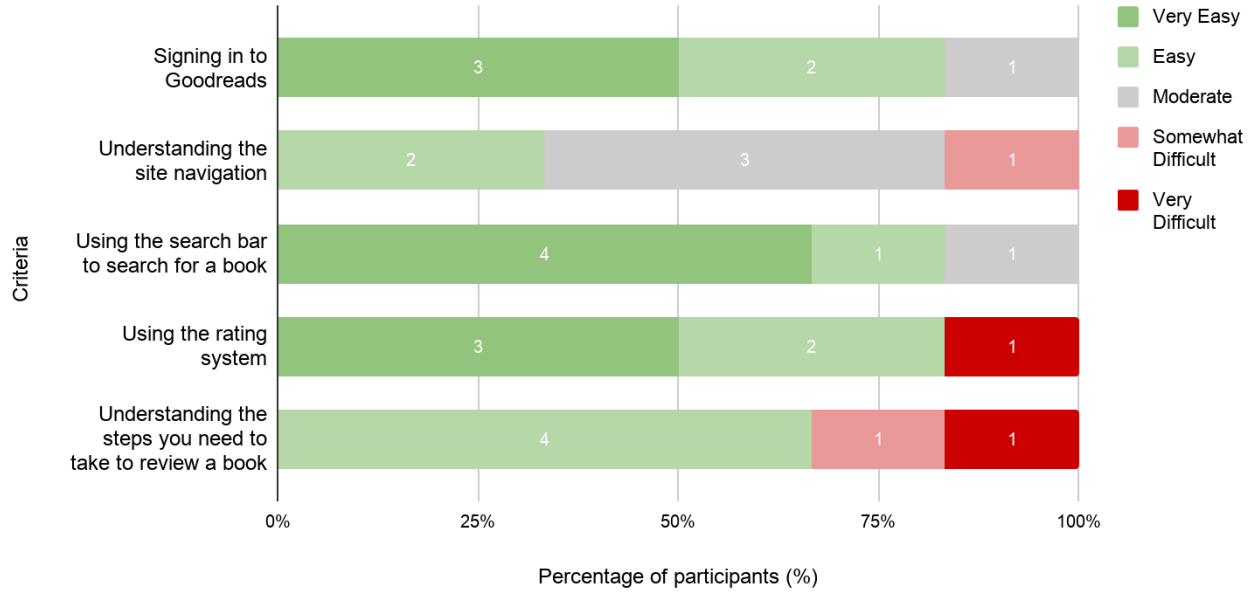


Figure 25.
Post-task Questionnaire - User Ratings for Task 2

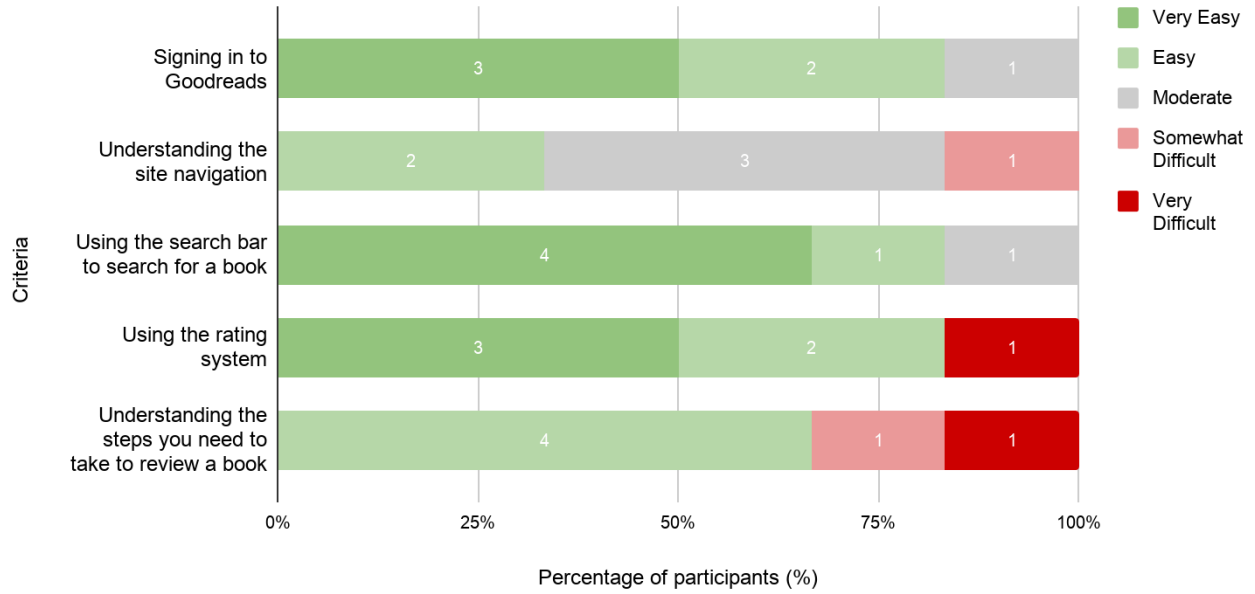


Figure 26.
Post-task Questionnaire - User Ratings for Task 3

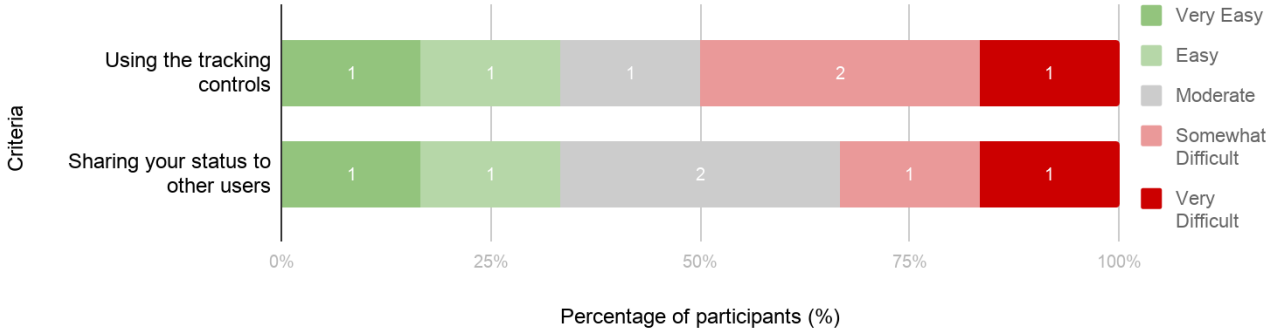


Figure 27.
Post-task Questionnaire - User Ratings for Task 4

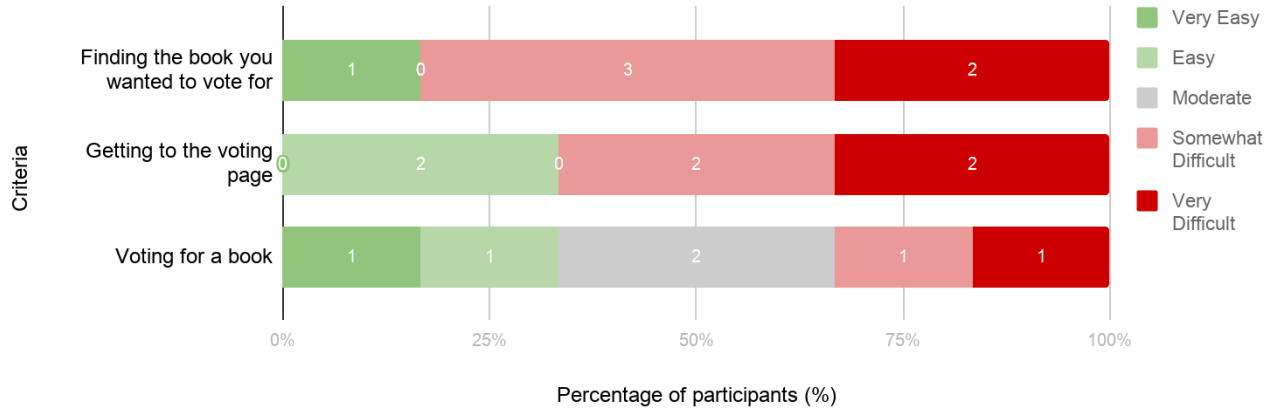


Figure 28.
Post-task Questionnaire - User Ratings for Task 5

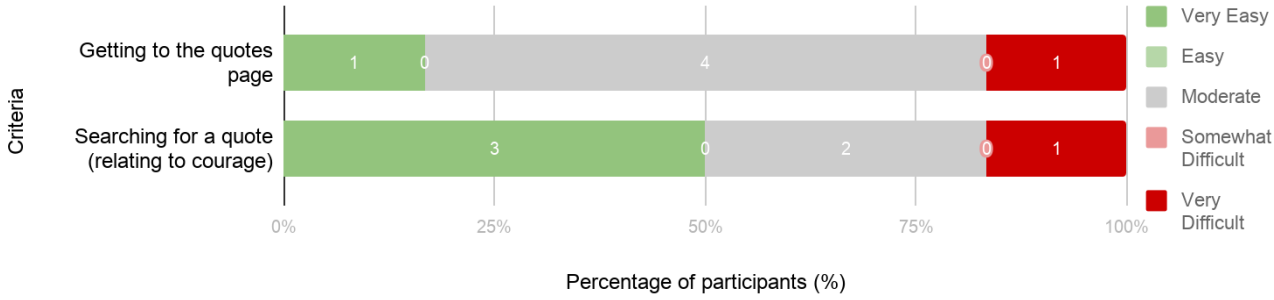
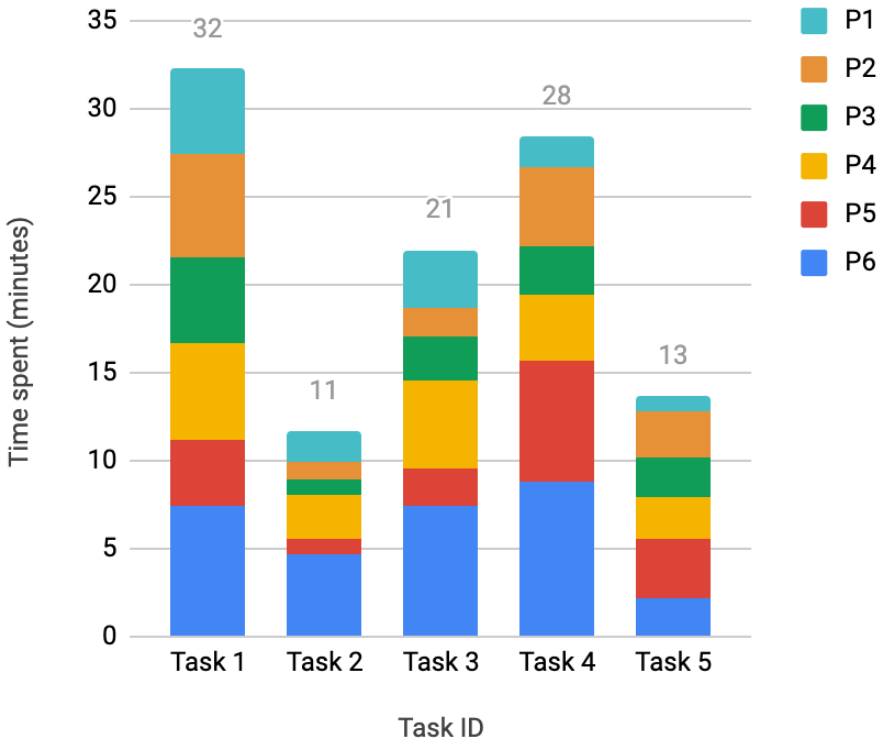
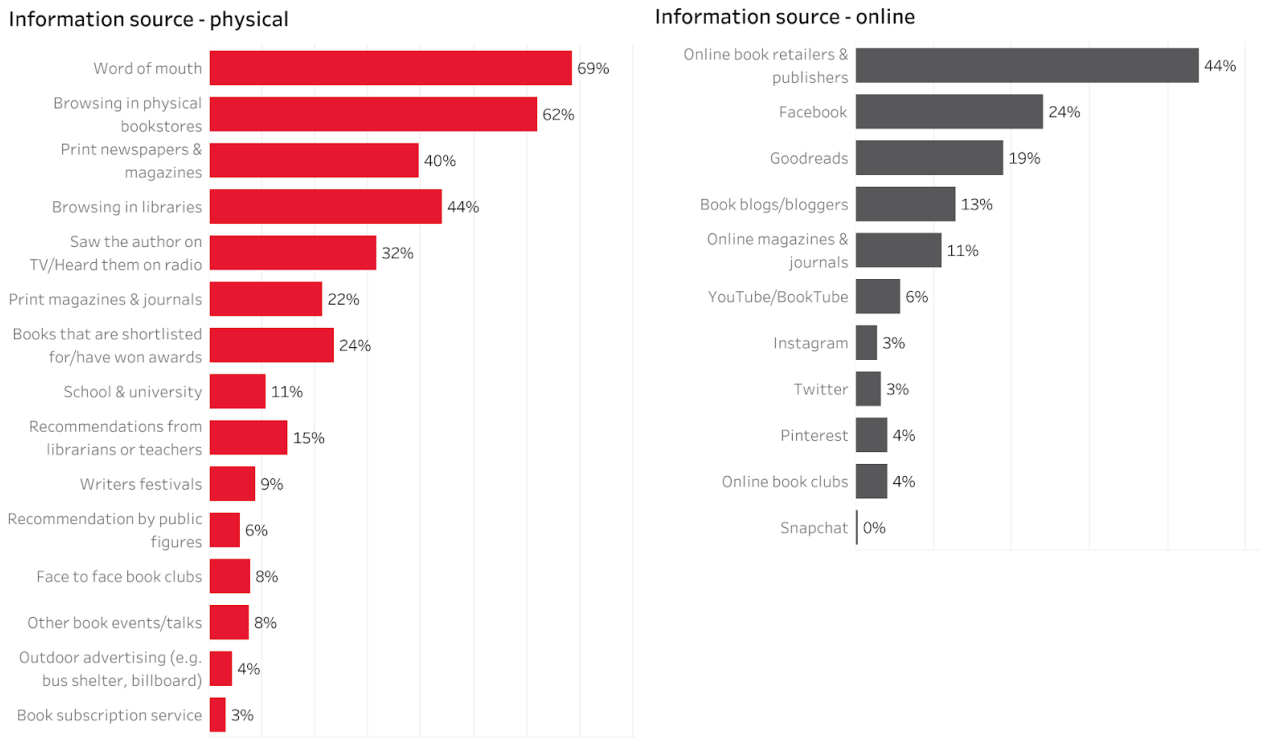


Figure 29.
Time Taken to Complete Each Task by Participant



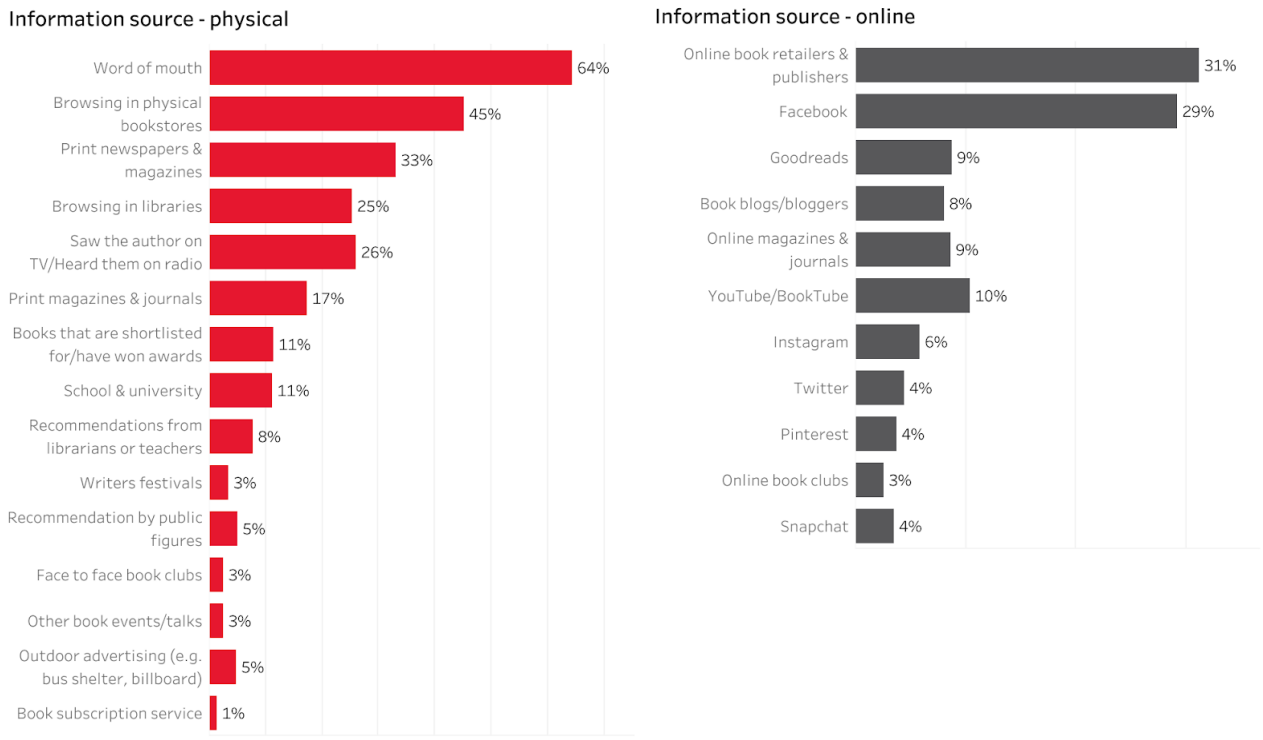
Note: Not all users completed the tasks successfully. Refer to table 1 on p.37 for task completion table.

Figure 30.
Methods of discovering books to read for pleasure: percent of frequent readers



Note: The figure represent frequent readers of all genders and all age groups. Retrieved from Australian Council. (2017, July 3). *Reading the reader: A survey of Australian reading habits*. https://www.australiacouncil.gov.au/research/reading-the-reader/

Figure 31.
Methods of discovering books to read for pleasure: percent of occasional readers



Note: The figure represent occasional readers of all genders and all age groups. Retrieved from Australian Council. (2017, July 3). *Reading the reader: A survey of Australian reading habits*. https://www.australiacouncil.gov.au/research/reading-the-reader/

Appendix 3: Live Test Observation Notes

This section shows the live notes we took during the test.

Participant ID	P1	**Test session date/time:**	Saturday, 26 September, 2020 1:00 pm - 1:35 p.m.	
Task ID	**Issue/Problem**	**Additional comments**	**Timestamp**	**Page**
1	P1 take a look at the homepage and is drawn to the reading challenge section	→ "This is the first thing that caught my eye." → (Cursor hovering over the reading challenge section)	3:40 - 3:45	Homepage (Logged in)
1	P1 doesn't think there's enough cues on the site for people to know where to read or post a book review	→ "I knew to scroll down just because I've used sites where all the reviews are at the bottom of the page."	6:50 - 7:00	Book listing
2	Too many words on the page, deters user from reading instructions	→ "Yeah too many words, can't be bothered."	10:32 – 10:35	Bookshelves
3	Had trouble finding the track progress controls	→ Says "I have no idea, I'm stumped."	12:23 – 12:30	Book listing
3	Mentioned that there was too much information and too many words on the page	→ Visibly put off by that and leaves the page immediately	13:10-13:20	Book listing
4	Wasn't able to find the list	→ Went to Choice Awards page instead of the list page	19:54 – 20:02	Choice awards page
4	Comments on grid of book covers	→ Using small images of book covers is "useless", he can't get any information from it	20:52 – 21:13	Discussions
Post-test	Finds the Ask The Author feature really cool	→ Likes that users can interact with author directly through the site	31:00 – 31:30	Ask the author

Participant ID	P2	**Test session date/time:**	Saturday, 26 September, 2020 2:30 p.m. - 2:58 p.m.	
Task ID	**Issue/Problem**	**Additional comments**	**Timestamp**	**Page**
1	P2 was able to sign in through the sign up page, possible bug with the site?	→ P2 completely missed the sign in boxes at the top of the page	2:20 - 2:35	Sign up page
1	Wasn't sure of where to rate and review a book	→ Clicked on 'rate more books' button on the homepage (wrong path) → When user searches up the book and clicks on a book cover image, the page just refreshes and nothing changes → "It's just not doing what I want it to do."	3:05 - 3:20	Homepage (Logged in)
1	P2 clicked on 'recommend to friend' button (wrong path)	→ "It's just really not clear, there's too many things on the page."	4:00 - 4:05	Homepage (Logged in)
1	Mentions that icons on the nav bar are really hard for people to understand	→ "I don't know what they actually are... It kind of just assumes that I know."	5:10 - 5:15	Homepage (Logged in)
3	P2 thought 'general update' button was misleading	→ General update button is clicked, and a text box for sharing thoughts on books with friends comes up. → P2 thinks it should be labelled 'share thoughts with friends' instead	10:20-10:30	Homepage (Logged in)
3	Mentions that website UI is too overwhelming	→ Text in all caps on the page → Too many links → Headings blends in with informative paragraphs → "There's too much on one page."	10:50-11:10	Homepage (Logged in)
4	P2's first instinct is to look at the 'Community' tab to find book lists	→ Lands on Groups > Discussions > Choice Awards > Recommendations before clicks on Lists → Mentions that the page isn't obvious enough	12:50-13:00	Groups
4	Thinks that having cluster of book covers isn't helpful, and makes the UI more confusing. (Distracting)	→ "Once again why do they have these random covers."	14:19 – 14:30	Booklists
4	Couldn't find where to add books to list without help from facilitator.	→ "That wasn't clear, I didn't see that, it's too small."	15:42 – 15:52	Booklists
5	Tries to click preview book and look for quote	→ "I don't want to look through the whole book."	20:45 – 20:50	Booklists

Participant ID	P3	**Test session date/time:**	Sunday, 27 September, 2020 8:00 p.m. - 8:36 p.m.	
Task ID	**Issue/Problem**	**Additional comments**	**Timestamp**	**Page**
1	The user feels the star rating system is too small.	→ "[The star rating system] needs to be bigger", "didn't notice it at first" → The user scrolled past the star rating system and only saw it after they had written the review.	08:36	Book description
1	User found searching very easy	→ "The search bar was right up there" → User indicated it was obvious and clear	08:38	Homepage
2	Bookshelves are hidden in a drop down menu	→ "Many other people might not know about the other shelves" → Users feel like it is easy to get confused about the bookshelves a book can be added to.	13:00	Book description
3	User mistook the comment section of the reading progress update page as "general update"	→ User initially shared his/her status in the comment section → Took user a while to find the "General update" button → "I didn't know the general update button was to share a status"	18:40	Currently Reading -> "To Kill a Mockingbird"
3	User was confused about the percentage and hash symbols next to the page selection	→ "The switching confused me a little bit"	19:07	Book description -> reading update
4	Used an alternative method to find lists.	→ Searched a book and scrolled down on the book page	23:45	Book description
4	User did not actually vote for the book	→ User mistook adding the book to the list as voting → User was confused that the book was already in the list when he/she tried to add it	25:10	Book list
5	User intuitively clicked on the browse drop down looking for quotes	→ Unsure about where to find quotes → Clicked 'Browse' in the search bar → Then clicked on community tab → "Just by random clicking, I found it"	29:45	Taskbar
Post-test	User agrees that the site is unnecessarily complex	→ "Some things [on Goodreads] are more hidden than others"	32:35 - 36:36	N/A

Participant ID	P4	**Test session date/time:**	Sunday, 27 September, 2020 6:00 p.m.	
Task ID	**Issue/Problem**	**Additional comments**	**Timestamp**	**Page**
1	P4 wrote book review in 'Ask the author' section instead of review section	→ Mistaken 'Ask the author' for the 'Review' section ("Why it has to contain a question mark")	5:43-7:23	Book listing page
2	P4 did not understand the "bookshelf" function	→ User searched "currently reading " in search bar → User having trouble finding the "currently reading"	10:45-11:56	Book description
3	P4 tried tracking progress through reading the book and place a bookmark	→ "Where should I click to read?" → Places the book in "read" bookshelf	15:44-16:17	Book description
3	User could not find progress section	→ "I don't see any page number?"	17:49-18:28	Book description
3	Tried to share with friends via Facebook instead	→ "I could share with my friends right? By Facebook?"	18:35-18:43	Book description
4	Tried searching through search bar	→ "Oh my god, there's nothing here"	21:00-21:07	Home
4	Tried searching through "community" tab	→ "Oh! Community, it must be!"	21:08-21:25	Search
4	Difficulty finding the book through the list	→ "I thought it would have a green cover, but it's orange" → There is no search engine to help user to find the books	22:25-22:40	Booklist
4	Booklist does not make sense	→ "List in the browsing tabs is hard to find and does not make sense"	25:23-25:30	Booklist
5	User did not use "Quote" tab, instead found a quote through book description tab	→ "Searching 'Courage'. "	26:25-27:48	Book description

Participant ID	P5	**Test session date/time:**	Tuesday, 29 September, 2020 1:15 p.m. - 2:00 p.m.	
Task ID	**Issue/Problem**	**Additional comments**	**Timestamp**	**Page**
1	Had no issue but mentions that there is a lot of unnecessary information that is cluttering the page	→ Unnecessary features such as start and end date are not needed for writing a review	12:40 – 13:00	Homepage
2	Discussion about bookshelves	→ Mentions that it took a while to understand the concept of a bookshelf when using Goodreads for the first time → Thinks that the controls for adding books to shelves are not the best for novice users	14:20 – 14:40	Bookshelf
3	Discussion about Goodreads in general	→ "I try not to spend too much time on Goodreads, the only thing I'll do is I'll go browse, look for the book I like reading, that's it. Anything outside of those general tasks, is a no-no."	15:00 – 16:20	N/A
3	Progress tracking controls aren't clear	→ User had to check a couple times by clicking between the '#' and the '%' option to make sure that the right value is entered → "I think because they used a monochromatic colour scheme, it's hard to differentiate between which one's greyed out, and which one's selected"	17:00 – 17:20	Homepage
3	Update progress also unclear	→ "I'm not sure if what I did was right, it doesn't say share to friends, it just says update my progress. So I'm not sure if that for me, or if other people can see that."	18:00 – 18:20	Homepage
4	Difficulty finding wanted book in booklist	→ "I looking for a way to search for specific books…, don't think it's the one at the top because it searches the whole site."	24:30 – 24:42	Booklists
5	Uses search bar instead of looking for quote page	→ "I think it's the easiest way to navigate." → "If I was going to click through the pages without searching, I was going to spend hours clicking."	30:00 – 30:30	Homepage Quote page
Post-test	Pages become inconsistent as user dives deeper into the book pages	→ Suggests there's room for improvement in visual design of the site	37:12 – 37:30	N/A

Participant ID	P6	**Test session date/time:**	Tuesday, 29 September 2020 4.15pm - 5.00pm	
Task ID	**Issue/Problem**	**Additional comments**	**Timestamp**	**Page**
1	Tries to search for book on the search bar for specifically for 'currently reading' instead of the main search bar	→ Didn't seem to notice → Added book to currently reading shelf instead of reviewing	2:00 – 2:15	Homepage Bookshelf
2	Drop down menu for different bookshelves was misleading	→ Thought 'Want to Read' is the only option → Attempted dragging the book from 'Want to Read' into 'Currently Reading' → "What does Bookshelf mean"	5:22 - 9:44	Want to read/Currently reading
3	Clicked on My Books to track progress but failed to see the 'Progress button', then eventually found it on the 'Home' page	→ Too small → Did not realise that this all done on the Homepage → "I don't know how to track my progress"	10:51 - 15:15	Homepage
3	Got lost when finding the 'General' update button	→ General update does not match the user's mental model that friends update is in the general update tab → Too small → Not obvious	15:15 - 18:02	Homepage
4	Cluttered information throughout the site	→ "Too many lists" → Users get distracted by the overwhelming amount of content on the lists page. → Lists search bar too small → User getting confused between main search bar and the list specific search bar	19:07 - 24.08	Booklists
4	Found it very hard to find the search option when a book has not already been added to your bookshelf.	→ "Confused between 'My Books' and 'Search' → Buttons are too small. → Not in a visible spot, easily overlooked.	19:07 - 24.08	Booklists
5	Takes the wrong path – goes to lists to find quotes	→ "I don't know, I don't know how I would do that actually." → Required extra guidance from facilitator to get to quotes page	29:30 – 29:42	Homepage
Post-test	Getting lost on page Too much information on the whole site Dissatisfaction for the design and colours of the website	→ "Too many tabs on the home page", "You can get pretty lost" → "You could do that in Google", referring to the quotes tab. → "People don't want this much information" → "Don't like the colour scheme", referring to the website as a whole.	32:15 - 36:00	N/A

Appendix 4: Optimal Workshop Data

The Optimal Workshop treejack test tracks the path that users took to achieve their end goal. The task question and the correct answer is on the top-left of every figure. There are 6 possible outcomes for each question, including (Optimal Workshop, 2020):

Direct success: Participants went directly to their nominated response without backtracking and chose the correct option.

Indirect success: Participants clicked into a few different areas of tree and turned around and went back while trying to complete their task, but still reached the correct location in the end.

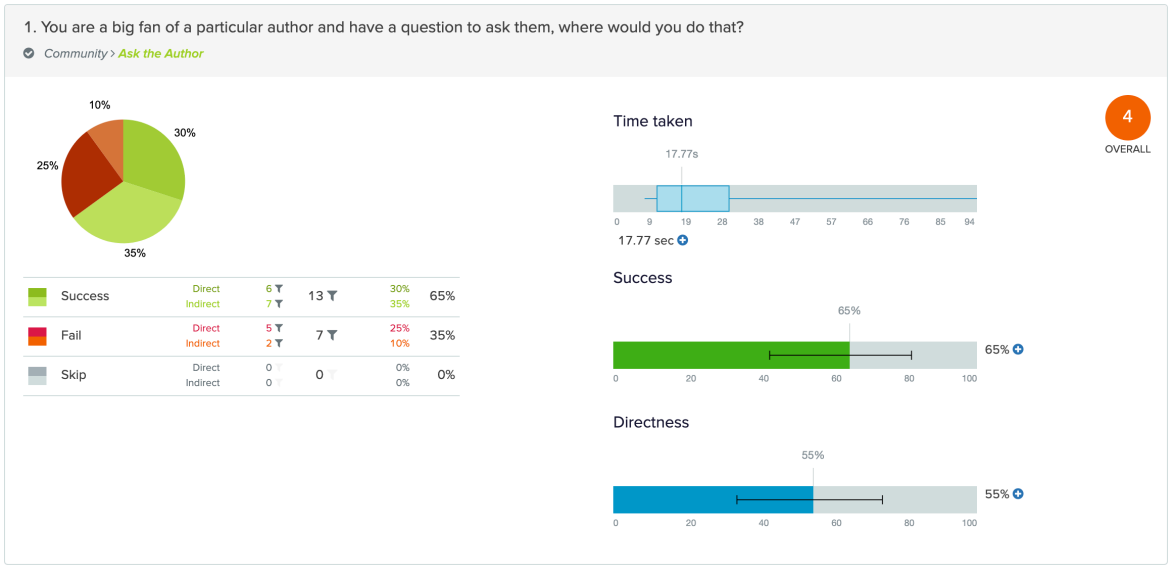
Direct failure: Participants went directly to their nominated response without backtracking but unfortunately did not find the correct location.

Indirect failure: Participants clicked into a few different areas of the tree and some backtracking occurred, but they still weren't able to find the correct location.

Direct skip: Participants instantly skipped the task without clicking on any of the tree nodes.

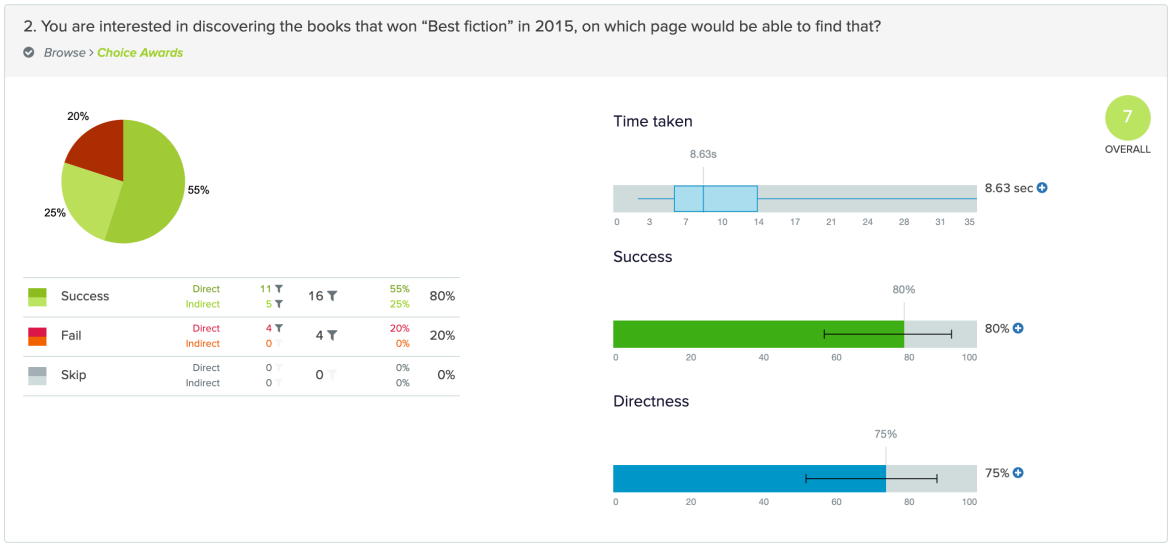
Indirect skip: Participants attempted to complete the task but ultimately gave up after clicking into at least one node.

Ap 4.1 Task 1 Results

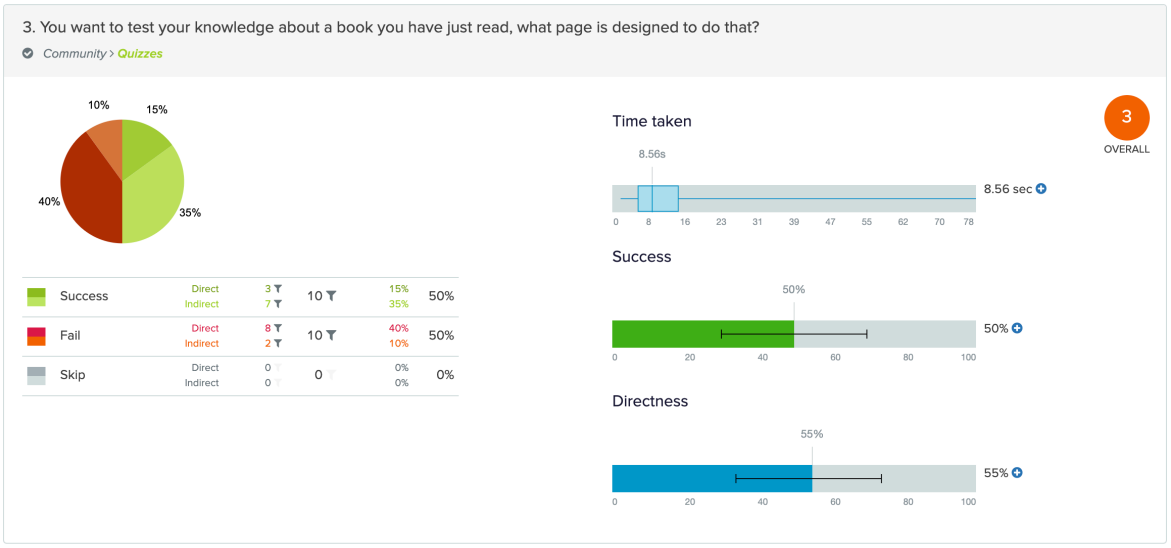


Note: This was the first question for all users, and we expect them to spend more time on this question on average since they're getting familiar with Optimal Workshop. The answer to this question is 'Ask the Author', 35% of users are able to find the node directly.

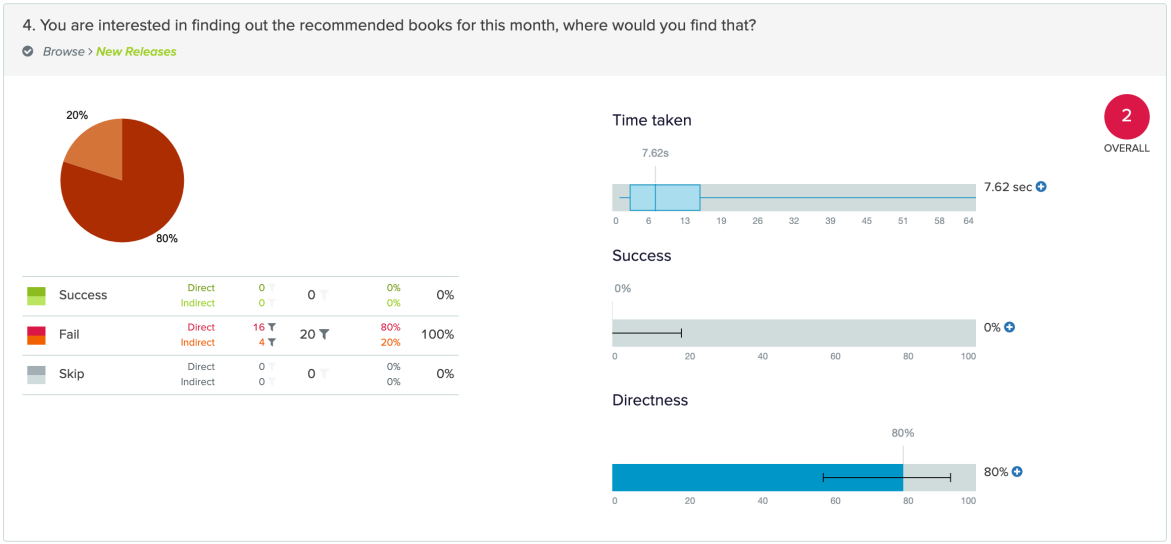
Ap 4.2 Task 2 Results



Ap 4.3 Task 3 Results

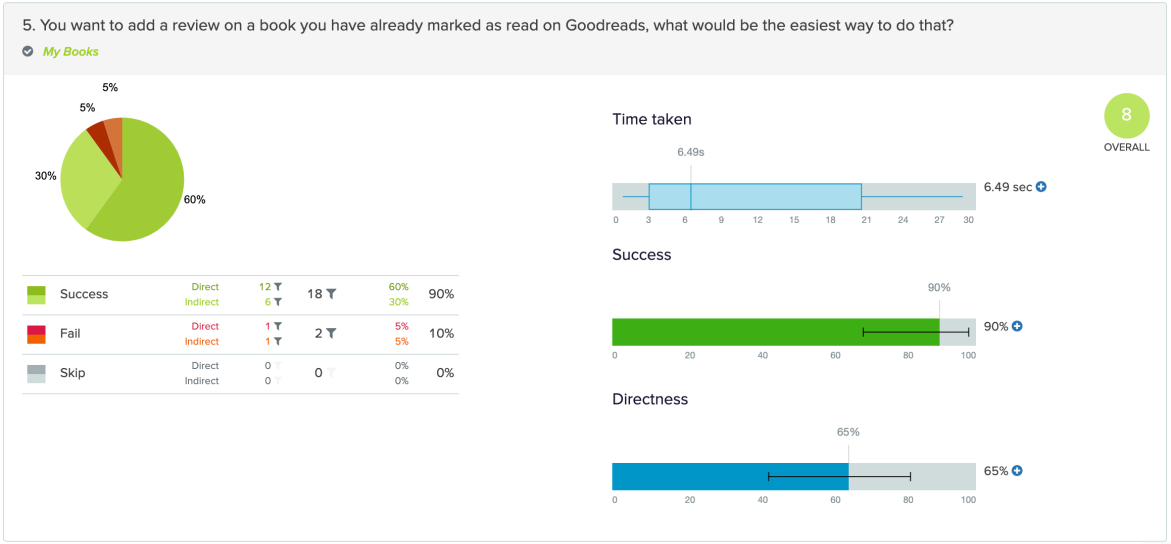


Ap 4.4 Task 4 Results

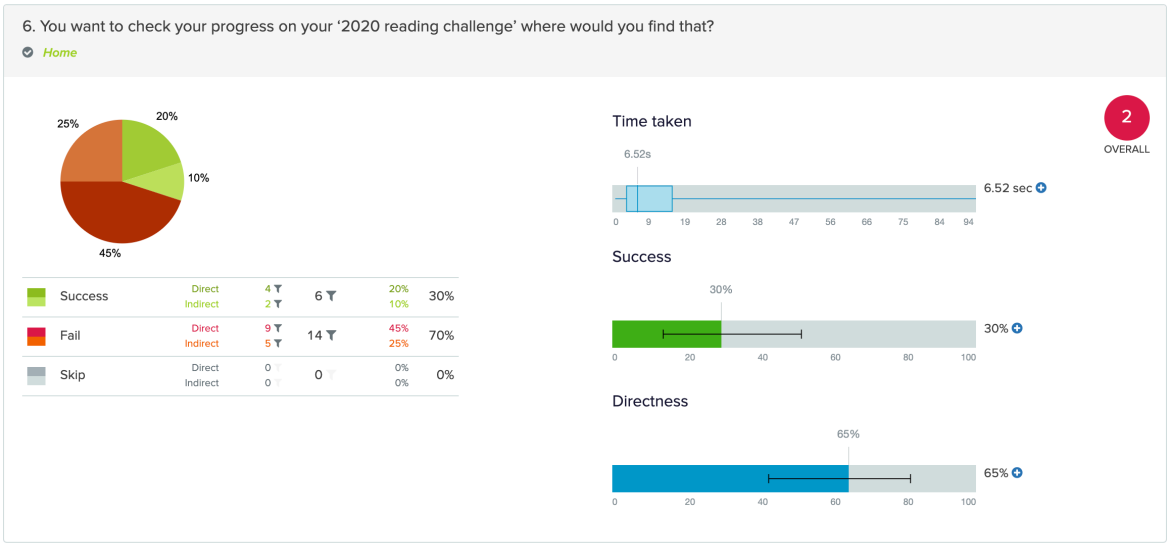


Note: No participants answered this question correctly. We assume this is because of the wording of the question and not entirely because of the IA (Information architecture) of the site. Most users answered this question fairly quickly and didn't click around the tree too much. The word "recommended" possibly misled users, since 14 users chose the "recommendations" node. If we were to reword this question, we would change "recommended" to "suggested".

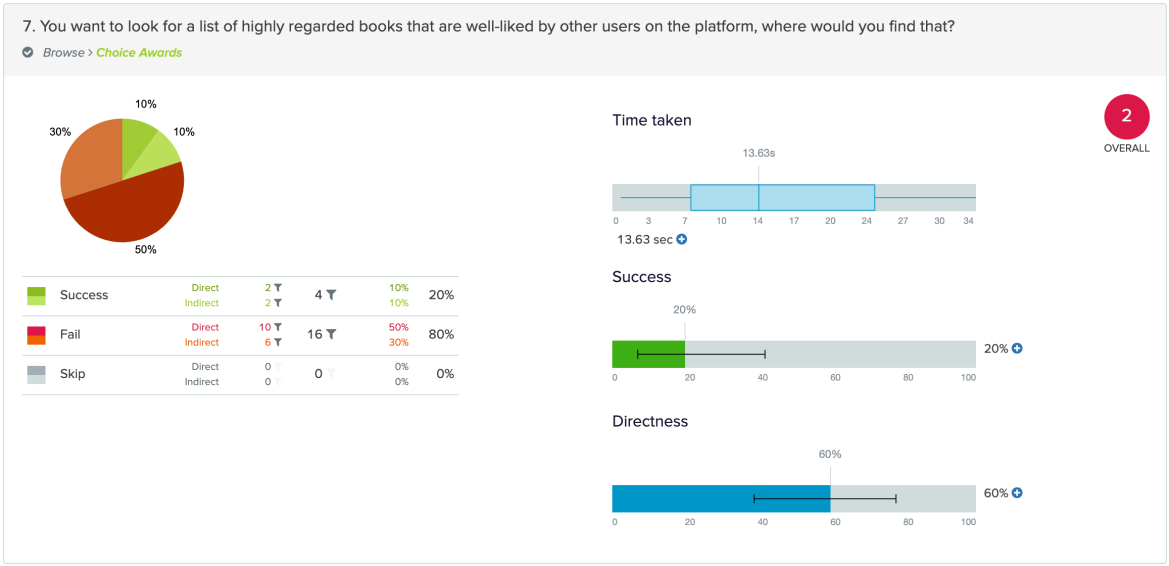
Ap 4.5 Task 5 Results



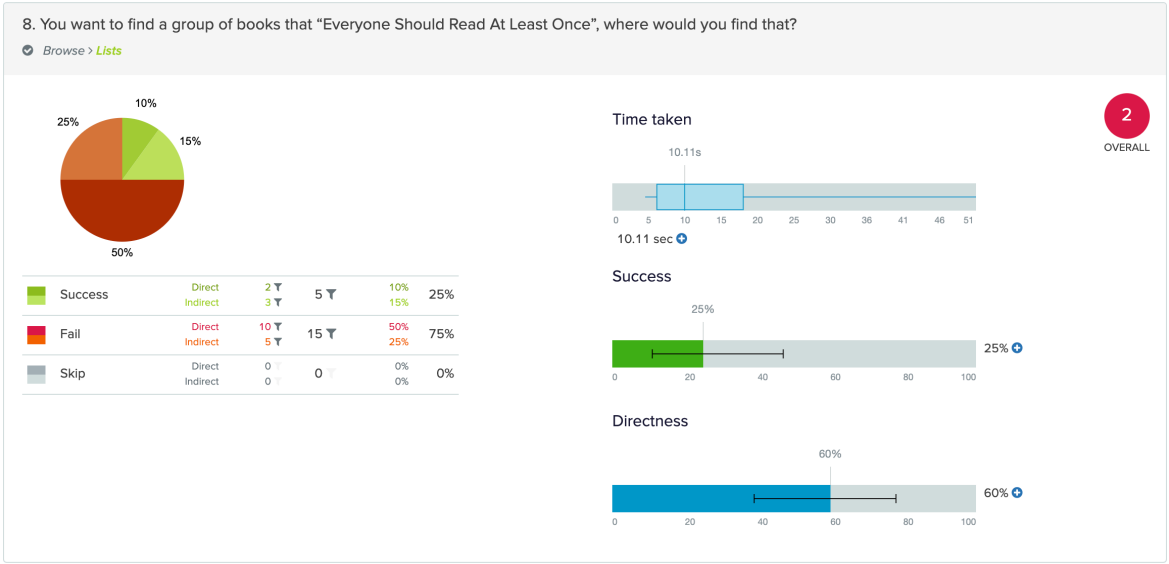
Ap 4.6 Task 6 Results



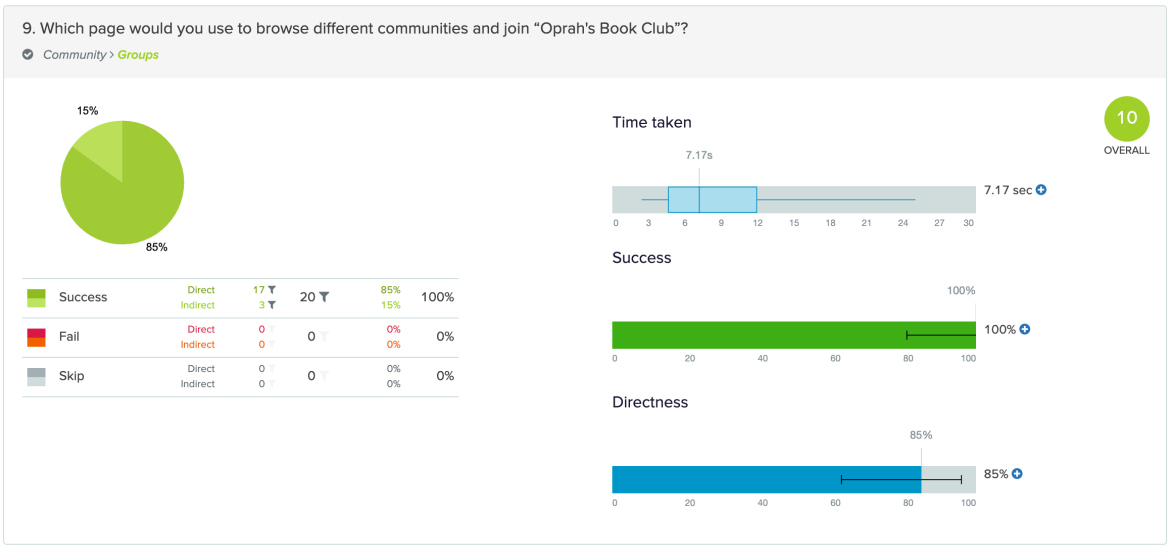
Ap 4.7 Task 7 Results



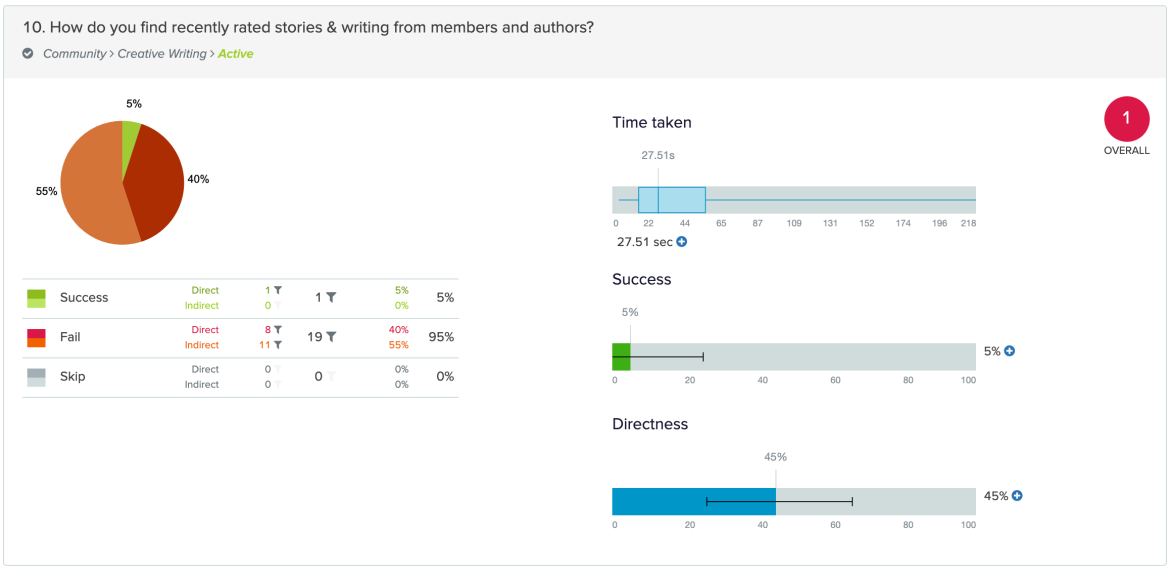
Ap 4.8 Task 8 Results



Ap 4.9 Task 9 Results

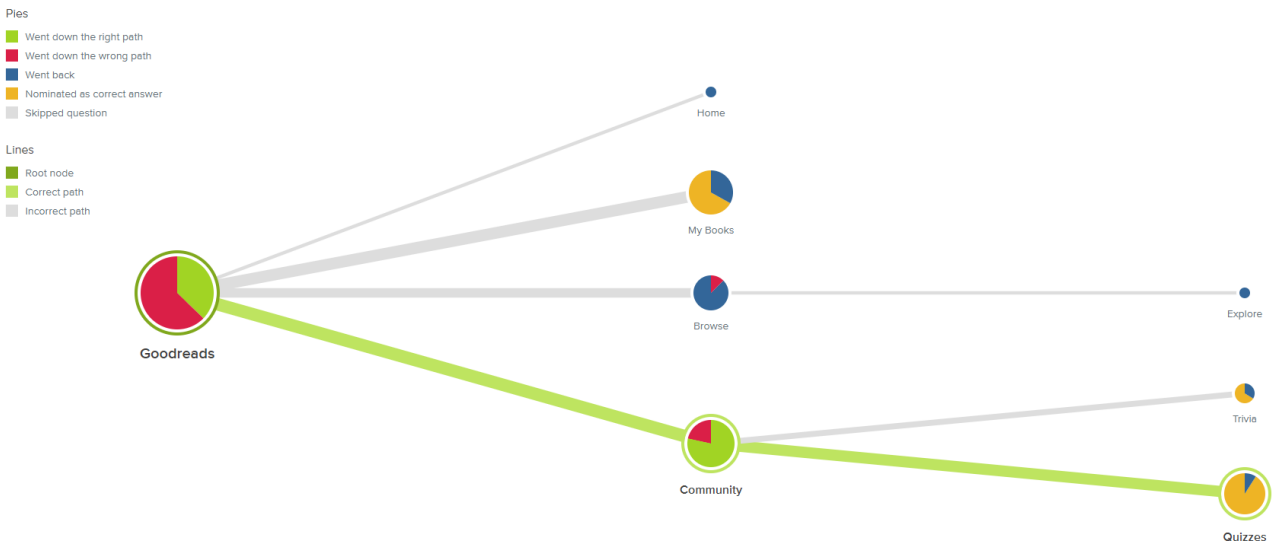


Ap 4.10 Task 10 Results



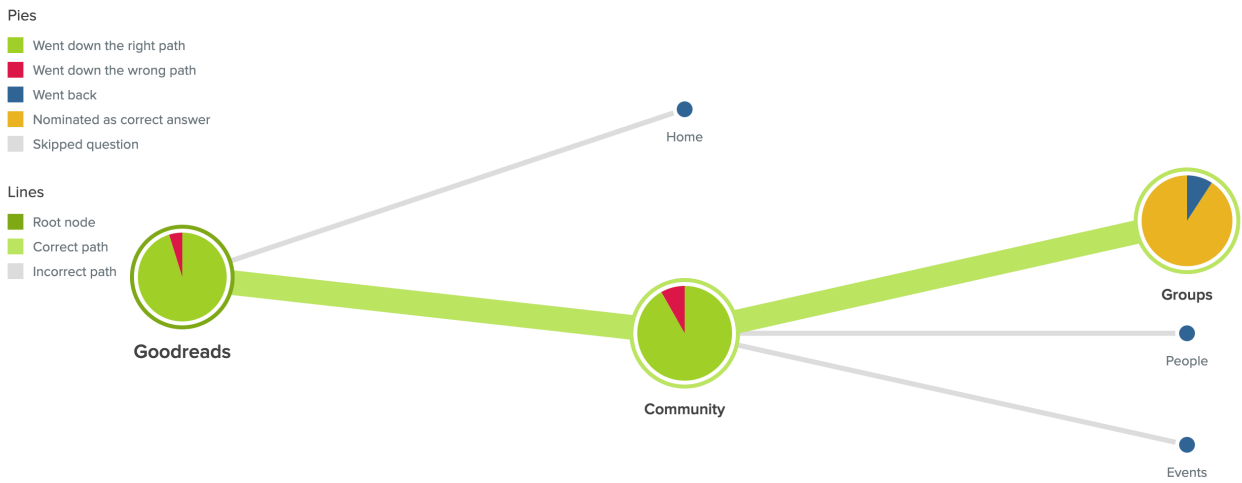
Note: Users spent the most time on this question, and the question received the lowest score out of all 10 questions.

Ap 4.11 Task 3 Pie Tree



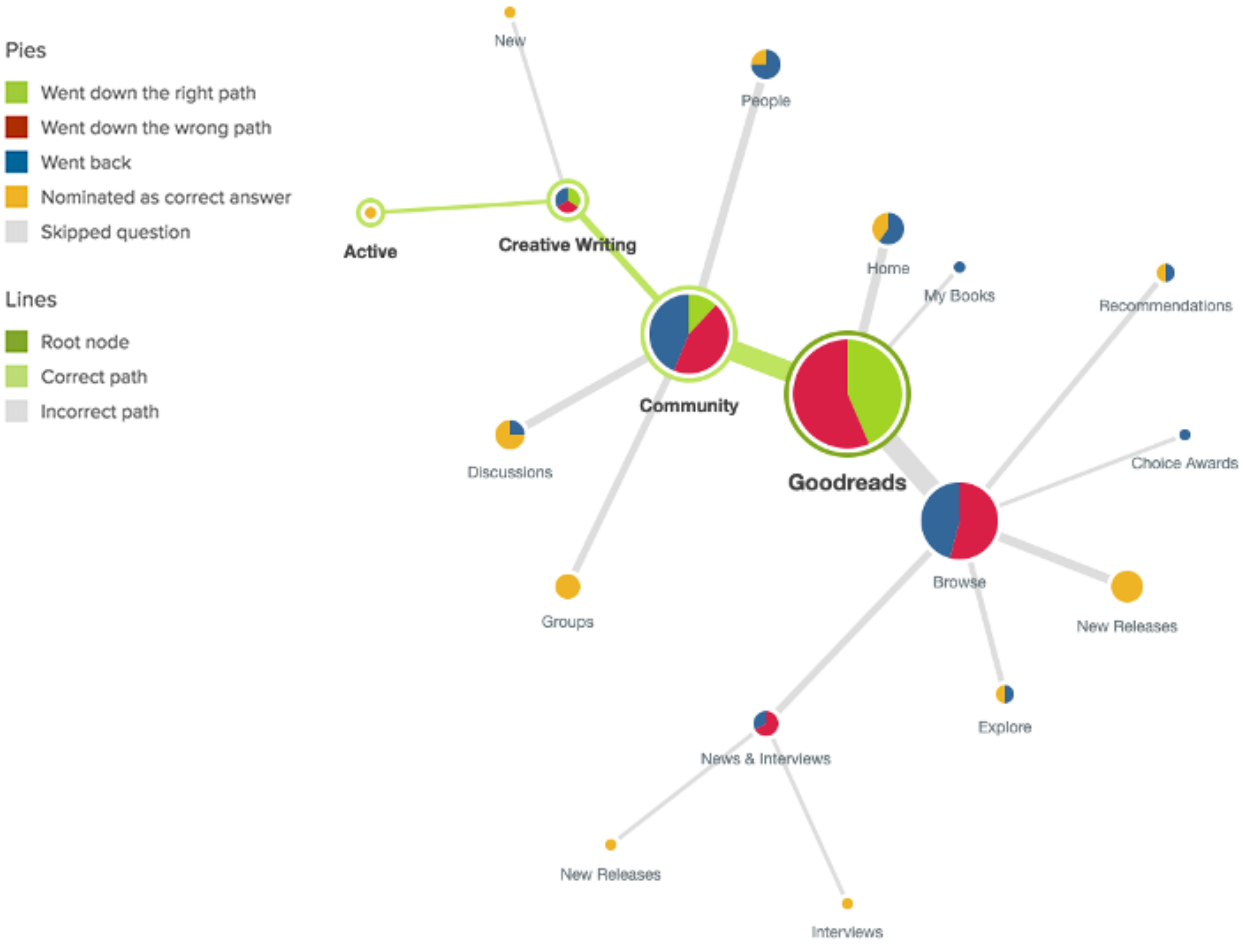
Note: Question 3: You want to test your knowledge about a book you have just read, what page is designed to do that?

Ap 4.12 Task 9 Pie Tree



Note: Question 9: Which page would you use to browse different communities and join “Oprah's Book Club”?

Ap 4.13 Task 10 Pie Tree



Note: Question 10: How do you find recently rated stories & writing from members and authors?

Ap 4.14 Task 8 Participant Paths

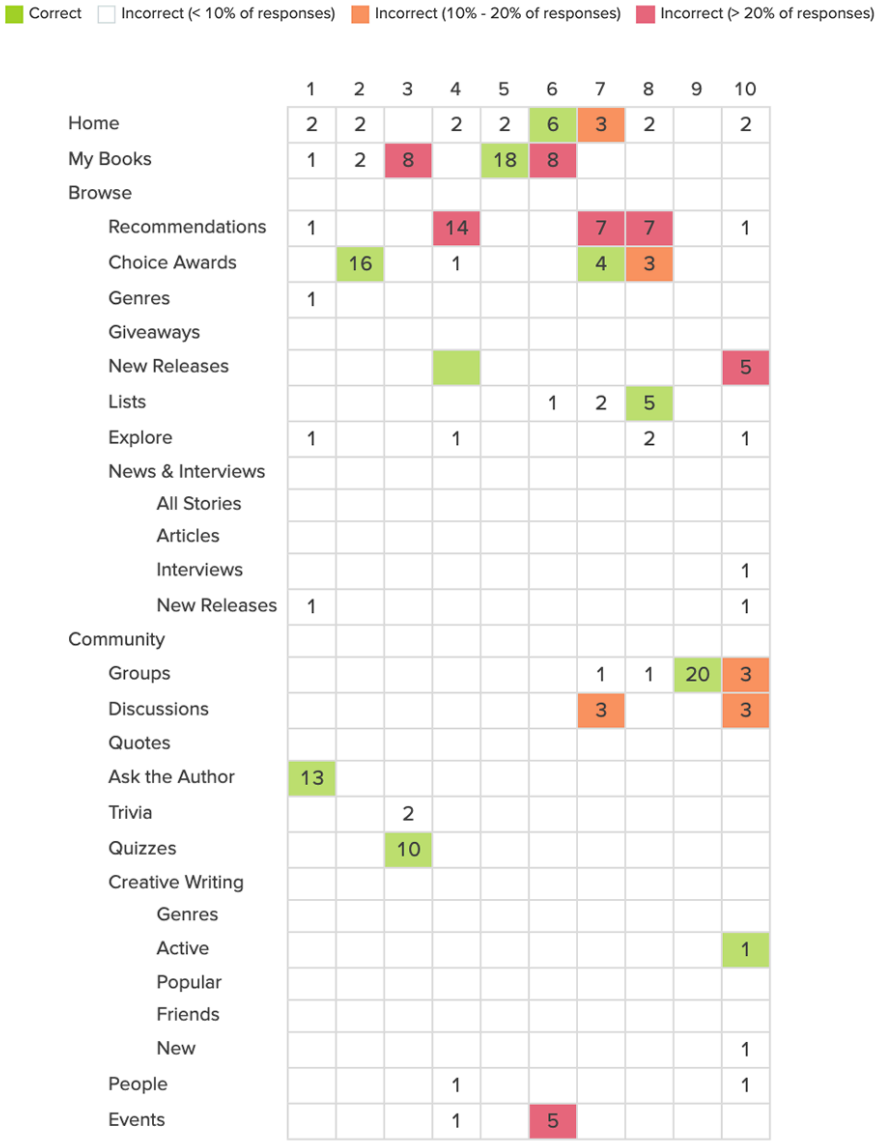
8. You want to find a group of books that “Everyone Should Read At Least Once”, where would you find that?

Browse › Lists

Success	Participant	Identifier	Path
■	1	[redacted]	› Browse › Explore
■	2	[redacted]	› Browse › Recommendations
■	3	[redacted]	› Browse › Recommendations
■	4	[redacted]	› Community ‹ Goodreads › Home
■	5	[redacted]	› Browse › Choice Awards
■	6	[redacted]	› Browse › Recommendations ‹ Browse › Giveaways ‹ Browse › Explore ‹ Browse ‹ Goodreads › Community ‹ Goodreads › Home ‹ Goodreads › Browse › Recommendations

Note: Participant’s full names were edited out. This table only shows the paths that the first 6 participants took.

Ap 4.15 Participant Responses



Note: The chart represents where participants ended up for each task. The vertical axis represent the tree (site structure) and the horizonal axis represents the task number.

Appendix 5: Data Matrix

The data matrix shows the data files that we have collected from the usability tests. Organising our shared files on Google Drive helped us to efficiently search for specific data, especially when finding footage for the highlights video.

Date collected	File location	File Name	Data description
20/10/2020	Google drive > INFO20004 > Assignment 2	Screener_questionnaire_responses.xlsx	Screener questionnaire responses generated from Google Form responses
26/10/2020	Google drive > INFO20004 > Assignment 2 > Zoom Recordings	P1_zoom_recording.mp4 P1_zoom_audio.mp4 P1_zoom_chat.mp4	P1 Zoom video recording + audio recording + chat file
26/10/2020	Google drive > INFO20004 > Assignment 2 > Zoom Recordings	P2_zoom_recording.mp4 P2_zoom_audio.mp4 P2_zoom_chat.mp4	P2 Zoom video recording + audio recording + chat file
26/10/2020	Google drive > INFO20004 > Assignment 2 > Zoom Recordings	P3_zoom_recording.mp4 P3_zoom_audio.mp4 P3_zoom_chat.mp4	P3 Zoom video recording + audio recording + chat file
27/10/2020	Google drive > INFO20004 > Assignment 2 > Zoom Recordings	P4_zoom_recording.mp4 P4_zoom_audio.mp4 P4_zoom_chat.mp4	P4 Zoom video recording + audio recording + chat file
29/10/2020	Google drive > INFO20004 > Assignment 2 > Zoom Recordings	P5_zoom_recording.mp4 P5_zoom_audio.mp4 P5_zoom_chat.mp4	P5 Zoom video recording + audio recording + chat file
29/10/2020	Google drive > INFO20004 > Assignment 2 > Zoom Recordings	P6_zoom_recording.mp4 P6_zoom_audio.mp4 P6_zoom_chat.mp4	P6 Zoom video recording + audio recording + chat file
29/10/2020	Google drive > INFO20004 > Assignment 2	Pre_test_questionnaire_responses.xlsx	Pre-test questionnaire responses generated from Google Form responses
06/10/2020	Google drive > INFO20004 > Assignment 2	Goodreads_treejack_test_results.xlsx	Optimal Workshop raw data in csv data - Includes participant information (location, device), task times, treejack test results
06/10/2020	Google drive > INFO20004 > Assignment 2	Loop11_usability_test_results.xlsx	Loop 11 raw data in csv file - Includes participant (location, device), task times, click map, post-task questionnaire responses, SUS results

Appendix 6: Transcription Excerpts

To extract qualitative data from our interviews, we extracted parts of our test sessions that are of interest to us, including when users experience issues with the site, but also when they like a particular aspect of the site. We performed general thematic coding to find out what kind of problems users experience the most when using the site. We are aware that we haven't transcribed the entirety of the test sessions, so the numbers aren't representative of the problems users encountered in all 6 test sessions, but are indicative of some common reoccurring themes.

Problem		# of times quoted in transcription excerpts
Interface Problems		
1.1	Dissatisfaction about an aspect of the interface	27
1.2	Confusion/uncertainty about an aspect of the interface	30
1.3	Confusion/surprise at the outcome of an action	17
1.4	Physical discomfort	0
1.5	Fatigue	2
1.6	Difficulty in seeing particular aspects of the interface	21
1.7	Having problems achieving a goal	21
1.8	The user has made an error	16
1.9	Unable to recover from error without external help	7
1.10	Suggestion for redesign of the interface	8
Content Problems		
2.1	Dissatisfaction about aspects of the content	20
2.2	Confusion/uncertainty about aspects of the content	25
2.3	Misunderstanding of the content (the user may not have noticed this immediately)	9
2.4	Suggestion for re-writing the content	2

Key:

F: Facilitator

O: Observer

P1 Transcription

(Task 2)

P1: (User on Homepage, just finished reading the task brief) OK… um, ok well. (cursor scans across "Bookshelves" on the homepage) Is this my home, how do I get to this page though? (referring to bookshelf page) [1.2, 1.7]

P1: Current reading down here. (Clicks on current reading button) And search and add books, okay. (Types in to Kill a Mockingbird, once page refreshes, clicks on the arrow dropdown menu next to the book) Add shelf? (Clicked on add shelf) No, should be… (opened the task brief again) [1.2, 1.6, 1.8] Currently reading. (Clicks on currently reading)

(Task 2 feedback)

P1: Ok, I wait… I don't really understand how bookshelves work. Hmmm. Do I just put books onto it? [1.2, 2.2] (Hides the review page) What if I click on the edit button (Clicks on edit next to the bookshelf, saw bookshelves tips) Um… too much stuff to read, I can't be bothered. [2.1]

F: Ha!

P1: (Cursor on add shelf) Add shelf, so I can say, books that I hate. (Proceed to type in, pressed on add button) Ok, ok that's pretty cool.

F: There you go.

P1: Yea, I'll say it's pretty easy.

(Task 3)

P1: Currently reading.. Could it be reading stats, track my reading (Clicked on reading stats). [1.2, 1.8, 2.2] Pages over time? (Hover over pages over time button) Hmm, no. (Scan through the entire interface) Wouldn't be in Browse. Community? No.. Has to be my books somewhere. (Enters My book page) What if I just click on the book, and it would show what I am up to? (Clicks on the book)

P1: Hmmm.. It doesn't look like it. (Cursor scans over the page count of the book) Pages here um.. (Scrolled to the Progress tracking section and remained for 4 seconds) Yea I am pretty stumped, I have no idea where to find the buttons… [1.2, 1.6, 1.7, 2.2]

F: You could skip the task, if you are really struggling. [1.7]

P1: Yeah...

(User was asked to give feedback to improve the site in the post-task questionnaire)

P1: Maybe these need to be bigger, these titles. (Pointing to the headings on the page) [1.10] Because it's the same size as the content. Like if I look at the page, I don't look here first (referring to headings), I look here first (referring to book titles). [1.1, 2.1]

F: Yeah.

(User clicks around the site and lands on Discussion page)

P1: Ok I'm confused by this now, why aren't there any discussions? [1.2, 2.2] Wait, if I go here… (goes to Groups page, then returns to Discussions page)

Maybe if these were bigger, I can't really… (cursor hovers over a grid of book covers)

Because this is useless to me, it's just a jumble of colours. [1.1, 2.1] Like, I can't identify any of these books. [2.1] None of these here will ever interest me. Like, maybe only if you read the book and you recognise them? Like, they're pretty small.

P1: The voting is a little confusing though. (User failed to complete the task earlier) [1.2, 1.7] Maybe it's because like, this says choice awards (cursor pointing to Choice Awards option on nav bar), but I don't really understand what Choice Awards are. [2.2]

F: True. But if you go back to the navigation bar and click on lists... [1.9]

P1: Oh it's in lists… what? [1.3]

F: Here you can vote.

P1: Books that everyone should read… what? (laughs) [1.3]

F: It's a bit tricky to find right?

P1: Yeah, lists is just like, I don't know, listing all the books in existence, that's what it sounds like to me. [1.2] It should be like 'award lists' or something like that. [1.10] Yeah, because having an option of 'choice awards' confused me in terms of having to vote for something. [1.2, 2.2]

P2 Transcription

(During task 1)

P2: Alright. So, I'm trying to write a book review. So… let me think… There's quite a few like.. I don't know, I don't know where to click because there are so many different… um... images and everything on the screen [1.1, 1.2, 1.7]

Umm… To write a review… I don't even know where to write that. Maybe…

F: Oh… This is the sign up page.

P2: Oh there you go… I'm writing a review… so rate my books. [1.8] Umm and I'll look up the Hunger Games". Yes, I don't want to read it, I want to… It's just not doing what I want it to do! [1.1, 1.7, 1.8, 2.1, 2.3]

Yes, okay I'll try another way. Umm… recommendations… want to read… It's just not very clear. [2.1] There's too many things on the page [2.1]

F: I agree.

P2: I disliked it because of the terrible writing style. Oh this is the recommendation, that's wrong" [1.8] I'm not recommending it, but I'm gonna do that. Why is it not letting me?! Okay, I don't think that's right" [1.3, 1.7, 1.8] It's not a recommendation, I want a review. What are these icons on top? I think that's really hard with just having the pictures without knowing what they are…rather than… actually telling me what they all are. It kind of presumes that I know [1.6, 2.1] I haven't even done the first task yet…

F: That's okay.

P2: I wish there was a search bar for things to do [1.10] discussions… quizzes… people… discussions??? I honestly don't know where to review [2.2]

O: If you think it's too hard you can click on the show button, and then abandon the task if you are really stuck. But if you want to give it a go…

P2: I can continue to try, but it's going to take me awhile… I don't know… [1.2, 1.7]

F: Either way I think um… If the task is too hard to complete, it shows something, so if you want to move onto the next task, you can.

P2: Yup okay, I'll abandon it then. [1.7]

(Completing post-task questionnaire)

Signing into Goodreads, yup that was pretty easy. Understanding the site navigation, I found that difficult… Using the search bar to search for a book… Using the rating system… I didn't use the rating system…

Understanding the steps you need to take to review a book… I found that very difficult because I did not know how to do that. [1.7] Which aspects of the site made this task easy for you? It wasn't easy… [1.1, 2.1]

F: You can say that it wasn't easy.

P2: I didn't find it easy. I thought the page was a bit overwhelming and didn't know where to go next to write a review. Many links and images that cluttered the page made it difficult. [1.1, 1.6, 1.7]

(Task 2)

P2: You have been wanting to read To Kill a Mockingbird for a while, and you finally got to start reading it. You want to add this book to your Currently Reading shelf. How would you do that? Currently reading… To Kill a Mockingbird… That was quite easy because I saw "currently reading" at the top. Do I add that book? Yes… add a book… There's just so many links [1.1]

F: Yes I know… It can be quite confusing…

P2: Oh that's where you write a review… I found it!

O: If you think you finished the task, you can click on the completed task.

P2: Okay. Which aspects of the site made this task easy for you? The bold heading of currently reading. What made this task difficult for you? Umm… Perhaps lots of bolded titles which can distract from the task.

(Task 3)

P2: Chapter 3, page 45…. Okay… ah! Okay I think it's a bit misleading by saying "general update" and then having only tab as "sharing your thoughts with friends", that's not really a general update, it should just say "share thoughts with friends" [2.1, 2.2, 2.3]

(Clicks around)

Update progress, oh no let's go back. [1.8] I think that the main thing about this website is it's just quite overwhelming, there's so many texts like down here, the title heading, and it's just too much on the same page [1.1, 1.2, 2.1] So… I'll say I'm currently on page 45, okay. [1.2]

(Task 4)

P2: Oh Green Eggs and Ham! You think that everyone should read it at least once… vote for the book. Okay! Guess I would go to community? Oh hmm… Groups? Discussions? I feel like it's also hard just because I don't know the website, there's so many different things. [2.2, 2.3]

F: Don't worry it's not about how well you know the website, it's about how easy the website is to navigate.

P2: Yeah okay… crowd-sourced booklist… choice awards… best of… hmmm… I don't know if it's choice awards or recommendations… recommendations from users?? Um lists? Maybe? Oh there you go. Hmm once again why do they have the… oh there we go, found it! Cool, click on that. [1.2]

It took me a while to find and add books to the list. [1.6]

I think this setup is prettier, it took me a while to find it but the fact that you can add your own is [good]. What am I adding… Green Eggs and Ham… well… we can pretend it's on there.

F: You can go to Search instead of my books on the top bar over there. At the left.

P2: Books?

F: Yeah, under the add books to list and then go to the left side. Where it says add books from My Books or a Search.

P2: Oh! I see, yeah, that wasn't clear, I didn't see that. Too small [2.1]I didn't even see that there were two different options [2.1] I wasn't sure why it wasn't coming up. There we go, vote for this book, my votes… I don't know if that's going through or not.

F: Do you think it needs more user feedback?

P2: Yeah, this is what I voted for whether or not if that's been put into the input like I don't know if that's been considered or if other people agree… [1.1, 1.2, 1.3] Um.. yeah, maybe there should be a submit button or something so you know your input is counted [1.10, 2.4]

F: Yeah.

P2: Finding the book you wanted to vote for… that was kind of difficult because I did that wrong to begin with… getting to the voting page… that was kind of difficult as well. Voting for a book, that was easy. What made this task easy for you… um… the search bar? Hmm… made this task easy for me… the search bar so that I could easily find my book. What made it difficult for you, well… lots of links to reach the voting page. Kind of confusing… did not see the difference between the "my books" and "search" when voting for a book. [2.2] Too small font. [1.6]

(Task 5)

P2: You were writing an essay and you wanted to emphasize the significance of courage in life. You wish to conclude the essay with a nice quote from any book that relates to courage. How would you find it? Okay! Browse, explore… ah, genres… there's just so much on each page! I just think it's just so overwhelming and so many photos, different coloured

texts, different sized texts… [2.1] If I search up courage let me see what comes up… no I think I need more of a quote [1.3] in my books… lists… browse by tag, there we go.

Okay, that's pretty cool, I like this because it's separated into different kinds of… depending on the essays… categories... it also shows the votes but I don't really understand the voting bit. I don't actually see the quotes let's see… I don't know how to actually find quotes… [1.7]

Preview maybe? But I don't want to go through every single book. Well... I didn't find the quote page, I don't know where that was" [1.6, 1.7] Easy? Not much… didn't find the page. Didn't know where to find the quotes page. Couldn't … I don't know if this is helpful for you guys…

F: Anything would be helpful.

P2: Hahaha okay… I couldn't search for any quotes, let alone courage ones. [1.7]

(Post-task questionnaire and general feedback)

P2: (Reading from questionnaire) Which 3 features of the site has room for improvement in your opinion? Hmmm… Um…. Well the big one I guess was the quotes page, because I couldn't find it. Perhaps if it was organized into groups, I would be able to locate it. [1.10] What was my second idea… I had one. Um… too many links and subheadings. Could be organized into groups and only be located in the top bar. I found it confusing with heaps of links down the side, top and bottom. What was the third thing... [1.2, 2.2]

F: It could be anything from the main aspect of the website or just a little small thing, maybe what you struggled with the most.

P2: Hmm… too many fonts and colours. Overwhelming for the reader and makes it harder to locate what you want to find. [1.1, 1.5]

P3 Transcription

(Task 1)

P3: (While writing a book review) Oh wait, I can also rate it … 3 stars! Okay, I'll just post it I guess, not sure if I want to change... Oh wait, (Clicks the "inserts book author") Oh wait, never mind (closes it right away) [1.3, 2.3] Does that complete my task?

F: Yes, you can click "task completed".

(While answering questionnaire)

P3: Okay but I have used this before, do I just go off based on my experience also?

F: Um, yes… I mean no, just based on this test.

P3: Okay, using the search bar… that was easy, its literally right up there.

P3: (Answering the "using the rating system" question) But I would like the rating system to be bigger. [1.10] (Answering the "understanding the steps you need to take to review a book) Fairly easy, but there were a lot of fine print I would say. [2.1] I mean you could edit it, edit your review, as you want, I guess with the actual formatting stuff. Which is I think good but it was also in a tiny corner so you might not know about it. [1.1, 1.6, 2.1] Yeah but I would say easy, I guess. Fairly easy to get your review out there.

(Task 2)

P3: I would say it is easy, but many people might not know you can access the other shelves that you have, like the "Currently Reading" shelves. [2.1]

P3: I mean you just shelved it under… whatever you shelved it under

(Task 3)

P3: Share my thoughts… I don't have any thoughts cause I haven't read the book. [1.7]

P3: Okay considering that it is my first time using the progress tracking since I don't really do that on my own. Umm, I'd say it was … moderate because like, oh no, no, it was easy, because like the page sign with the switching to the percentage sign kind of confused me a little bit so… [1.2]

P3: Sharing your status to other users… Oh, did I share my status to other users? [1.7, 1.8]

F: No, I don't think you did.

P3: (Goes back to do it) Okay now I am confused. (Finds the general update button) Ah, now there we go, that's what I am supposed to do. Okay done that now. (Back to the questionnaire) Sharing your status was moderate, because I didn't know that the general update button was to share a status. [1.2, 1.3, 2.2, 2.3]

(Task 4)

P3: Oh, I am venturing into uncharted territory now. Okay I found the list that says, "Books that Everyone should Read at Least Once". Okay, I clicked on the list, okay I should add books to this list. (Searches for the book) Oh no, add books from a search! (Switches options and searches again) …Added to your list first?? Is it already added? [1.2, 1.3] (Visibly confused) I think it was already added in. (Still confused) Okay, I'm done.

(Task 5)

P3: I actually didn't know you could do this; oh, you can do this. (Finds the page) Oh okay, just by random looking I found it. I guess I can just search by tag. Ah hah! I guess I am done since I found the quotes.

P4 Transcription

(Sign in Stage)

P4: (Entered email address into registration form instead of login form) [1.2, 1.6, 1.8, 1.9, 2.2]

F: I don't think you should be logging in there…

P4: Why? (Clicks on sign up)

F: Oh no, you're supposed to sign in, not sign up…

P4: Oh really? (returns to home page) Oh! (See Sign in on top) [1.3]

(Task 1)

P4: (Enters the Hunger Game page and scrolled down to Reader Q&A) Oh here! Ask anything about the book. [1.3, 1.6, 1.8, 2.2]

P4: Maybe I will share on social media to review? Is that right?

(Enter review in Q&A section)

P4: Really? Why? (Finally realised the error prompt: sorry, your questions needs to contain a question mark) Oh! Question mark!

(Task 1 Feedback)

P4: (Types: Why does it have to contain a question mark?) [1.2, 2.2, 2.3]

(Task 5)

P4: First I should read, so I ought to open it (referring to the book) hmm… (Clicks on the "read" button in the bookshelf) Oh My God.. The "read" button is too small [1.2, 1.7, 1.8, 2.2] What's this?

F: Just a little explanation about the site: the site doesn't actually offer any reading links, if you hover the book links button, it directs you to other websites to buy the book, so you cannot actually read here.

P4: What do you mean by tracking my reading progress, because I haven't read?

F: For this task, you could put any date, but you need to record your reading progress on this page.

P4: I could just copy the URL and send to my WeChat, the next time I would know where to come back. [1.2, 1.6, 1.8, 2.2, 2.3]

F: But then that wouldn't actually record the page number on the page right? If you are really struggling, you could skip this task.

P5 Transcription

(User completing task 4)

P5: I'm looking to see if there's a way to search for specific books. Don't think it's the one on the top because that searches the whole site. Ok I think…

(Clicks on choose a book button)

To vote for an existing book on the list, there's a link to it.

(Reads from text on the page)

Choose from your books, or simply search, and then add books to this list. There's a link vote for… It looks like it's clickable, but nothing is happening. [1.2, 1.3, 2.2]

(Clicks on button 3 times)

Can I not choose a book from here? (Clicks on button again) Nope, apparently not. Um, let me read that again. [1.2, 1.7]

(Reading from text on page)

To vote on existing books from the list, beside each book there is a link vote for this book, clicking it will add that book to your votes. To vote on books not in the list or books you couldn't find in the list, you can click on the tab add books to this list and then choose from your books, or simply search.

They're telling me to search, but now I'm very unsure, so I'm continuing to scroll, hoping to find… (Scrolls down the page) It's a very long list. [1.1, 1.2, 1.8, 2.1, 2.2] I see fiction, non-fiction, I'm trying to see if there's a way… [1.7]

F: Ok, let me intervene and help you out a little bit here. Scroll back up, do you see the 'Add books to this list' button? [1.9]

(P5 spends a few seconds looking for the button then clicks on it) [1.6]

F: Yup, great, here you can click on the search link next to my books.

P5: Umm…

(P5 struggles to find the link)

F: It's at the top of the page to the left.

P5: Ah, I see. Ok. I would have never gotten that. (Clicks on link) [1.2, 1.6, 1.9]

F: How do you feel about the way this is laid out? Do you think it's clear or…

P5: It's not clear, it's completely terrible, because if you're telling me that I can vote from here, I wouldn't go here to add or to search for the book. [1.1, 1.3, 2.1] I think this would be if I thought that a book wasn't on the list, then I'd come here. [1.3] Even with this (clicks onto the search link), the sizing here is very small, and it's not very descriptive of what exactly it's meant to do. [1.1, 2.1] Like am I searching through the list? Or just searching in general. [1.3, 2.2] (Pointing to the add books and search links)

They could have made them into buttons instead of just text to make it more obvious. [1.10]

F: Right.

P5: So if I were to search Green Eggs and Ham, (types in Green Eggs and Ham in search bar) and then we'll see what shows up.

Yes, it says I vote for the book. But it would not have been my first place to go, I would have honestly mistaken the top one that I've used already as searching through the list, because it's on the same page as this. [1.3, 2.2]

(Clicks around the page)

But I really wouldn't have gotten there if you didn't tell me. [1.9]

F: And was the message that popped up when you clicked on choose a book help you at all?

P5: No. If I had to choose a book, I would click on choose a book, and the choose a book to add button, and then search for it, if I had to do it through this. I think that's what I would've thought that was, but it wasn't.

P6 Transcription

(Task 1)

P6: So I have logged in. Then I would search for The Hunger Games.

(Uses the wrong search bar, uses the 'Currently Reading' search bar than the 'Search Books' search bar', then clicks on 'View all books')

P6: (On all books page) And then looking at here. So now I have to leave a review. Where would I leave a review of this? [1.6]

(20 seconds passes)

P6: Oh, under write a review.

(Task 1 Feedback)

P6: There is a lot of information on the page to find the review tab [1.1, 1.6].

(Task 2)

P6: I would probably go to 'My Books' as I have started to read it. (Book has not been added to shelf yet)

F: So the question is asking to add it to My Books.

P6: So I have added it to my 'Want to read' but I can't see it. But the question said I have started it? What does reading shelf mean? [2.2] Does it mean 'Bookshelf'? So I have just added it to my 'Bookshelf' and it has come up as 'Want to Read'. [1.2, 2.2]

(User looks confused for a moment)

F: Can you see a tab where it may suggest you are currently reading?

(About a minute passes)

P6: Oh currently reading. It hasn't got To Kill A Mockingbird. I might just search it again. So I just dragged it in (to currently reading), nope it won't let me do it [1.3, 1.7, 1.8, 2.3]. Um I don't know how to do it. [1.3, 1.6] Oh hang on (clicks on drop down), oh here we go, here's currently reading.

(Task 3)

P6: Oh no I went to the 'Read Tab' that's wrong. [1.8, 2.2, 2.3]

(Misinterprets task)

F: So the task is asking you to track your progress.

P6: I don't know how to do that. [1.2, 1.6, 1.7]

(Task 4)

P6: I would probably search the book first and then… (scrolling on Green Eggs and Ham page then gets lost) [1.9]

F: Maybe think about other tabs you could use to find lists?

P6: I will have to have a look, groups? [1.2, 1.6, 1.8, 2.2] It is very slow [1.1, 1.5] (Thinks it is slow because there is no content on the 'Groups' page)

(Clicks on 'Choice Awards' then finally 'Lists')

(Uses wrong search bar then recovers and uses list search bar, finding the right list, but doesn't know what to do with it)

P6: But then I don't know how to find the list. I can't see it. [1.6]

F: Can you see the list on the page?

P6: Oh right got it. There are a lot of lists that're ridiculous! [1.1, 1.9]

(Post-Task Questionnaire)

P6: Do people want this much information? (referring to the whole site) [1.1, 1.6, 1.10, 2.4] You can get pretty lost [1.1, 1.6]. I don't think it would be cumbersome after learning how to use it.

Appendix 7: Meeting Minutes

Meeting Minutes #1

Date:	15 September, 2020 (Tuesday)
Time:	11:00 a.m. - 12:00 p.m.
Attendees:	Angelina Lim, Manami Fujikawa, Nicola Toomey, Pei Yi Woo, Yiteng Qi
Minutes taken by:	Angelina Lim

Key decisions made at the meeting:

✓ General discussion of the assignment
✓ Create Google Form screener questionnaire

Actions from this meeting:

Action	Person(s) responsible	Deadline
All live usability interviews finished	All group members	27 September, 2020
Send screener questionnaire to participants	All group members	18 September, 2020
Recruit participants according to recruitment matrix	All group members	18 September, 2020
Create consent form (Google Form)	Mike	18 September, 2020
Create post-test questionnaire (Google Form)	Angelina	18 September, 2020

Next meeting: 18 September, 2020 (Friday)

Meeting Minutes #2

Date: 18 September, 2020 (Friday)

Time: 3:15 p.m. - 4:15 p.m.

Attendees: Angelina Lim, Manami Fujikawa, Nicola Toomey, Pei Yi Woo, Yiteng Qi

Minutes taken by: Angelina Lim

Actions from last meeting:

Action	**Status**
All live usability interviews finished	Delayed
Send screener questionnaire to participants	Completed
Recruit participants according to recruitment matrix	Completed
Create consent form (Google Form)	Completed
Create post-test questionnaire (Google Form)	Completed

Key decisions made at the meeting:

✓ Select live usability test participants
✓ Organise and coordinate test sessions
- Assign moderator and observer for each session

Actions from this meeting:

Action	**Person(s) responsible**	**Deadline**
Pre-test questionnaire on Google Forms	Nicola	Saturday
Mid-test questionnaire on Google Forms	Manami	Saturday
Email lecturer about optimal workshop	Angelina	Today
Send Optimal Workshop quiz to selected participants	All group members	By next tutorial

Next meeting: 29 September, 2020 (Friday)

Meeting Minutes #3

Date: 29 September, 2020 (Tuesday)

Time: 11:00 a.m. - 12:00 p.m.

Attendees: Angelina Lim, Manami Fujikawa, Nicola Toomey, Pei Yi Woo, Yiteng Qi

Minutes taken by: Angelina Lim

Actions from last meeting:

Action	**Status**
Complete 4 usability tests	Completed
Request all participants to complete Optimal Workshop test	Completed

Key decisions made at the meeting:

✓ Optimal Workshop test finished (Due 30 Sept)
✓ Transcriptions (Due 7 Oct)
✓ Executive summary (Due 20 Oct)
✓ Video (Due 23 Oct)

Actions from this meeting:

Action	**Person(s) responsible**	**Deadline**
Live usability test observation notes	All group members	Next meeting

Next meeting: 5 October, 2020 (Friday)

Meeting Minutes #4

Date: 5 October, 2020 (Monday)

Time: 11:00 a.m. - 12:00 p.m.

Attendees: Angelina Lim, Manami Fujikawa, Nicola Toomey, Pei Yi Woo, Yiteng Qi

Minutes taken by: Angelina Lim

Actions from last meeting:

Action	Status
Live usability test observation notes	Completed

Key decisions made at the meeting:

✓ Discuss video script
✓ Discuss recommendations prototype (Back-logged)
✓ Split up report into parts for each person to write-up

Actions from this meeting:

Action	Person(s) responsible	Deadline
Video script introduction	Manami	Next meeting
Participants	Pei Yi	Next meeting
Video slides introduction	Manami	Next meeting
Scenarios	Angelina	Next meeting
Methods	Nicola	Next meeting
Introduction	Manami	Next meeting
Transcription (10 min.)	All group members	Next meeting

Next meeting: 8 October, 2020 (Saturday)

Meeting Minutes #4

Date: 5 October, 2020 (Monday)

Time: 11:00 a.m. - 12:00 p.m.

Attendees: Angelina Lim, Manami Fujikawa, Nicola Toomey, Pei Yi Woo, Yiteng Qi

Minutes taken by: Angelina Lim

Actions from last meeting:

Action	Status
Video script introduction	Done
Complete parts of report	Done – Needs editing
Transcription (10 min.)	Done

Key decisions made at the meeting:

✓ Discuss video script
✓ Discuss recommendations prototype (Back-logged)
✓ Split up report into parts for each person to write-up

A**ctions from this meeting:**

Action	Person(s) responsible	Deadline
Thematic coding count	Mike	Next meeting
Post test results tables and figures	Angelina	Next meeting
Video script	Manami	Next meeting
Slides	All group members	Next meeting

Next meeting: 8 October, 2020 (Saturday)

Meeting Minutes #5

Date: 13 October, 2020 (Tuesday)

Time: 11:00 a.m. - 12:00 p.m.

Attendees: Angelina Lim, Manami Fujikawa, Nicola Toomey, Pei Yi Woo, Yiteng Qi

Minutes taken by: Angelina Lim

Actions from last meeting:

Action	**Status**
Thematic coding count	Completed
Post test results tables and figures	Completed
Video script	Completed
Slides	Completed

Key decisions made at the meeting:

✓ Ask tutor about how to format findings and advice on presenting optimal workshop results
✓ Agree on report formatting
✓ Discuss key findings from usability tests
✓ Come up with usability issues and key themes

A**ctions from this meeting:**

Action	**Person(s) responsible**	**Deadline**
P3 Transcript	Pei Yi	Next meeting
Voice recording (Introduction)	Manami	Next meeting
Analyse optimal workshop	Mike	Next meeting
Simple thematic coding table analysis	Mike	Next meeting
Fill in post task questionnaire tables	Angelina, Manami, Nicola	Next meeting

Next meeting: 16 October, 2020 (Friday)

Meeting Minutes #6

Date: 16 October, 2020 (Friday)

Time: 3:15 p.m. – 4:15 p.m.

Attendees: Angelina Lim, Manami Fujikawa, Nicola Toomey, Pei Yi Woo, Yiteng Qi

Minutes taken by: Angelina Lim

Actions from last meeting:

Action	Status
Voice recording (Introduction)	Completed
Simple thematic coding table analysis	Completed
Post-task questionnaire tables	Completed
P3 Transcript	Completed
Analyse optimal workshop	Completed

Key decisions made at the meeting:

✓ Assign tasks to each member

✓ Discuss OW findings

✓ Discuss recommendations

✓ Write video script

Actions from this meeting:

Action	Person(s) responsible	Deadline
P3 live observation notes	Pei Yi	Sunday
Find clips related to usability issues	All group members	Sunday
Slides	Pei Yi	End of today
Continue finalising findings	All group members	Tuesday (Next tutorial)
Script	Angelina, Nicola, Mike	Sunday
Video recording	Manami	Monday
Edit video	Angelina	Tuesday

Next meeting: 20 October, 2020 (Tuesday)

Meeting Minutes #7

Date: 20 October, 2020 (Tuesday)

Time: 11:00 a.m. - 12:00 p.m.

Attendees: Angelina Lim, Manami Fujikawa, Nicola Toomey, Pei Yi Woo, Yiteng Qi

Minutes taken by: Angelina Lim

Actions from last meeting:

Action	**Status**
Video	Completed
Recordings	Completed
Findings	Needs editing
Slides	Completed
Recommendation prototypes	Completed

Key decisions made at the meeting:

✓ Delegate tasks

✓ Work on recommendation prototypes

Actions from this meeting:

Action	**Person(s) responsible**	**Deadline**
Re-record voiceover	Manami	Friday 12pm
Add positive findings to report	Mike	Friday 12pm
Executive Summary	Nicola	Friday 12pm
Proof-read report (Check spelling, grammar, figs and tables, numbering)	All group members	Friday 5pm