Protocol:

A closed card-sort was created with five categories and 20 cards on OptimalSort, an online card-sorting tool, to describe the elements of the app content. Two participants were then given a link to the survey and asked to sort the 20 cards into given categories without a set time limit. All cards were shown to participants in random order. The categories and cards were labeled as follows:

Categories

- *1. My Account page*

- *2. Textbook Search Results Page*

- *3. Search Stores (for a Textbook)*

- *4. My Purchase Checklist*

- *5. Textbook Comparison from Booksellers Page*

Cards

- *1. Account Settings*

- *2. My Search History*

- *3. Offline Stores*

- *4. Online Stores*

- *5. Show Me Both Online and Offline*

- *6. Search Bar for Textbook (by ISBN or Title/Author)*

- *7. Create New Checklist*

- *8. Add to Checklist*

- *9. Edit Item*

- *10. Delete item*

- *11. Delete Checklist*

- *12. Filters (according to price, bookseller reviews, etc.)*

- *13. Shipping Information (delivery time + price)*

- *14. Retail Price (offered by specific bookseller)*

- *15. Reviews of Bookseller*

- *16. Available Purchase Options (Buy, Rent, or E-Book)*

- *17. Title/Author/Publisher/Edition Information*

- *18. Other Details about Book (language, length, hardcover/paperback, etc.)*

- *19. Image of the Book Cover*

- *20. Book Synopsis*

Results:

        Participants had categorized the cards as I had expected them to for the most part, but there were a couple of outstanding points that were key to creating the sitemap. For example, one overarching misunderstanding participants had was that users would be able to purchase textbooks directly off of this app, instead of understanding the app as a tool that would help the users buy textbooks in a more time and cost-effective way. This was evident when both participants categorized the details about the shipping service offered by the bookseller under the "My Account" page. Another equally unexpected result was both participants categorized the cards "Edit Item" and "Delete Item" under the "My Account" page, when they were actually intended to be part of "My Purchase Checklist". The underlying problem with this result is the same issue as the one above; participants seemed to be confused about the application itself. In retrospect, the wording of the card might have been ambiguous to the user because it is about editing and deleting an item and therefore could have been more clear by, for example, clarifying that the user would be editing/deleting an item in the checklist. Other than this main misconception however, the way they categorized everything else in the data seemed reasonable and provided useful feedback in creating the sitemap.

Application for Sitemap and Navigation:

        In addition to the misunderstanding mentioned above, the results contributed to creating the sitemap. For instance, one participant thought that the image of the textbook cover should be on the search results page, while the other thought the image should be on the page when the user compares the book across different booksellers. Such a result indicated that it would be helpful if users could view the image on both pages; hence, in the sitemap and corresponding lo-fi prototype, I have taken that point into account. Another important result is that participants thought they should be able to manage their purchase checklists under the "My Account" page (although I had initially planned to make this feature accessible from the "My Purchase Checklist" page). To reflect this particular categorization, I included the option to manage checklists from the account page in addition to being able to add/edit/delete their checklists from the "My Purchase Checklist" page.