

Evaluation: Book Club

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ABSTRACT

In this paper, we present and discuss the results of evaluations of a prototype for a reading-based forum, Book Club. The paper presents the results of both the analytical and empirical evaluations and goes on to discuss the insights provided by the evaluations of the website's prototype.

Keywords

Usability; book; discussion; website; prototype; evaluation; analytical method; empirical method; cognitive walkthrough.

1. INTRODUCTION

Book Club is a web application that aims to connect users and provide a strong online community for book lovers. Users will have profile pages where they can share their interests and the site will contain discussion areas that help connect users to those with similar taste. This online community will enable users to find new books and it will give them a place to discuss books with others as they are reading them. With Book Club, we seek to integrate these capabilities into an enjoyable user experience.

Part of ensuring that the desired user experience is provided is prototyping the interface for the site. Prototypes are rarely perfect on their first iteration and thus it is important to perform evaluations to identify where the interface prototype needs to be altered or improved to provide a positive user experience. The evaluation of Book Club's interface prototype was approached from both an analytical and empirical perspective in an effort to expose as many flaws as possible so that the next iteration could fix those flaws.

2. ANALYTICAL EVALUATION

2.1 Goals

The goals of the analytical evaluation center on determining whether the proposed interface prototype presents the various functionalities offered by Book Club in a way that is intuitive to the user and does not cause confusion. The aim of the analytical evaluation is to determine this through critically examining the traits of the average Book Club user and whether such a user will be capable of easily figuring out how to use the functionalities offered by the site. Through this examination, we discover which aspects of the current interface prototype satisfactorily meet their

intended usability goals and which need to be modified to offer the desired user experience.

2.2 Points of Evaluation

In an attempt to understand whether users would be able to successfully use the various functionalities offered by Book Club, a series of tasks were formulated to incorporate the use of each of these functionalities. Among the tasks used in the cognitive walkthroughs are:

1. Create an account.
2. Log in to an existing account.
3. Change who can view own profile.
4. Change personal information on account such as bio or profile picture.
5. Change the default filters that are used when one first signs into their account.
6. Log out of account.
7. Navigate to the comment thread for a post.
8. Return to the post feed from a comment thread.
9. Leave a comment on a post.
10. Reply to the comment of another user in a comment thread.
11. Add another user as a friend.
12. Filter posts by Genre.
13. Filter posts by Author.
14. Filter posts by Series.
15. Filter posts by Book.
16. Show only posts that do not contain spoilers.
17. Create a new post.
18. Upvote/Downvote a post.

Each of these tasks were evaluated by answering three questions while keeping the characteristics of a typical user in mind. These questions were:

1. Will the user know what to do?
2. Will the user see how to do it?

3. Will the user understand from the feedback whether their action was correct?

With the answers to these questions, the individual performing the cognitive walkthrough could then decide if any changes needed to be made to the interface to make the task easier for users to perform.

2.3 Methods

See appendix G for images of the prototype that was used for the cognitive walkthroughs.

The cognitive walkthrough was performed independently by two members of the group in an effort to provide different perspectives and thus increase the number of insights. As per the evaluation plan, each member identified the characteristics of what was considered a typical user of Book Club and with these characteristics in mind, considered the likelihood of a typical user being able to correctly interpret and perform the tasks listed in Points of Evaluation. In this consideration, the user's knowledge base and potential experience with other sites with similar interfaces was taken into account. The result of the evaluation was an analysis that carefully weighed a user's knowledge and preconceptions against the design of the interface prototype.

2.4 Results and Insights

To see the data collected in the cognitive walkthroughs, see Appendices E and F.

The cognitive walkthroughs highlighted aspects of the interface that may cause confusion for users and should be changed, exposed holes in the design where functionalities that should exist do not, and confirmed the usability of some other features.

One of the aspects of the interface that will need to be changed is the fact that the functionality for logging in and creating an account are presented together. When presented with two options that have similar purposes, users may become confused as to which they should use. This should be changed to only present the option to log in along with a link if the user does not already have an account which will take them to a page where they can create an account.

In the current design, upon creating an account, a user will be logged in to that account and redirected back to the post feed page. There is currently no explicit feedback to indicate to the user that their account was successfully created which may introduce uncertainty to the user experience. To address this, an intermediary step should be added to the account creation process where the user is given some explicit feedback that their account has been created before being redirected back to the post feed page.

Adding this intermediary step to the account creation process also offers the opportunity to address some other issues with the current interface. With the current design, it is never made clear to the user that the ability exists to add a personal bio, upload a profile picture, add other users as friends, or choose default content filters. Furthermore, the concept of default content filters could be confusing for users who are not familiar with other sites like Reddit that implement similar mechanisms. These flaws can be remedied in the intermediary step by including an onboarding

process that briefly presents and explains each of these functionalities and where to access them.

While some features only need to be modified to provide the desired user experience, it was made apparent during the cognitive walkthroughs that other features were completely missing from the current interface. Currently there is no way for a user to log out of an account and while the mechanism for initiating the process for creating a new post exists, the interface to facilitate this process does not exist. Therefore the ability to logout of an account and the interface components for creating a new post should be added to the interface design.

Despite the issues that exist in the current iteration of the interface, there are some features which work well and provide the desired experience to the user. Among these are the abilities of commenting, filtering spoilers, using filters to find relevant content. One small change that should be made in the use of filters is to display a special message when the filters being used result in no relevant content being found.

3. EMPIRICAL EVALUATION

3.1 Goals

The goals of the empirical evaluation are similar to those of the analytical evaluation in the sense that we wish to discern whether the proposed interface prototype conveys the various functionalities of the site in an intuitive way. Specifically we wish to see whether the user has any difficulty in determining how to perform prescribed tasks and if users have an overall positive experience when interacting with the interface.

This evaluation is also performed with the goal of exposing any potentially incorrect assumptions that may have been made in the analytical evaluation by seeing how these various assumptions hold up when an actual user interacts with the interface prototype. By observing a user interacting with the interface, we can ascertain whether the parts of the website that we thought to be strong points are indeed as strengths and whether there are any particular aspects of the site that are difficult for a real user to understand.

3.2 Points of Evaluation

In an attempt to accomplish the goals associated with the empirical evaluation, users were given an ordered list of tasks to perform using interface prototype which was presented on paper with each page representing containing the interface for a different page on the website. Each task was given only after the previous task was successfully completed and fully worked through.

The first task given to the test subjects was to add a user as a friend when presented with that user's profile page. The goal of this task was to test the belief that the mechanism for adding friends was obvious to users once they were aware of personal profile pages.

Next test subjects were presented with the version of the homepage that is displayed to a user that is not logged in to an account. From this page, the subject was tasked with signing in to an account with a given set of credentials. This task was meant to determine whether the login functionality was apparent to users from the initial page that they would be shown.

For the third task, test subjects were shown the discussion feed page and asked to navigate to the comment section for a specific article in the discussion feed. With this, we sought to discover if users could easily tell how to navigate to locations where they could participate in the discussions which drive the site.

As the fourth task, test subjects were asked to filter the posts in the discussion feed by a specific book series so that only posts related to the specified series would be visible. This task in part demonstrated the ease with which users could figure out how to find content that was relevant to them.

For the fifth task, test subjects were presented with a comment section for a specific post and asked to leave a comment of their own on the post. Participation in discussions is what drives the site's activity, so it was important to determine whether users could easily figure out how to participate in discussions.

The final task was to, shown a comment section containing comments from various users, navigate to the profile page of a specific user who participated in the discussion. Adding friends and connecting to other users is considered a crucial aspect of the experience that the site offers, so it is important that users are capable of easily understanding the mechanisms for forming these connections.

The performance of these tasks offered the opportunity to witness what aspects of the interface prototype real users might struggle with and what parts were as easy to use as intended.

3.3 Methods

See Appendix G for images of the prototype that was used for the usability studies.

The empirical evaluation process that was used is based off of Steve Krug's *Usability Test Script*. For more information and to see the introduction used at the beginning of the process, see Appendix A.

To begin the empirical evaluation process, we asked the test subject some preliminary questions before introducing them to the interface prototype. The answers to these questions were intended to provide data about the subject's background that could be useful in gaining insights into their interactions with the interface prototype. The questions asked in this preliminary step were:

1. What is your name?
2. What is your occupation?
3. Do you use the internet daily? If so, how many hours a day do you use it?
4. Do you use the internet as part of your job?
5. Do you use book discussion websites such as Goodreads and Reddit's r/books?
6. How much time do you spend on online book discussion forums?
7. What is your favorite book-related site?
8. (User is shown homepage.) What is this website designed to do? Why would you want to come to this website? What functions does it offer?

After giving answers to all of the preliminary questions, users were given the ordered tasks outlined in Points of Evaluation. To facilitate the performance of these tasks, users were presented

with a paper prototype of the interface where each piece of paper presented a different page of the website and the relevant page was given to the user at the appropriate time. Users were given one task at a time and asked to complete the task to the best of their ability. While the users performed tasks, their interactions including any struggles that they may have had were recorded and notations were made as to the ease with which the user performed the task along with any problems they encountered or misunderstandings that they had.

The evaluation was completed with a final series of questions for the user. These questions were intended to gauge the user's overall experience with the interface prototype and to allow the user to reflect on what they perceived the strengths and weaknesses of the site interface to be. This information provides both more insights into how users felt about the interface prototype and data to cross reference against what was seen in the actual interactions with the interface to determine the consistency of the user's verbal feedback and what was observed. These final questions were:

1. What do you think of the site overall?
2. Is this a webpage you could see yourself using again?
3. What features of the site did you enjoy the most?
4. What changes would you suggest making?
5. Do you have any other comments you would like to make?

The participant was then thanked and any additional notes from the individual conducting the evaluation were added and the evaluation was completed.

3.4 Results and Insights

For full transcripts and notes from each of the usability studies composing the empirical evaluation can be seen in Appendices B through D.

For the first task, all of the test subjects were immediately able to identify the button to add a user as a friend when shown that user's profile page. This was expected since the button to do so is very prominent and its function is clear from its label. This task was used mainly as a warm up for the test subjects and the results do not provide any particularly informative insights.

The second task provided more interesting results. Two of the three test subjects were immediately able to navigate to the page to login while one user encountered difficulties identifying the correct button to take them to the Login page. Once at the login page, only one of the three subjects was able to login without any issues. The other two expressed confusion when presented with the two side-by-side forms for logging in or creating an account.

The fact that a single test subject had difficulty locating the Login page suggests that we may want to make navigation to the page more prominent. However, the current navigation follows a widely-adopted design style where a button with the label "Log In" is featured in the header bar on the far right side. This is a popular style implemented on many sites and so it may be prudent to perform more testing before deciding to make any changes to it. It could be that very few would have the same difficulties encountered by the one subject in our study.

That there were two subjects that were confused by the dual login and create account forms on the Login page implies a more serious problem with the interface prototype. This result seems to suggest that users should be presented with options one at a time as multiple options could overwhelm them and could make it difficult for them to decide which is relevant for what they are wishing to accomplish. With this in mind, it may be a good idea to present only the form to login on the Login page and offer a link either above or below for users who do not already have an account that directs to the create account page.

When presented with the third task of navigating to the comment thread for a particular post from the discussion feed page, each of the three test subjects were able to immediately recognize how to do so. One user commented that it was similar to the Reddit interface which is how they knew what to do. This supports the hypothesis that modelling our interface off of an existing popular interface makes it easier for users to quickly learn the methods for using the site.

Of the three subjects, two had no difficulties in filtering the posts by content pertaining to a specific book series. One actually commented on the filtering functionality before even being tasked with doing any filtering. The results of this task are interesting in that two of the users found it easy while one encountered serious difficulties even after fully understanding the task. This result may imply a dichotomy in the potential user base that separates individuals into one of two groups: those for whom the interface is extremely intuitive and simple to use and those who do not understand it at all. The difficulty comes in determining the common characteristics that define the individuals in each of these two groups--if this dichotomy actually exists in the first place. One thought is that the separation may come simply from having or not having web savvy and significant amount of time spent online. If this is the case, then the current interface may not be designed in such a way to be friendly to new users who are not particularly web savvy. Another more concerning idea is that the interface may be difficult to use for those who do not have previous experience with Reddit. The current interface prototype was designed with Reddit in mind and much of the functionality is partially based on parts of that site. The two subjects who had little to no problems with the filtering task and with the usability test as a whole both expressed familiarity with Reddit. Thus it may be the case that the interface prototype is not highly usable, but these two subjects found it so only because of their familiarity with the design of the site that much of the interface was based on. More testing specifically with users who are not familiar with Reddit would be a prudent measure to determine if this concern is valid.

Each of the users was able to immediately identify how to leave a comment and how to visit the profile page of a user who had participated in the comment thread. This implies that the functionalities associated with comment threads are presented in a way that makes them highly usable and provides a good user experience.

4. CONCLUSION

Both the analytical and empirical evaluations exposed aspects of the current interface prototype that have the potential to introduce confusion and thus hurt the overall user experience.

The cognitive walkthroughs performed for the analytical evaluation highlighted areas in the interface that need improvement such as the account creation experience and the visibility of some of the profile-related features. The walkthroughs also resulted in the idea of implementing an onboarding experience when a user creates a new account so that they could be introduced to and made aware of all the additional site functionalities that come with having a profile.

The walkthroughs also exposed components of the interface that are completely missing such as the ability to logout and the component of the interface that facilitates the creation of a new post.

The empirical evaluation uncovered two primary issues. The first of these is that having the option to both login and create an account presented side-by-side on the login page is confusing for users. This reinforces the same conclusion from the cognitive walkthrough and as a result changes will be made to this page. The second issue, a potentially more serious one, is that parts of the interface for Book Club may mimic Reddit's interface too much. We noticed that users who had previous familiarity with Reddit had far fewer problems in the usability studies for the empirical evaluation than users who did not have previous experience with Reddit. For this reason, it would be prudent to conduct more tests controlling for previous experience with Reddit to see if this is a legitimate concern.

Appendix A

Test script introduction from Steve Krug's "[Usability Test Script](#)"

Hi, <interviewee name>. My name is <interviewer name>, and I'm going to be walking you through this session today. Before we begin, I have some information for you, and I'm going to read it to make sure that I cover everything. You probably already have a good idea of why we asked you here, but let me go over it again briefly. We're asking people to try using a Website that we're working on so we can see whether it works as intended. The session should take about an hour. The first thing I want to make clear right away is that we're testing the site, not you. You can't do anything wrong here. In fact, this is probably the one place today where you don't have to worry about making mistakes. As you use the site, I'm going to ask you as much as possible to try to think out loud: to say what you're looking at, what you're trying to do, and what you're thinking. This will be a big help to us. Also, please don't worry that you're going to hurt our feelings. We're doing this to improve the site, so we need to hear your honest reactions.

If you have any questions as we go along, just ask them. I may not be able to answer them right away, since we're interested in how people do when they don't have someone sitting next to them to help. But if you still have any questions when we're done I'll try to answer them then. And if you need to take a break at any point, just let me know.

During this study I will be taking notes on your answers. The notes will not be made public but they may be shared between the members of the design team. Do you have any questions before we start?

Appendix B

Lando Shepherd Empirical Evaluation

Preliminary Questions:

Q1. What is your name?

Mersedeh

Q2. What is your occupation?

Customer Service

Q3. Do you use the internet daily? If so how many hours a day do you use it?

4 hours

Q4. Do you use the internet as part of your job?

Yes

Q5. Do you use book discussion websites such as Goodreads and Reddit's /r/books?

Yes, Goodreads

Q6. How much time do you spend on online book discussion forums?

30 minutes

Q7. Can you describe the split of time between how you use the various features of the online book discussion forums?

I mostly use the online book discussion forums to discover new books.

Q8. What is your favorite book related website?

Goodreads

Q9. At this time, users will be presented with the prototype of a logged out homepage and will be asked what they think the website is designed to do. Why would you want to come to this web page? What functions does it offer?

I want to use this website to see what it looks like elsewhere on the site. I know what it does, however, I would like to know what the next page looks like.

Tasks:

Notes should be taken during each task that document how the user accomplishes their goal, how quickly they are able to do it and anything they struggle to complete.

Task 1

Users will be presented with the prototype of another user's profile page and will be asked to add them as a friend.

The user immediately navigated to the "Add Friend" button.

Task 2

Users will be presented with the prototype of a logged out homepage once again and will be asked to sign in. This task will be evaluated based off how quickly they are able to find the login function.

The user was confused on the steps that it takes to sign in as there are two sign in labels. User suggests that there should be a Sign up as a one time tasks and a login which is a repeated task. User still confused.

Note: Design change noted and will be implemented.

Task 3

Users will be presented with the discussion feed page and will be asked to find the comment section for a specified article. Does the user know immediately what links to the comment section or do they try multiple areas before finding the right button?

The user immediately navigates to the leave comment button.

Task 4

From the discussion feed once more users will be asked to filter the feed by series.

User does not understand the task at hand.

Note: After explaining to the user the tasks again, it still took some time to fully grasp what to do. After the task was completed, the user suggested simplifying the left pane of the discussion thread page.

Task 5

From the discussion page users will be asked to leave a comment. Do they quickly find the comment button?

The first thing the user attempted to do was click a comment to access other options.

Task 6

From the discussion page users will be asked to navigate to the profile of a user who has left a comment.

The user will click on the username of the post.

Follow Up Questions:

Q1. What do you think about the site overall?

The site is a little dry.

Q2. Is this a webpage you could see yourself using again?

No

Q3. What features of the site did you enjoy the most?

I enjoyed how minimalistic the site was.

Q4. What changes would you suggest making?

Change the design, add some flash, make it more interactive.

Q5. Do you have any other comments you would like to make?

Is the creator a user of other similar websites?

Additional notes:

The user seemed to think that we were designing it for our personal tastes whether than for the wants and needs the user. Wants us to add more vibrant colors and effects.

Appendix C

Jeffrey Blake
Empirical Evaluation

Preliminary Questions:

Q1. What is your name?

Michelle Smith

Q2. What is your occupation?

Physical Therapist

Q3. Do you use the internet daily? If so how many hours a day do you use it?

Yes, 2-4 hours

Q4. Do you use the internet as part of your job?

No

Q5. Do you use book discussion websites such as Goodreads and Reddit's /r/books?

Yes

Q6. How much time do you spend on online book discussion forums?

Couple hours a week maybe.

Q7. Can you describe the split of time between how you use the various features of the online book discussion forums?

Pretty much just lurk on r/books maybe I find a book recommendation I enjoy, maybe its reading some funny comments, I don't really participate in the discussion.

Q8. What is your favorite book related website?

Reddit r/books

Q9. At this time, users will be presented with the prototype of a logged out homepage and will be asked what they think the website is designed to do. Why would you want to come to this web page? What functions does it offer?

It looks like some sort of Facebook for books? Or like any sort of social media site. It looks like I can only sign in and go to home, what would going to home without being signed in be? I like that it has a forgot username function I always have to use those. It also seems easier to sign in than reddit which I like.

Tasks:

Notes should be taken during each task that document how the user accomplishes their goal, how quickly they are able to do it and anything they struggle to complete.

Task 1

Users will be presented with the prototype of another user's profile page and will be asked to add them as a friend.

Immediately saw the big add friend button.

Task 2

Users will be presented with the prototype of a logged out homepage once again and will be asked to sign in. This task will be evaluated based off how quickly they are able to find the login function.

Immediately was able to find the button to log back in.

Task 3

Users will be presented with the discussion feed page and will be asked to find the comment section for a specified article. Does the user know immediately what links to the comment section or do they try multiple areas before finding the right button?

Immediately assumed you just click on a comment block, comment was made that it was just like reddit.

Task 4

From the discussion feed once more users will be asked to filter the feed by series.

Before this task was, the user made a comment, "Oh you can filter the feed" so again this task was done quickly without any questions for me.

Task 5

From the discussion page users will be asked to leave a comment. Do they quickly find the comment button?

When I showed the user the page they immediately said "Oh look the comment button" before I could ask.

Task 6

From the discussion page users will be asked to navigate to the profile of a user who has left a comment.

This again seemed easy for the user she just assumed it was just like reddit.

Follow Up Questions:

Q1. What do you think about the site overall?

It seems really user friendly.

Q2. Is this a webpage you could see yourself using again?

Maybe I am more of a lurker though, and do not participate in discussions a whole lot.

Q3. What features of the site did you enjoy the most?

The simple user interface it really puts me off when I can't figure out how to do something in an app or website.

Q4. What changes would you suggest making?

Maybe an incognito browsing or just make it easier to view everything without being logged in.

Q5. Do you have any other comments you would like to make?

It looks like a great app!

Additional Notes:

N/A

Appendix D

Michael Giovannoni
Empirical Evaluation

Preliminary Questions:

Q1. What is your name?

Ben

Q2. What is your occupation?

Deputy District Attorney

Q3. Do you use the internet daily? If so how many hours a day do you use it?

14+

Q4. Do you use the internet as part of your job?

yes

Q5. Do you use book discussion websites such as Goodreads and Reddit's /r/books?

no

Q6. How much time do you spend on online book discussion forums?

none

Q7. Can you describe the split of time between how you use the various features of the online book discussion forums?

N/A

Q8. What is your favorite book related website?

Amazon

Q9. At this time, users will be presented with the prototype of a logged out homepage and will be asked what they think the website is designed to do. Why would you want to come to this web page? What functions does it offer?

The user assumed at first glance that it was a website for buying books.

Tasks:

Notes should be taken during each task that document how the user accomplishes their goal, how quickly they are able to do it and anything they struggle to complete.

Task 1

Users will be presented with the prototype of another user's profile page and will be asked to add them as a friend.

The user found the friend button immediately.

Task 2

Users will be presented with the prototype of a logged out homepage once again and will be asked to sign in. This task will be evaluated based off how quickly they are able to find the login function.

The user was able to locate the sign in option immediately but they were confused because there were two places to sign in.

Task 3

Users will be presented with the discussion feed page and will be asked to find the comment section for a specified article. Does the user know immediately what links to the comment section or do they try multiple areas before finding the right button?

The user was able to click the correct area immediately.

Task 4

From the discussion feed once more users will be asked to filter the feed by series.

The user found the filter sidebar immediately and was able to locate the series filter.

Task 5

From the discussion page users will be asked to leave a comment. Do they quickly find the comment button?

The user immediately found the comment button.

Task 6

From the discussion page users will be asked to navigate to the profile of a user who has left a comment.

The user attempted to click the username, correctly navigating to the user profile.

Follow Up Questions:

Q1. What do you think about the site overall?

Looks a lot like reddit.

Q2. Is this a webpage you could see yourself using again?

No.

Q3. What features of the site did you enjoy the most?

None.

Q4. What changes would you suggest making?

The sidebar is stupid. Make it collapse unless someone is directly using it.

Upvote/downvote systems are bad.

Entire left sidebar is a waste of space. Would look better if it was expandable.

Why are the comments so separated from each other?

Why do people need avatars on a book website.

Q5. Do you have any other comments you would like to make?

The site is derivative. It looks like reddit.

Additional notes:

N/A

Appendix E

Austin Row
Cognitive Walkthrough

User Characteristics:

Users of Book Club will likely have the following characteristics:

- They will be individuals who share reading as a common hobby.
- They will have basic fluency in web browsing.
- They may have experience with other similar sites such as GoodReads or Reddit. However, it is also possible that they will have no previous experience with these sites.
- Some will be looking for new reading material via recommendations from other users.
- Some will be looking to participate in discussions of books that they have read.
- Some will be looking to join a community of like-minded individuals who enjoy reading as they do.

Book Club caters to a large variety of individuals, so there are few things that can be said to be true for all, or even almost all, of the users.

Task List:

1. Create an account.
2. Log in to an existing account.
3. Change who can view own profile.
4. Change personal information on account such as bio or profile picture.
5. Change the default filters that are used when one first signs into their account.
6. Log out of account.
7. Navigate to the comment thread for a post.
8. Return to the post feed from a comment thread.
9. Leave a comment on a post.
10. Reply to the comment of another user in a comment thread.
11. Add another user as a friend.
12. Filter posts by Genre.
13. Filter posts by Author.
14. Filter posts by Series.
15. Filter posts by Book.
16. Show only posts that do not contain spoilers.
17. Create a new post.
18. Upvote/Downvote a post.

Walkthrough:

Task: Create an account.

Will the user know what to do?

The concept of a user account is widespread and a basic component of modern web browsing. A user with even beginner-level web browsing experience should have no issues understanding what creating a new account means.

Will the user see how to do it?

The button to log in is prominently displayed on the right side of the header bar. This is a standard placement for this button which is followed by many popular websites so the user should not have difficulty locating it. One issue that may arise is that the user may not understand that the ability to create an account is accessible from the page where one can sign in to an existing account. However, this too is a standard practice shared by many sites so issues are not anticipated.

Once the user has navigated to the login page, they are presented with two side-by-side forms, one for logging in and the other for creating an account. This may be a case where the user is given too many options that are too similar which can be confusing. It may be better to change this so that they are presented with only the option to login to an existing account and there is a nearby button with a label similar to "Don't have an account yet? Create one." so that the mechanisms for creating an account and logging in to an existing one are more distinctly separate.

Will the user understand from feedback whether their action was correct?

Upon creating an account, the user will be redirected back to the post feed page and the button to login will be replaced in the header bar with a link to the user's account with a label that is their username. The username should be fairly conspicuous, however there is no explicit feedback that their account has been created. It may be a good idea to have an intermediary step after they create their account but before they are redirected to the post feed page where they are explicitly told that the account has been created. This could also be an opportunity to tell the user what specific things they can do with an account such as set default filters, add friends, and make posts.

Task: Log into an existing account.

Will the user know what to do?

Logging in to an existing account is something that should be familiar to any user as it is a common task among any website that features the ability to have accounts.

Will the user see how to do it?

The button to log in is prominently displayed on the right side of the header bar. This is a standard placement for this button which is followed by many popular websites so the user should not have difficulty locating it. Once the user has navigated to the login page, they are presented with two side-by-side forms, one for logging in and the other for creating an account. This may be a case where the user is given too many options that are too similar which can be confusing. It may be better to change this so that they are presented with only the option to login to an existing account and there is a nearby button with a label similar to "Don't have an account yet? Create one." so that the mechanisms for creating an account and logging in to an existing one are more distinctly separate.

Will the user understand from feedback whether their action was correct?

Upon creating an account, the user will be redirected back to the post feed page and the button to login will be replaced in the header bar with a link to the user's account with a label that is their username. The replacement of the login button with the user's username should be enough to communicate that the user is signed in.

Task: Change who can view own profile.

Will the user know what to do?

There are some popular sites such as Facebook that feature the ability to change profile visibility and restrict who can view a profile, however, this feature may still be considered somewhat obscure as many sites do not offer this functionality. That said, the task itself is self explanatory and does not require any specialized knowledge to grasp its meaning. Therefore users should be able to understand what the goal of the task is.

Will the user see how to do it?

There is no part of the interface that indicates how to navigate to the area where one can complete this task. However, the nature of the task indicates that it is functionality specific to one's account, therefore most users should be able to at least guess that they should start by navigating to their profile page. Once there, the mechanism for changing who can view the profile is clearly visible. Despite this, it may be a good idea to explicitly say that this is a functionality that is available on the profile page when a user first creates their account.

Will the user understand from feedback whether their action was correct?

When the user selects one of the three visibility settings, that option is colored to indicate that it is the active option and the previously selected option returns to a color scheme to indicate that it is not active. With this, the two not-selected options will share the same color scheme while the selected option is now uniquely identified. This will clearly indicate to the user that the profile visibility has been changed to the selected option.

Task: Change personal information on account such as bio or profile picture.

Will the user know what to do?

The task is self explanatory with no specialized knowledge needed to interpret it. Therefore the meaning of the task should be obvious to the user.

Will the user see how to do it?

There is no part of the interface that indicates how to navigate to the area where one can complete this task. However, the nature of the task indicates that it is functionality specific to one's account, therefore most users should be able to at least guess that they should start by navigating to their profile page. Once there, the mechanisms for completing the task are clearly visible. Despite this, it may be a good idea to explicitly say that these functionalities are accessible from the user's profile page when the user first creates their account.

Will the user understand from feedback whether their action was correct?

If a user changes their profile picture, the new profile picture will replace the old one on their profile page which will make it clear that the picture was successfully changed. However, there is currently nothing to indicate that the user's bio has been updated when they click "Save Bio". It may be a good idea to fire a popup that indicates that the bio has been saved when they click "Save Bio".

Task: Change the default filters that are used when one first signs into their account.

Will the user know what to do?

The concept of content filters is not unique to Book Club, but the ability to create default filters that are applied when a user logs in is not a widespread concept. Therefore the meaning of this task may be difficult to comprehend for inexperienced users who do not have significant experience using other sites with similar functionality such as Reddit.

Will the user see how to do it?

It is unlikely that the user will immediately understand where to access this functionality without being explicitly told at some point while using the site.

Will the user understand from feedback whether their action was correct?

When the user adds a new filter to their defaults, it is listed with their other default filters on their profile page near where they just added it. Therefore it should be clear to the user when they successfully add a new default filter.

Task: Log out of account.

Will the user know what to do?

The meaning of this task should be obvious to any user who has experience using the web.

Will the user see how to do it?

After searching through the interface, I realized that there is no mechanism for logging out of an account. This will need to be changed.

Will the user understand from feedback whether their action was correct?

Currently there is no way to log out so this does not apply.

Task: Navigate to the comment thread for a post.

Will the user know what to do?

Comment threads are a familiar concept to anyone with web browsing experience and thus the task should be easy to understand for a user.

Will the user see how to do it?

There is nothing in the interface to explicitly signal to the user how to navigate to a post's comment thread. However, each post is presented as something that can clearly be clicked on. Since this is the only reasonable option presented to the user for completing this task, they will likely click on the post which will present the comment thread.

Will the user understand from feedback whether their action was correct?

The comment thread, as a well known concept, will be easily recognizable to any user and thus a user will know when they have successfully navigated to it.

Task: Return to the post feed from a comment thread.

Will the user know what to do?

The use of the term "post feed" may introduce some confusion to users who do not associate the page containing all of the posts with that phrase. However the word "Return" should signal to the user that they simply need to go back to where they were before.

Will the user see how to do it?

There is no back button in a comment thread, however there is a "Home" button in the header bar which takes the user to the correct place. The issue with this is that the user may not associate "Home" with the post feed page. Also clicking this will take them back to the beginning of the post feed rather than back to where they were previously in the feed. There should be a clear way for the user to return back to their previous location in the post feed.

Will the user understand from feedback whether their action was correct?

When the user is once again presented with the page containing all of the posts, they will understand that they successfully navigated back to where they were before.

Task: Leave a comment on a post.

Will the user know what to do?

The concept of commenting is well known to any semi-experienced web user so the user should understand this task.

Will the user see how to do it?

The user should be able to correctly interpret that they should navigate to a post to comment on it. Once they have done so, the comment section will be clearly visible with a prominent button to leave a comment. Thus they should not have any issues in leaving a comment.

Will the user understand from feedback whether their action was correct?

When the user leaves a comment, it will be clearly visible at the top of the comment section and thus the user should be able to recognize that they successfully commented on the post.

Task: Reply to the comment of another user in a comment thread.

Will the user know what to do?

The task is self explanatory and should be obvious to the user.

Will the user see how to do it?

The user should be able to correctly interpret that they should navigate to a post to see its comments. Once there, the comment section will be clearly visible with each comment have an associated “Reply” button which the user can use to reply to the comment. This should make the mechanism for accomplishing the task obvious to the user.

Will the user understand from feedback whether their action was correct?

The reply that the user posts will be clearly visible at the top of the comment thread belonging to the comment that they replied to. This should make it immediately obvious to the user that they successfully completed the task.

Task: Add another user as a friend.

Will the user know what to do?

The concept of friends has become widespread via Facebook and is known even to many to do not use the site. That said, it is possible that a few users would not understand the task, though they would likely be a very small minority.

Will the user see how to do it?

The mechanism for adding a friend is not immediately clear and requires several steps to reach. For this reason, it may be a good idea to explicitly explain how to access this functionality when the user creates and account.

Will the user understand from feedback whether their action was correct?

There is currently no feedback mechanism to indicate that the user has successfully added another user as a friend. It may be a good idea to change some aspect of another user’s profile page if they are a friend or to create a friends list on a user’s profile page that contains all of the people with whom they are friends.

Task: Filter posts by Genre.

Will the user know what to do?

The concept of filtering should be easily recognizable to any user and genre is a well known feature of books amongst readers. Therefore the task should be clear.

Will the user see how to do it?

The filter functionality is prominently displayed in the left sidebar. Therefore the mechanism for filtering by genre should at least be clear if not the options for which genres can be used as filters. It may be a good idea to present the options for which genres can be used for filters. However, it may be okay to omit this as filtering by a non-option would simply result in an empty post feed which will indicate to the user that no posts relevant to the applied filter could be found.

Will the user understand from feedback whether their action was correct?

Upon applying the filter, the post feed will immediately be filled with posts that contain content relevant to the filter. This is indicate to the user that the filter was applied successfully. It may be necessary to have a special state or message for the post feed when no relevant posts can be found to indicate that nothing could be found.

Task: Filter posts by Author.

Will the user know what to do?

The concept of filtering should be easily recognizable to any user thus it should be clear what is meant by filtering by author.

Will the user see how to do it?

The filter functionality is prominently displayed in the left sidebar. Therefore the mechanism for filtering by author should at least be clear if not the options for which authors can be used as filters. It may be a good idea to present the options for which authors can be used for filters. However, it may be okay to omit this as filtering by a non-option would simply result in an empty post feed which will indicate to the user that no posts relevant to the applied filter could be found.

Will the user understand from feedback whether their action was correct?

Upon applying the filter, the post feed will immediately be filled with posts that contain content relevant to the filter. This is indicate to the user that the filter was applied successfully. It may be necessary to have a special state or message for the post feed when no relevant posts can be found to indicate that nothing could be found.

Task: Filter posts by Series.

Will the user know what to do?

The concept of filtering should be easily recognizable to any user and the concept of a book series is well known amongst readers. Therefore the task should be clear.

Will the user see how to do it?

The filter functionality is prominently displayed in the left sidebar. Therefore the mechanism for filtering by series should at least be clear if not the options for which series can be used as filters. It may be a good idea to present the options for which series can be used for filters. However, it may be okay to omit this as filtering by a non-option would simply result in an empty post feed which will indicate to the user that no posts relevant to the applied filter could be found.

Will the user understand from feedback whether their action was correct?

Upon applying the filter, the post feed will immediately be filled with posts that contain content relevant to the filter. This is indicate to the user that the filter was applied successfully. It may be necessary to have a special state or message for the post feed when no relevant posts can be found to indicate that nothing could be found.

Task: Filter posts by Book.

Will the user know what to do?

The concept of filtering should be easily recognizable to any user thus it should be clear what is meant by filtering by book.

Will the user see how to do it?

The filter functionality is prominently displayed in the left sidebar. Therefore the mechanism for filtering by book should at least be clear if not the options for which books can be used as filters. It may be a good idea to present the options for which books can be used for filters. However, it may be okay to omit this as filtering by a non-option would simply result in an empty post feed which will indicate to the user that no posts relevant to the applied filter could be found.

Will the user understand from feedback whether their action was correct?

Upon applying the filter, the post feed will immediately be filled with posts that contain content relevant to the filter. This is indicate to the user that the filter was applied successfully. It may be necessary to have a special state or message for the post feed when no relevant posts can be found to indicate that nothing could be found.

Task: Show only posts that do not contain spoilers.

Will the user know what to do?

This task does not require any specialized knowledge to understand and thus the intent should be recognizable to any user.

Will the user see how to do it?

The left sidebar prominently displays the mechanism for hiding and showing posts that contain spoilers and the mechanism itself is a simple "Yes/No" option. Therefore it should be clear to the user as to how to perform this task.

Will the user understand from feedback whether their action was correct?

If there are posts with spoilers in the user's current view of the discussion feed, they will be removed which will change the user's view. The highlighted active option for hiding spoilers will also be changed to whatever the user clicked in the left sidebar. Therefore it should be clear to the user that they disallowed the showing of posts containing spoilers.

Task: Create a new post.

Will the user know what to do?

The concept of making a post should be familiar to anyone with experience browsing the web and thus the task should be clear.

Will the user see how to do it?

The button for creating a new post is prominently featured in the left sidebar with the label "Create Post". Therefore the mechanism for completing this task should be obvious.

Will the user understand from feedback whether their action was correct?

There is currently no explicit feedback given to the user when they create a new post. Their post may appear is their post feed, but it is possible that it will not be visible there depending on what filters the user has applied. Therefore it may be a good idea to provide some sort of explicit feedback that the user has created a new post.

Task: Upvote/Downvote a post.

Will the user know what to do?

Voting is a familiar concept to most users. However, the concept of upvoting and downvoting is taken from Reddit and thus may cause confusion for those who are not familiar with that site.

Will the user see how to do it?

The arrows displayed alongside the title of each post clearly indicate the concept of up and down, but it may not be clear to the user what these are for.

Will the user understand from feedback whether their action was correct?

Upon selecting an option, the number of upvotes for a post will be incremented or decremented by one depending on what the user chose. However, users may not notice this slight change and thus may not realize that what they did had any effect.

Appendix F

Lando Shepherd
Cognitive Walkthrough

- Our target for this application are readers who use the web for socializing and gathering information. Our platform's main goal is to help readers discuss and discover new literature.
- On the Sign In page, the user will most likely get confused by the two "Sign In" labels above the text fields. This issue will be address.
- At first glance the sign in page also looks like it would take too much work to get started. We have to think about the quick pace of the world and how touch and go our culture has become. I believe that we should remove the Sign-Up area and create a page used strictly for signing in. So, when the user first sees the Sign-Up page, it's presented as a simple action to gain access. I feel like all they would have to do is fill in two textboxes. Once denied after realizing that they need an account, curiosity will cause them to select the Sign-Up button which will take them to the Sign-Up page. This page should also have a minimalistic ease of use feel.
- Once logged in, the user will want a home base page. A page that has all of the links to any other place on the website. For example, once the user logs in, the main page may be the latest posts from other users. This page could be the Discussion Feed. On the Discussion Feed page, the user would probably want to see small card to the left that shows their name, picture and possibly the current book that they are reading. Fitt's Law is used to predict the time it takes to reach a target using a pointing device. Although we may not be able to keep this number low for all links within a page, the path to the user's profile and should be more visible and seem more accessible. Think about how the LinkedIn system works.
- When interviewing my interviewee, I noticed how all of the choices that they were allowed to make slowed them down a few seconds. For example, on Realtor.com, there are a few filter choices automatically available and those are the important ones. The price of the house. The number of bedrooms and the number of baths. If the user wanted more filters, they are allowed to select the More Filters link to further customize what they are looking for. Now, compare that to Indeed.com. Just about all of the filters are on the left side and it would make the user feel like there is so much text on the screen that they would not want to take the time to read it all. I think maybe there should be a filter button that once selected, the user can make all of these selections and return back to the discussion feed only viewing the discussions. They may also be able to save their filter settings for easy access when they log back in.
- After the user selects their username, they view their personal profile page. Again, the list of filters that the user has may not need to be listed at the bottom. If this list grows, there would be a long list of filters at the bottom the user profile.
- Having user privacy settings right on the profile page seems to go against the grain of what other social applications are doing. However, this particular setting is welcome as privacy is a big deal these days. It is nice to know that the user can press a simple button that will determine who can see their profile. The buttons are larger than most buttons on the page and there are only 3 choices. It looks very simple and the user can make their decision and within seconds go to something else.
- The user realizes that they do not know how many friends that they have or where they can find them, so they navigate back to the discussion feed, find a user whose post about Harry Potter was intriguing and decided to add them as a friend. They select the username and clicks the Add Friend button.

Completing small tasks by clicking a few buttons makes the user want to know what else can they get done with just a few clicks.

- The user then navigates to the Harry Potter post and finds the method to leave their own post right at the top of the page. The user leaves a comment as it was readily accessible. The user did not have to go through any other loops to complete this task.
- After the user has browsed around a bit, they realize that they have spent enough time on the web and decide to log out. The user then realizes that there is no place to log out. We may need to add a log out feature.

Post Feed/Discussion Feed

Home

Username_7

Book Club

Filter Posts By

Genre

Fantasy

Murder Mystery

Add Filter

Author

Add Filter

Series

Add Filter

Book

Add Filter

Content Type

Add Filter

Hide Spoilers

☐

Create Post

+

username_123

207

...

username_342

136

...

username_489

52

...

username_98

4

...

Login/Create Account Page

Home

Sign In

Book Club

Sign In

☐ Remember Me

Having trouble logging in? Bummer.
No worries though! Let us help by clicking
the link below!

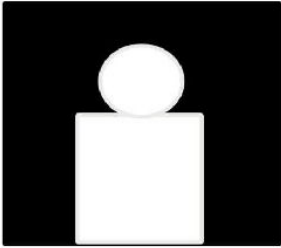
[Forgot Username/Password](#)

or

Sign In

Book Club

Home



Your bio is empty! Type here to tell people a little about yourself!

Save Bio

Change Profile Picture

Who can view my profile?

Everyone

Friends Only

Only Me

Default Feed Filters

Genre

Author

Series

Book

Content Type

Fantasy

Add Filter

Add Filter

Add Filter

Add Filter

Add Filter

Book Club

Home

Username_7

user_111

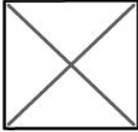


I like long walks on the beach, goat cheese, and books by Brandon Sanderson.

Add Friend


Book Club

Home user_111




Lorem ipsum dolor sit amet,
consectetur adipiscing elit!


Leave a comment

 John Doe

Ed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis.

 Sally28

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 Tiger21

Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla pariatur?