

Bookmate Final Report

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I. Background

Bookmate was inspired by the frustration of students who spend hundreds of dollars on textbooks each year and are left with no method of selling them that offers both convenience and value. To address this problem, Bookmate provides an easy way for students to buy, sell and exchange textbooks with others on campus.

II. Research

Throughout our design process, we integrated multiple stages of research to continually refine and inform our designs. We began by deepening our understanding of the problem space through user interviews and competitive analysis. As we developed initial paper prototypes and interactive wireframes, we conducted usability studies to ensure that our interface incorporated the functionality and ease-of-use that students need. Once the functionality needed to support the core functionality of our solution had been implemented, we conducted evaluative testing to assess the effectiveness of our solution and inform next iterations. Each phase of our process and the findings from each are described further in the following sections.

A. User Interviews

Our design process began with an effort to better understand how students currently buy and sell textbooks. We wanted to find out what the current options are, and what students consider when they decide where to buy their textbooks. To answer these questions, we conducted 10 interviews with undergraduate students ranging in major and graduation year. The following is a consolidated list of the key insights we gathered during this initial research effort:

1. **Convenience:** A streamlined process for posting, finding, and completing transactions is important to students.
2. **Value:** Value is the most important characteristic of a textbook for both buyers and sellers. Buyers will choose the option that offers the lowest price for acceptable quality. Sellers are motivated to recover as much of the original price of their textbook as possible.
3. **Commitment:** Agreeing on the terms of a transaction is the first step to reaching a commitment. Reaching commitment is currently the largest roadblock for students attempting to buy and sell textbooks within their community.

During our interviews, we also asked students to rank the textbook characteristics as they influence their buying decision. The results are shown below:

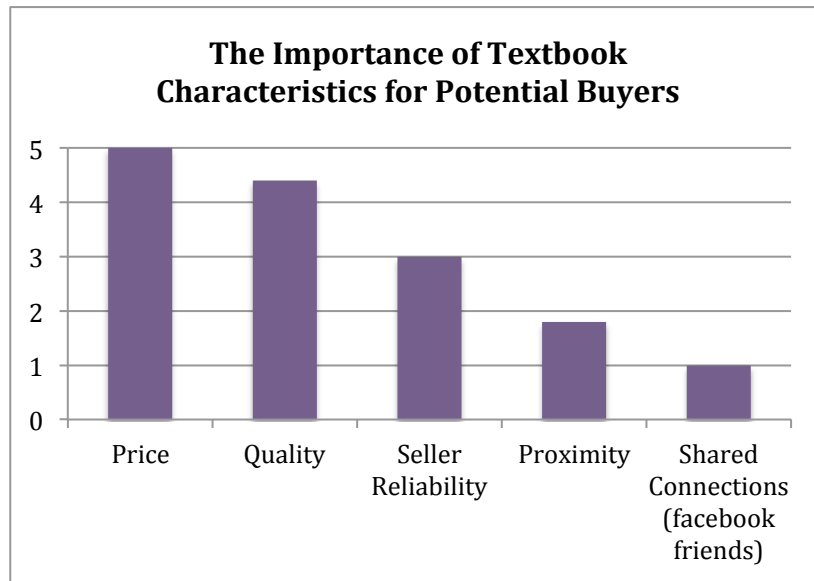


Figure 1. The price and quality are significantly more important to buyers than other characteristics and should be clearly indicated.

B. Competitive Review

Initial research indicated that convenience and value are critical facets to designing a successful solution. By comparing the most used options for buying and selling textbooks, we noticed a clear pattern in the benefits and tradeoffs of different textbook resources. As shown in the graph below, options that optimize convenience such as the University Bookstore require a tradeoff in price. Buying a textbook from a store is convenient because the steps, time and effort required are minimal. However, the bookstore is expensive and buy-backs only yield a small fraction of the original cost. Conversely, the Facebook group offers an opportunity to achieve much greater value for both buyers and sellers, but completing transactions successfully takes significant amount of time, effort and commitment.

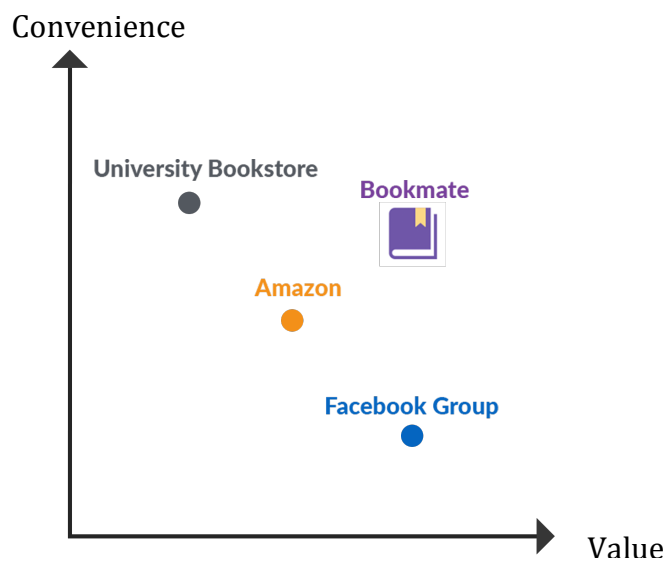


Figure 2. Bookmate aims to offer both buyers and sellers value similar to the Facebook group while providing a significantly more convenient platform.

III. Opportunity

Based on our understanding of user needs and current options for students, we developed a clear opportunity statement: Design a solution that offers a superior combination of **convenience** and **value** for students who are both buying and selling textbooks. With this opportunity in mind, our goals for the core functionality of Bookmate are as follows:

1. **Buy:** Students should be able to quickly and easily find the books they need, conduct straightforward communication with sellers, and pick up textbooks flexibly based on their own schedule. Above all, Bookmate should offer students significantly better value than existing tools and resources.
2. **Sell:** Posting a textbook for sale and handing it to a buyer should be straightforward. Sellers should be able to recover significantly more value from the textbooks they have than other platforms.

IV. Prototyping

We began designing our solution by creating a paper prototype and interactive wireframe. These two approaches allowed us to continue testing and inform our design throughout implementation.

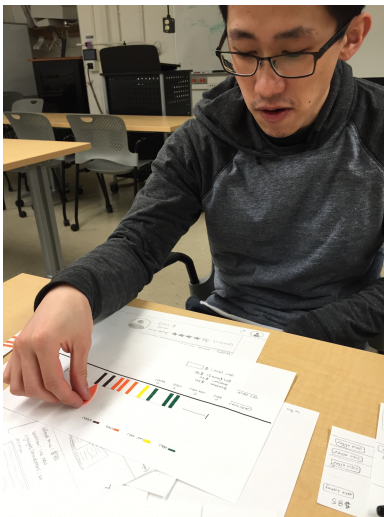


Figure 3. One of the students testing the paper prototype

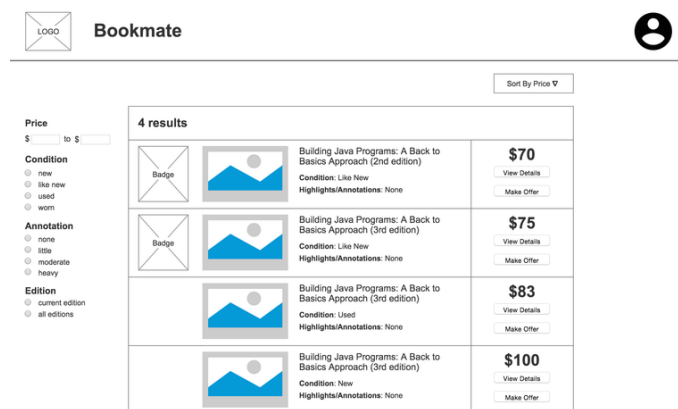


Figure 4. The initial design of Bookmate

Our prototyping and usability testing efforts gave us helpful insights about the usability of our initial design. We found that users were comfortable with the concept of searching for a book and navigating listed results. We also found that users do not want to consider the specific details about when and where they would like to meet before a deal has been negotiated. Identifying a time and place to meet to complete a

transaction should take place only after both buyer and seller have committed to a deal.

Additionally, users were confused about the distinction between “desired” and “listed” categories within the dashboard, which inspired us to separate the buyer and seller dashboards completely. High fidelity mockups were created to explore visual design aesthetic and direct implementation efforts.

V. Implementation

Core Scenarios

In order to reach our goal of implementing a functional prototype capable of testing the core concept of Bookmate, we developed four scenarios. Focusing on these core scenarios enabled us to focus the implementation towards specific functionalities:

1. Post a textbook for sale
2. Search for a textbook and make an offer
3. Accept and respond to an offer
4. Communication between buyer and seller

A. Search Results

The search results interface is designed to help students find the book they are looking for as quickly as possible:

1. The results are ordered by price by default because students want to view the cheapest books first.
2. Filters allow users to narrow down the search results to specific characteristics such as price range and condition.
3. Badges help students to quickly identify textbooks with relevant attributes. For example, an “exchange badge” indicates that the seller is looking for a book that the user has listed, which creates the opportunity to exchange books rather than cash.

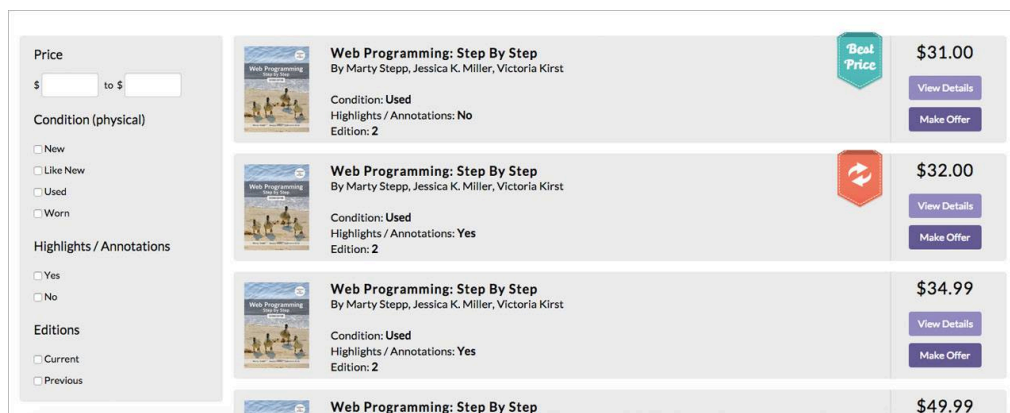


Figure 5. Search Result Page

B. Make an offer

The make an offer popup allows buyers to easily input the information they want to communicate to sellers up front.

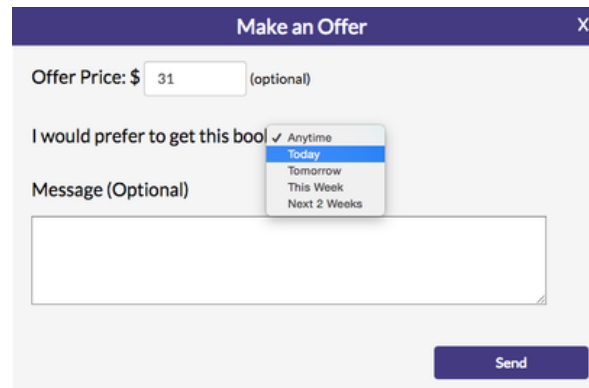
A screenshot of a 'Make an Offer' popup window. The window has a purple header with the title 'Make an Offer' and a close button 'X'. Below the header, there is a text input field for 'Offer Price: \$' with the value '31' and the text '(optional)'. Below this is a dropdown menu for 'I would prefer to get this book' with options: 'Anytime' (selected), 'Today', 'Tomorrow', 'This Week', and 'Next 2 Weeks'. Below the dropdown is a text input field for 'Message (Optional)'. At the bottom right is a purple 'Send' button.

Figure 6. Make Offer Popup Window

C. Dashboards

The buyer and seller dashboards are separated to distinguish buyer and seller functionalities. The sections within each dashboard show the status of each book within the transaction process. Usability testing helped determine what language resonated most with users.

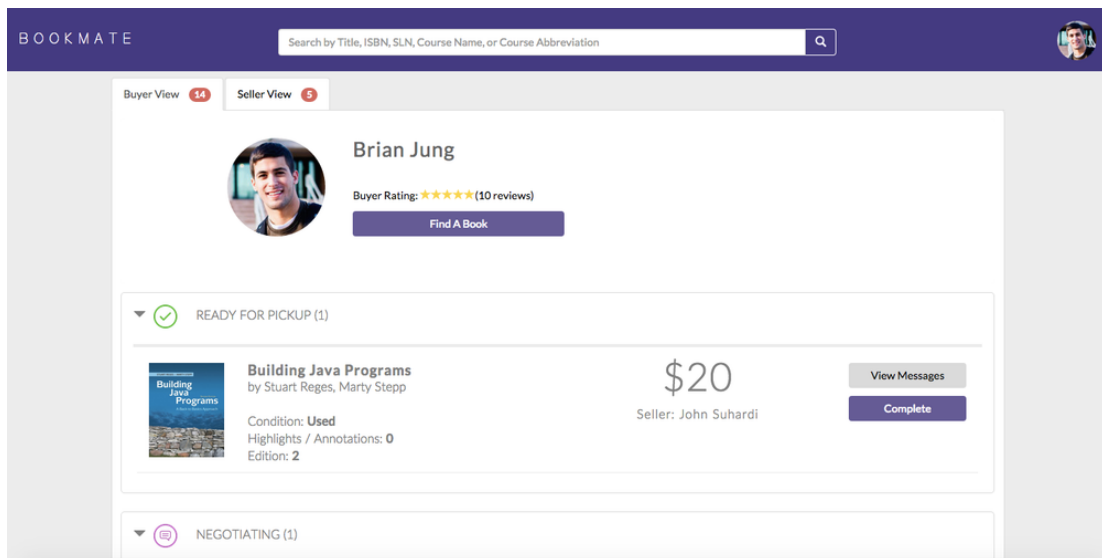


Figure 7. Buyer and Seller Dashboard

D. Chat

A chat interface enables students to quickly coordinate logistical information once a commitment has been made.

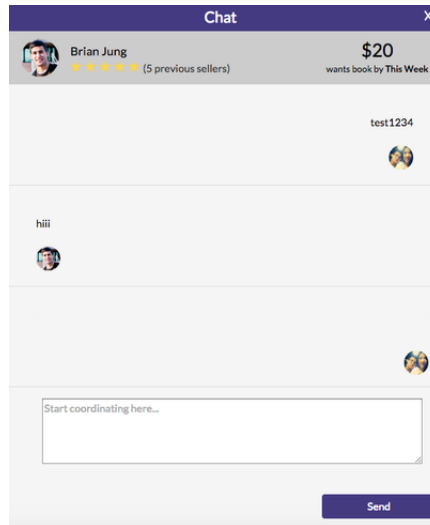


Figure 8. Chat interface between buyer and seller

VI. Evaluative Testing

By getting the implemented prototype in front of users, we were able to assess the functionality and design of our core scenarios. We received helpful feedback through the testing process, both confirming initial insights and providing opportunities for improvement and further iteration.

“It is streamlined, I like it”
-Jack ‘15

A. Confirmation

Overall, users were able to navigate easily and responded positively to the design. Students especially liked the ability to communicate the urgency to sellers. This functionality would help them ensure that they could get the book on time. Users' behavior also confirmed our initial insights, such as searching by lowest price and using filters to narrow results by condition.

B. Opportunities

1. Method of Payment
We learned that buyers would want to know what forms of payment the seller would accept. For students, this information would impact the convenience of a transaction.
2. Seller Information Accessibility
Seller rating is a vital facet in influencing their decision, hence, information should be clearly available in the search results rather than contained within the “View Details” box.
3. Exchange Functionality

We feel that integrating robust exchange functionality into this platform is the most significant opportunity for further iteration. The ability to exchange textbooks represents the pinnacle of efficiency, convenience and value. Furthermore, facilitating the exchange of textbooks is functionality not offered by any existing tools and would significantly increase the value of Bookmate for students.

VII. Conclusion

Our design process emphasized iterative design through continuous testing. By limiting our implementation goals to the core functionalities of our solution, we were able to commit considerable effort to getting the design right. We believe that this approach was effective in allowing us to continually improve our design while simultaneously implementing the core functionality. More importantly, our solution is now grounded in multiple rounds of feedbacks and iterations, which will make the process of implementing the remaining pages and functionalities very straightforward. If we choose to continue implementing Bookmate, our next goal would be to make changes according to our evaluative testing, design and implement the remaining functionalities, and release a version to be tested with a small group of students.