

# **Book Readers and Enthusiasts**

Final Report

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Chris Poynton - Jenny Falzone - Anthony Gladney - Harry Cao

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## **I. Executive Summary**

While the activity of reading books is beneficial, about 24% of adult Americans have not read a book in the last year (Perrin, 2018). Simultaneously, we have found that as active readers we have struggled to find helpful book recommendations. We have also been discouraged and frustrated when we invested time and money in a book that did not live up to our expectations. The goal of this project is two-fold: (1) to understand active and new reader's needs for selecting books for their individual interests; and (2) encourage more people to become active readers.

To begin our project, we conducted observations of people who frequently read. We used a modified contextual inquiry framework. We first asked participants about their research process and what areas of research were most important to them. We then asked participants to demonstrate how they would conduct research to select the next book that they would want to read and observed their processes.

All participants researched books through a combination of iterative steps that included: (a) high-level search, (b) specific criteria to narrow the search, and (c) use of reviews and recommendations.

(a) We defined high-level search as an initial, general search of websites and blogs without a specific title in mind. Participants would sometimes see something in these lists that would trigger a memory of a previously desired or saved book to read.

(b) Specific criteria were a more narrowed search that participants used to gather more information on a book once they had a clear idea in mind. Information participants gathered about books included author, genre, and synopsis. This category of research also included exploring samples of the work itself, in both a physical and audio form.

(c) Use of reviews and recommendations was another form of narrowed search in which participants focused on gathering opinions from previous readers. This included product reviews and personal recommendations from friends and acquaintances.

The commonality of these three iterative steps was supported by our interviews, but with two notable caveats. First, while the high-level search was mentioned, it was not frequently discussed. Half of the participants mentioned this step, but downplayed its importance, while the other participants did not mention this at all. Second, reviews, recommendations, and other criteria were mentioned frequently in every interview. Two of the four participants commented that reviews from trusted sources required little to no additional research before deciding on a book.

Our survey findings also supported the main themes from our observations and interviews. Respondents reported frequently looking to internet/blogs and friends/family for a new book to read. We also found more detailed information on important criteria, notably that readers prefer paperback books, and rated genre and author as being important aspects of a book to consider when deciding. Personal recommendations were also ranked at a higher importance level than third-party reviews and star rating systems.

Our survey also helped us learn more about readers' motivations to read. When asked an open-ended questions about motive for reading, common answers included topic/content of a book, learning something new or seeing a new perspective, time, and relaxation. When asked to rate the importance of six motivations (escapism, learning, work, school, boredom, passing time). Escapism and learning were rated important (Likert 4-5) by a majority of respondents.

Based on our research, there are two major areas where technology can improve the decision-making process for selecting books. The to-be-designed technology should scaffold all three steps to create a

more efficient research method, while also allowing users to weigh attributes and mediums when providing both recommendations and other content. This would surface information that each specific user considers important to streamline the decision-making process.

We also found one area where technology can help motivate people to read more. Many participants in the interviews and surveys noted social aspects of reading. The to-be-designed technology, therefore, should include aspects of social media that extend beyond strictly leaving reviews. Elements of social interaction could include individual profiles, messaging systems, likes, contests, online forums or groups, or more structured online book clubs.

This work was limited by a small sample size ( $n = 4$ ) in the observations and interviews. In addition, the observations, interviews, and surveys all had homogenous demographics that included age range. The observations and interviews were additionally homogenous in gender and reading frequency. The surveys were homogenous in education level and income level. Future studies should include a larger more diverse sample and focus more on gathering further explanation on the type and quality of sources, reviews, and recommendations, and how these criteria affect decision making.

## **II. Introduction**

The activity of reading books is beneficial, however, about 24% of adult Americans have not read a book in the last year (Perrin, 2018). According to an ongoing study at the University of Michigan, retired people who read any type of book for at least 30-minutes a day lived on average two years longer than those who did not (Spektor, 2017). Researchers have also found that there are benefits to reading chapter books when compared to reading newspapers and magazines. That is, books encourage deep reading that can make connections in the brain and delay cognitive decay while increasing the development of empathy and emotional intelligence (Spektor, 2017). While these physical and cognitive benefits highlight the importance of reading, we have found it is difficult to make informed decisions about which books we will enjoy most.

Based on our experience, we believe that both new and active readers may find it discouraging to search through multiple sources in an effort to find a book that fits their personal interests. We have also been discouraged and frustrated when we invested time and money in a book that did not live up to our expectations. The goal of this project is two-fold: (1) to understand active and new reader's needs for selecting books for their individual interests; and (2) encourage more people to become active readers. There are several competitors that already provide book recommendations.

One competitor is GoodReads. GoodReads is a website and application that offers book recommendations based on ratings and reviews. GoodReads can make recommendations based on previous books read for subscribers who reach a threshold of 20 previously read books. GoodReads also allows users to connect with friends and acquaintances to view their reading lists and get additional recommendations.

Another competitor is Amazon.com. Amazon features a large number of ratings and reviews. Users can also purchase their choices directly on Amazon and many books offer short samples that allow readers to

try before they buy. Additionally, the ‘people who bought also bought’ feature has the potential to expand a user’s reading list.

We argue, however, that both GoodReads and Amazon do not solve the issue of personalized recommendations for newer readers. We have also found that both services limit subscribers to similar genres that they have previously read, which can lead to redundancy and limit potential exploration into new genres.

A third competitor is Whichbook. Whichbook is a website that relies on broad filters to help narrow down book results. The website offers 12 filters that range from difficulty level to amount of sex, and an alternate filter set containing character, setting, and plot.

We argue that Whichbook does not solve the problem of personalization for two main reasons. The filter system limits the level search customization, only allowing users to apply four of the available 12 filters at one time. In addition, Whichbook has a limited number of books in its database, especially when compared to the selection available through Amazon and GoodReads. These issues may result in a lack of variety when trying to find satisfying book recommendations.

In this project, we are asking how users research about and decide on books to read. In the next sections, we present our methods and findings and discuss the implications for the design.

### III. Methods

#### A. Observations

In the following, we present our participants, data collection methods, and analysis methods for the observation protocol.

##### 1. Participants

We recruited four participants for observation. All participants were recruited through personal connections and lived in Chicago, IL. All participants were females ranging in age 19-33. Our participants were all active book readers who read every day, and/or who completed six or more books a year.

Number	Name	Gender	Age	Location	Occupation	Notes
1	Erin	F	33	Chicago, IL	Treasure Manager	Reads every day.
2	Sarah	F	26	Chicago, IL	Graphic Designer	Listens to 1 audiobook a month
3	Carmen	F	29	Chicago, IL	Recreation Therapist	Reads every day.
4	Jade	F	19	Chicago, IL	History Student	Reads every day.

## **2. Data Collection Methods**

We conducted the four observations in-person; the observations lasted 20-30 minutes. Before participating in the study, participants were given an informed consent form to sign (VII Appendix, A. Observation Informed Consent Form). After signing an informed consent form, we asked participants warm-up questions about their reading habits and preferences. Warm-up questions included frequency of reading, number of books read annually, favorite authors and genres, and preferred medium (i.e. paper-based, electronic, and/or audio). Participants were then asked to demonstrate how they would find a book that they would like to read sometime in the near future (see VII Appendix, B. Observation Protocol).

Participants were given a laptop computer to use to complete the task, if needed, and were also told that they could use any additional tools they may have or use in a normal setting. We took notes on participants' actions asking only minimal questions to clarify actions.

After participants completed the task, we asked wrap-up questions that focused on gaining a better understanding of their actions and their personal research preferences. After the wrap-up questions, we gave users the opportunity to comment on the observation activity and ask questions of us before wrapping up the observation. All sessions were audio recorded; three were also video recorded using screen capture software.

## **3. Analysis Methods**

Using a modified version of the contextual inquiry framework, we analyzed our notes, considering tools, sequences of actions, methods of organization, and kinds of interactions. We explored this further by creating a task grid (Figure 1 below) to help identify our participant's methods, goals, pain points, and the tools they used. We then added our organized notes to Stormboard, an affinity diagramming tool. Using Stormboard, we worked collaboratively to identify and refine themes (see VII Appendix, D. Affinity Diagram). From our Stormboard themes, we created a high-level flowchart to demonstrate the search processes we had observed.

Subtasks	Researcher uses a search engine.	Researcher reads random article.	Researcher visits a blog they have bookmarked and visits frequently.	Researcher visits Amazon.	Researcher reads reviews on Amazon.	Researcher reads sample of the book on Amazon.	Researcher researchers finer points about a book on Amazon.	Researcher visits GoodReads for community recommendations.	Researcher visits GoodReads for "to read" list.	Researcher visits Audible.
Goals	Find content that provides a recommendation on books or authors.	Find a book or author from the article content.	Go to a reliable source for a book or author recommendation.	Look at reviews, samples, and book details.	Read reviews and ratings for more information on a specific book.	Get an idea about the voice, tone, and style of the book.	Find out more about the book itself.	See who in their community has read or wants to read a particular book.	Explore their "to read" list of saved books.	Find an audio book.
Considerations/Influence	How easy is it to find a good article? What genres/authors do the search results cover?	Is this article about a specific genre or author? Have I read any of the books/authors in this article? Who wrote this article?	How much success have you found in this blog before? What is the subject of the blog? What is the subject of the specific article?	Are there recommendations based on previously purchased books? Is the book I want in stock in the medium I prefer?	Who is writing this review? Are the reviews well written? Does this review provide any context into the reviewer's reading habits/preferences? Does the star rating accurately reflect the review?	Is this the correct genre? Is this well written? Is the story captivating right away?	Who is the author? What is the genre? What is it about? What is the price? What does the cover look like? What format is this available in?	Who has read this book? Who wants to read this book? Who recommends this book? Do I have a similar taste to those who have recommended or plan to read this book? Who has read similar books or authors?	Do I remember why I put this book on my list? Do I still want to read this book?	Who is reading the book? What does their voice sound like?
Pain Points	Information overload. Unhelpful recommendations. Poory organized articles.	Information overload. Unhelpful recommendations. Poory organized articles.	Lack of new content. Change in quality of articles.	Information overload.	Lack of reviews. Poor quality of reviews. Misleading ratings.	The book does not meet the goals or preferences of the user. Lack of sample. Length of sample.	Lack of information.	Lack of community. Lack of community communication.	Forgetting why something is on the list. Changing one's mind.	Annoying reader.
Tools	Computer Smart Phone	Computer Smart Phone Website	Computer Smart Phone Website	Computer Smart Phone Website App	Computer Smart Phone Website App Reviews (Written Reviews and Ratings)	Computer Smart Phone Website App Written-Digital sample of the first X chapters.	Computer Smart Phone Website App Book Details-Synopsis	Computer Smart Phone Website App Recommendations Community	Computer Smart Phone Website App	Computer Smart Phone Website App Audio Sample

KEY:  Crucial to task  Helpful, but not necessary

Figure 1: Task Grid

## B. Interviews

In the following, we present our participants, data collection methods, and analysis methods for the interview protocol.

### 1. Participants

We recruited four participants through personal connections. All participants lived in the Chicagoland area; two participants lived in Chicago, and two participants lived in the suburbs (Evanston and Frankfort). Participants included three males and one female, between the ages of 26 and 40.

Number	Name	Gender	Age	Location	Occupation	Notes
1	Brian	M	40	Evanston, IL	Conversion Copywriter	Reads 1-2 hours every day. Tries to read a book a week.
2	AJ	M	25	Frankfort, IL	Marketer	Non-Active Reader
3	Eugene	M	32	Chicago, IL	Small Business Owner	Daily reader.
4	Jingru	F	26	Chicago, IL	Grad Student	Non-Active Reader

### 2. Data Collection Methods

We conducted the four interviews in-person. All of the interviews were conducted in different settings. Brian was interviewed in a conference room at his job. AJ and Eugene were interviewed in their homes.

Jingru was interviewed in the lobby of her apartment complex. The interviews lasted 25-40 minutes. All interviews were audio recorded.

We started the interview with a brief introduction, and then gave participants an informed consent form to sign (VII Appendix, F. Interview Informed Consent Form). Next, we asked warm-up questions that focused on the participant's reading habits and preferences. We then asked focused questions about participants' previous experiences researching and selecting books; this included participants' criteria when researching and selecting books. We also asked about good and bad reading experiences. Focusing on bad experiences, we asked participants to suggest solutions to problems. Finally, we asked questions on demographics.

### **3. Analysis Methods**

All interviews were individually transcribed and open inductively coded using Atlas.ti. We worked collaboratively to analyze our data. We used Stormboard to organize and group our individual codes using an affinity diagram (VII Appendix, H. Interview Affinity Diagram).

We also identified several potential spectrums that represented our participants' key characteristics and behavior:

- Reading Activity: Passive to Active
- Reading Frequency: Low to High
- Reading Level: Low to High
- Reading Speed: Low to High
- Volume of Content: Low to High
- Reading Enjoyment: Low to High
- Price Acceptance: Low to High
- Use of Broad Search: \$0 to \$50
- Use of Book Criteria: Low to High
- Use of Book Recommendations and Reviews: Low to High

We then ranked each participant along the spectrums to identify potential user groups and draft initial personas (VII Appendix, J. Draft Personas Scales). Based on these scale ratings, we developed two detailed personas, an active and non-active reader (VII Appendix, K. Draft Personas).

### **C. Surveys**

In the following, we present our participants, data collection methods, and analysis methods from our survey.

#### **1. Participants**

We recruited participants through the DePaul University CDM Participant Pool and through our own social networks. Participants had to be over 18 and must have read or listened to at least one book for leisure in the past year to participate in the study.

We collected 60 responses to our survey. 52 participants reported their age, which ranged from 21 to 64, with an average age of 28 (Figure 2 below). One additional participant wrote in the range of 18-25. A

little more than half (56) participants reported their gender; 30 of the participants were male, 25 were female, and one identified as other (Figure 3 below).

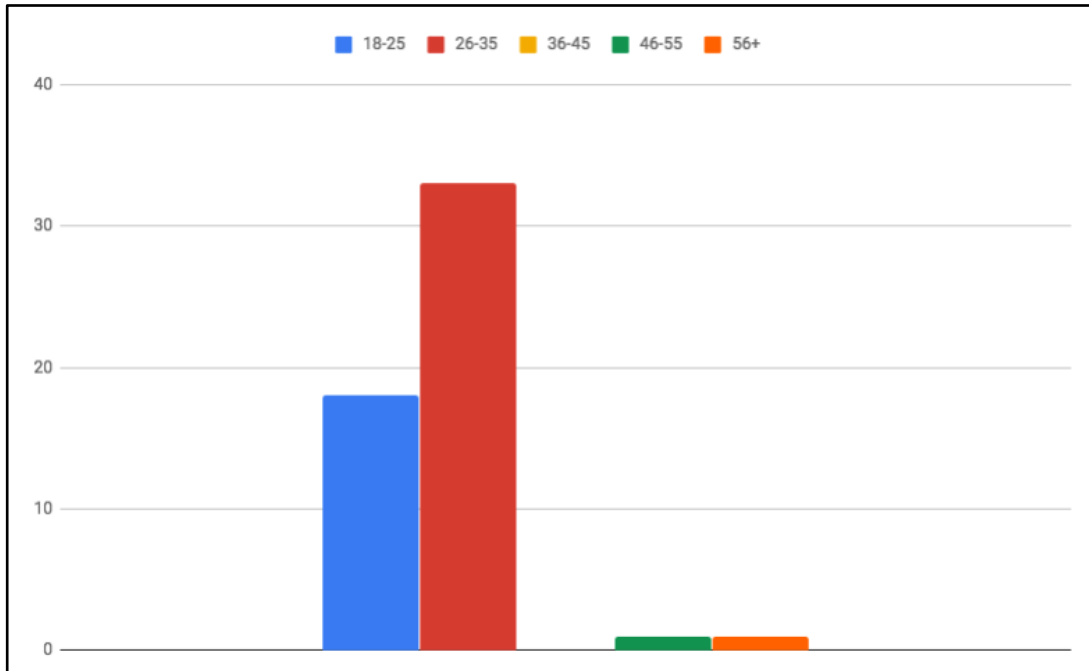


Figure 2: Distribution of survey participants' age

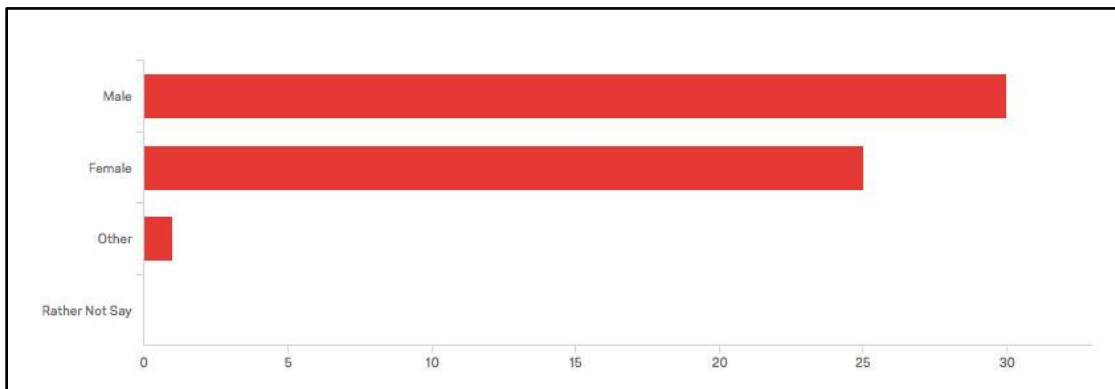


Figure 3: Distribution of survey participants' gender

Among the 56 participants responded to a question on education (Figure 4 below), the majority of participants had completed some form of higher education: 17 participants had a Graduate Degree, 31 participants had a Bachelor's Degree, and four participants had an Associate's Degree. See Figure 4 for details.

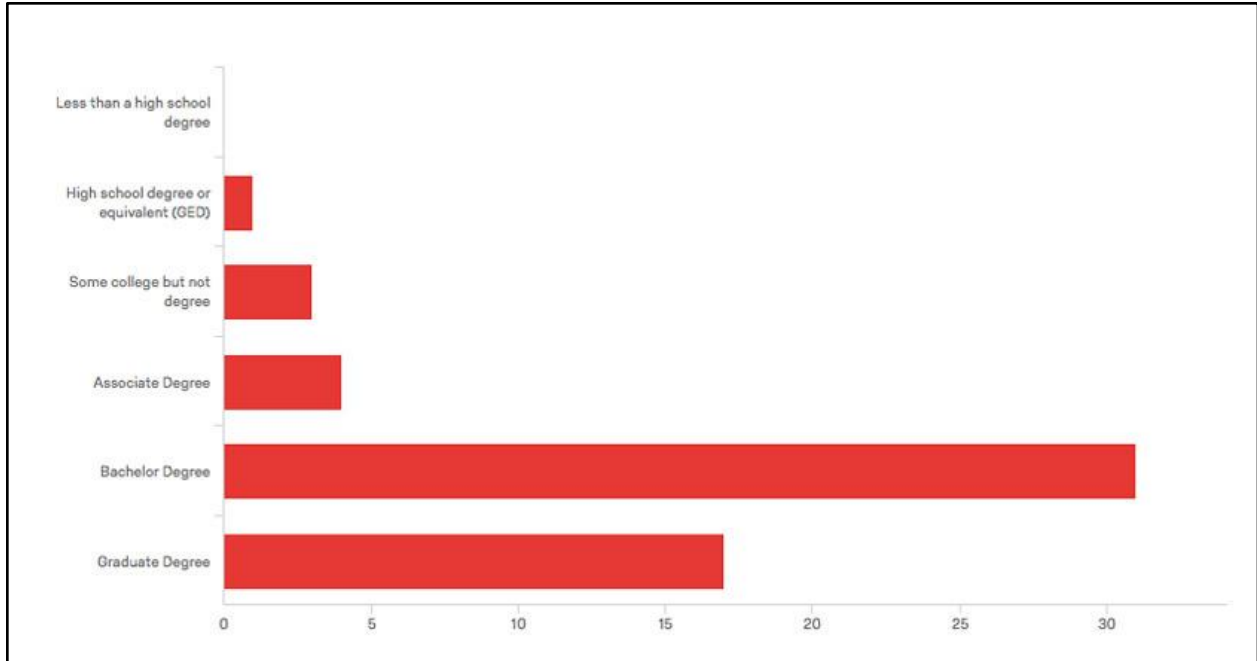


Figure 4: Distribution of survey participants' education

Among the 54 participants responded to a question on employment, 11 participants were employed and working less than 40 hours a week, while 21 participants were employed and working 40 hours or more a week. See Figure 5 for details.

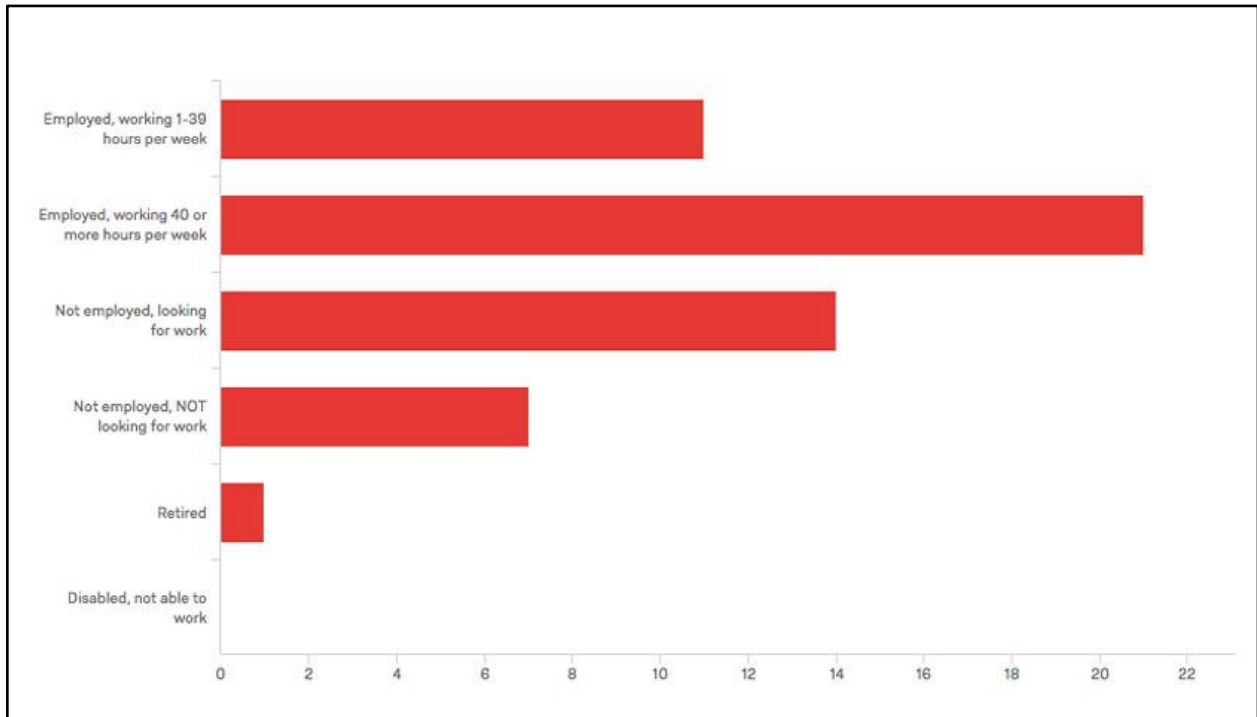


Figure 5: Distribution of survey participants' employment status

Among the 56 participants answered a question on income, most (n=18) made less than \$9,999 per year. See Figure 6 for the wide distribution of income.

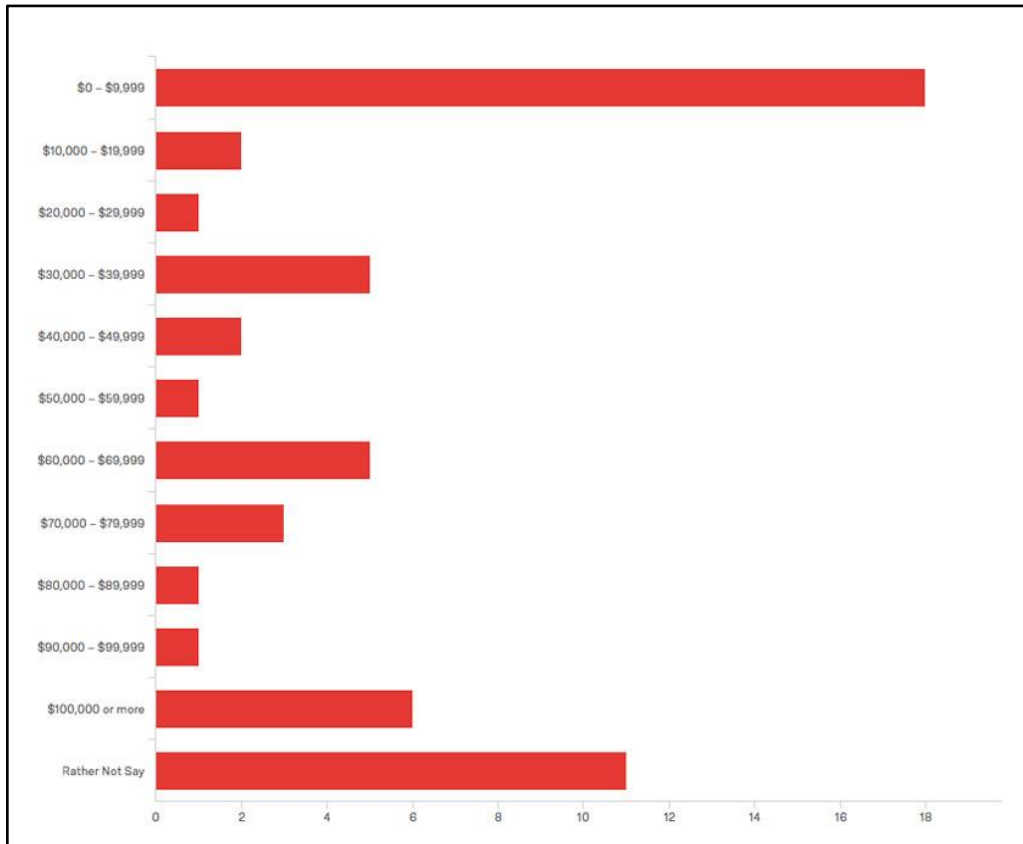


Figure 6: Distribution of survey participants' employment status

## 2. Data Collection Methods

We used Qualtrics to host the survey. The survey was made available on the DePaul CDM Participant Pool from Sunday, March 10th to Thursday, March 14th. A link to the survey was also shared by members of the team through social media, email, text, and personal messaging applications (ex - Slack). Users were informed that the survey was anonymous and voluntary in the introduction to the survey.

Our survey questions focused on the following areas (*see VII Appendix, L. Survey*):

1. Reading Habits - questions on reading frequency and motivation.
2. High-Level Search - questions on the use of broad search and use of articles/blogs when selecting a book.
3. Book Criteria - questions on specific aspects of a book considered when selecting a book (ex - medium, genre, author, reading level, etc).
4. Reviews and Recommendations - questions on the use of personal and third party reviews, and starred rating systems when selecting a book.

### 3. Analysis Methods

We used Google Sheets and SPSS to analyze the survey data. We formulated three research hypotheses based on our analysis of our observations and interviews.

1. Escapism is the biggest motivating factor for reading.
2. There is no clear preference of criteria when deciding on what book to read.
3. Personal recommendations are more important than reviews from unknown sources or rating systems.

To establish our independent variables, we sorted participants based on their answer to question one: How many books did you read (or listen to) for leisure in the last year? We considered users who read five or more books within the last year to be active readers and users who read four or fewer books within the last year to be non-active readers. We analyzed responses through descriptive statistics in SPSS.

Our survey analysis was also used to refine our initial personas.

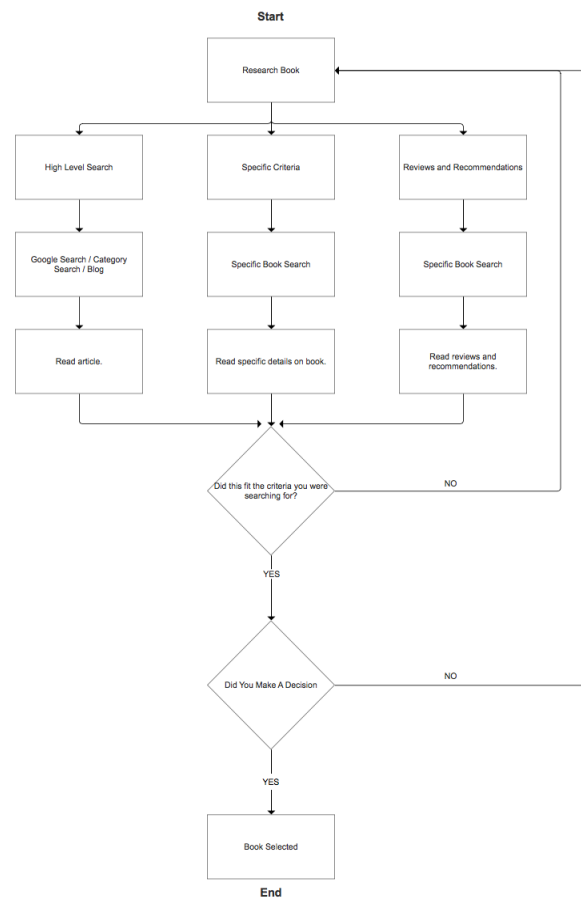
## IV. Findings

From our observations, interviews, and surveys, we found that people researched books through a combination of iterative steps that included: (A) high-level search, (B) specific criteria to narrow the search, and (C) use of reviews and recommendations. The three steps are described as follows:

- A. High-Level Search: We defined high-level search as an initial, general search of websites and blogs without a specific title in mind. Participants found search results through apps and/or websites, and/or using keyword search in a search engine. Participants would sometimes see something in these lists that would trigger a memory of a previously desired or saved book to read.
- B. Criteria: Specific criteria were a more narrowed search that participants used to gather additional information on a book once they had a clear idea in mind. Information participants gathered about books included author, genre, plot synopsis, price, length, and medium. This category of research also included exploring samples of the work itself, in both a physical and audio form.
- C. Reviews and Recommendations: Use of reviews and recommendations was another form of narrowed search in which participants focused on gathering opinions from previous readers. This included written product reviews, star rating systems, and personal recommendations from friends and acquaintances.

While we separated the typical research process into three different steps, these steps were not necessarily linear. Our observations showed that participants began with a high-level search, and all used at least one of the two next steps (specific criteria and review/recommendations). However, observation participants varied in the order and how they prioritized the refining steps. For example, Erin bounced around all three steps repeatedly as she refined her selection and made a choice, while Carmen focused mainly on reviewing blog posts. The level of evaluation and the depth of research also varied; Erin and Jade were very thorough in their review cycle and picky in their overall choice. This was also echoed in the

interviews, with multiple participants describing how they may look at different sources and criteria before selecting a book. This is represented by the following user flow:



*Figure 7: Flow*

Our initial research question also aimed to understand the factors that could help facilitate more reading. We found an additional theme of Motivation in our interviews and expanded upon this through our surveys. Motivation can be defined as a personal feeling or desire that pushes readers to read.

## A. High-Level Search

### 1. Observations

All participants started with a general search and then refined potential selections based on their search results; however, their approaches were dependent on how much experience they had searching for books and how clearly they defined their preferences. Erin and Sarah both had definite preferences and a lot of experience searching for books; they pinpointed their searches more rapidly when compared to Carmen and Jade. Carmen and Jade approached their searches in less directed (more exploratory) methods; they searched for general blogs, articles, celebrity endorsements, or “best of lists” to initiate their search.

The tools each participant used varied. For example, Carmen, Erin, and Jade used Google to perform a keyword search. Carmen searched for “15 Books Every 20-Something Woman Should Read Right Now,” while the other participants were more specific in their search terms. Erin searched for “top sci-fi books”

and Jade searched for “books about Chicago.” Sarah utilized Amazon’s Audible to browse the sci-fi category to find a title she felt that she would enjoy based on previously read books.

## **2. Interviews**

Findings from our interviews confirmed the step of high-level search that we defined from the observations. However, only active readers (Eugene and Brian) among our interviewees participated in high-level searches. Both indicated that they looked to blogs and/or articles for new book recommendations. Eugene also mentioned going to a bookstore and browsing the shelves. For both, their high-level search methods led to additional research. For example, Brian discussed high-level search using specific publications:

*“I usually find books through reviews, like the New Yorker, Atlantic, or Harpers or something, or a few other different kind of magazines. Their book review sections are where I first hear about a book, or kind of do a little bit more research on it, or buy it impulsively.”*

## **3. Survey**

We used the survey to further understand where users find book recommendations. We asked participants (n=53) to rank the frequency of use of six different sources (Internet/Blogs, Friends/Family, Book stores, Book Club, Amazon, and GoodReads) when finding a book for leisure in the last year (see Figure 8 below). While this question included areas of other identified steps, we found that two different types of high-level search were used often: (1) 58.7% (n=29) of participants ranked Internet/Blogs as used often (Likert 4-5) and (2) 45.3% (n=25) of participants ranked book stores as used often (Likert 4-5).

Q9 - Thinking over the last year, how often have you used the following resources to help choose a book for leisure?

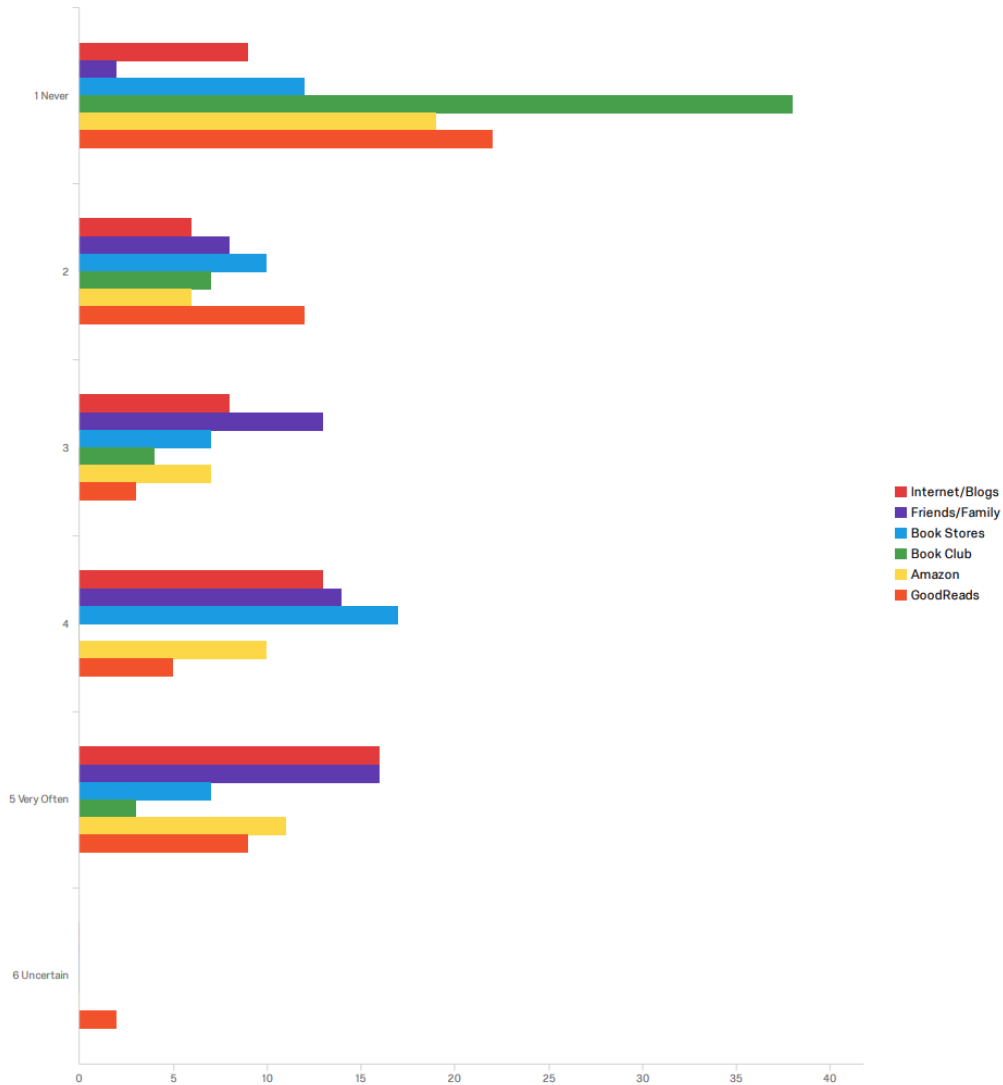


Figure 8: Distribution and rank of Resources

We also asked survey participants (n=53) to rate the importance of book lists provided on blogs and/or websites (see Figure 9 below). 41.5% (n=22) of participants ranked books lists as important (Likert 4-5). Another 30.2% (n=16) ranked book lists as medium importance (Likert 3). Only 7.6% (n=4) of participants ranked this type of content as having no value (Likert 1).

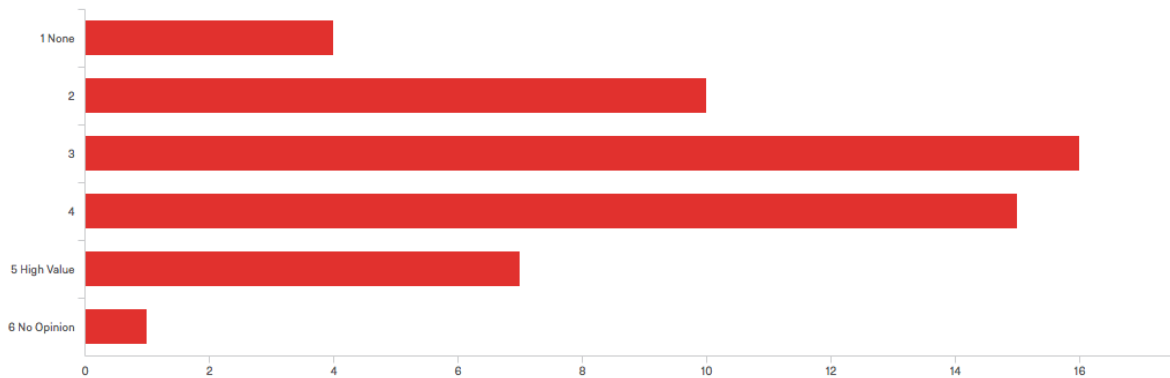


Figure 9: Ranking of importance of lists from blogs and websites

## B. Criteria

### 1. Observations

After finding a potential title, participants often continued their research by learning more about specific, concrete details of the book. This included aspects of author, genre, setting, series, length, price, and availability. Participants varied in their narrow search methods; methods were iterative and sometimes included repeating the methods we observed in the high-level search.

To narrow their search, Erin and Jade conducted further research on specific criteria about the book. Erin read the book synopsis of her chosen title, and told us that if it did not sound like something she would enjoy, she would not follow through with that selection. Erin and Sarah looked for additional criteria in the form of book samples. Erin told us that she liked to read excerpts of books prior to deciding. Sarah, who preferred the Audible medium, required that the narrator's voice have certain sound qualities in order to move to the next step in her decision-making process.

Once a book title met their criteria, all participants either decided to read/purchase the book or examined reviews and recommendations.

### 2. Interviews

Findings from our interviews supported our finding from the observations that criteria followed search. All four participants discussed specific book criteria that were important to them when deciding on a book to read. We refined our initial definition of specific criteria into five sub-themes: (a) Medium; (b) Genre; (c) Emotional Connection; (d) Ease of Reading; (e) Price.

#### a. Medium

Three of the four interviewees, Brian, Eugene, and AJ, shared the preference of using physical books. While readers got their book recommendations from different sources, they desired physical, printed books rather than digital versions. Brian elaborated on his preference for physical books:

*“I definitely avoid electronic books. I have nothing against it or anything like that, but I’m generally tired of a screen by the time I start reading and I like having the physical copy in my hand. I like seeing the pages start to disappear from the left to the right side.”*

**b. Genre**

Three of the four interviewees, Brian, Eugene and AJ, noted that genre was important in researching a title. While readers did not align on a particular genre, each reader showed interest in a book based on the genre itself. One reader, AJ, told us:

*“I like sci-fi, sci-fi, and fantasy just because they create new worlds it's not too formal typically it's a good story and has a good theme.”*

**c. Emotional Connection**

All participants described that they wanted some form of emotional satisfaction from reading a book. This was most commonly described as a feeling of personal interest at the time of selection. Eugene expressed emotional connection when narrowing down his topic selection:

*“I think it just has to pique my interest. Like, it's doesn't have to be anything like a long book or short book that needs to be the criteria for why I choose it... it just has to be an interesting topic to me.”*

AJ described emotional connection in terms of quality, stating that his disappointment in the classic novel, *The Catcher in the Rye*, was due to boredom and lack of substance:

*“Catcher in the Rye was really depressing. It's supposed to be like a book that everyone should enjoy and it's like a coming-of-age thing but I thought it was really boring. I thought it was depressing. It didn't really teach me anything in my opinion.”*

**d. Ease of Reading**

A criterion only mentioned by non-active readers, AJ and Jingru, was the importance of a book being easy to read. AJ and Jingru mentioned ease of reading in terms of both the difficulty and length of the book. Jingru also mentioned illustrations as an aspect of easy reading:

*“The content should be interesting to me. 1. It should have some images and not only the words. 2. The book is easy to read.”*

**e. Price**

We asked all four participants about the importance of price when selecting a book. Three of the participants, Brian, Eugene, and AJ, noted a high-price point as a deterrent to purchasing a book. This amount was between \$20-\$30. Brian mentioned this in terms of prioritizing his purchases, and waiting for the price of a new book to drop:

*“Price is important. I mean. Yeah, you know. I know from times I really want a book and that’s gonna be like \$35-\$40 dollars, then I’ll wait till paperback comes out. If it’s something I really want, then I will. But I don’t like to spend too much. I’d say \$30 is the high point that I’ll pay for a book.”*

One participant, Jingru, noted how she takes additional time to research for online resources that are free and could save her money:

*“Some of my friends post this book on social media. Then I was kind of interested in it. So I searched it on Google or other social media to check if there were free resources online.”*

### 3. Survey

Our surveys provided additional insight into the importance of specific criteria when selecting a book. We asked survey participants (n=57) how they consumed books for leisure (Figure 10 below). Most (67.3%) (n=37) of participants submitted that paperback was the most common medium (Likert 4-5), followed by 60.7% (n=34) who reported that hardcover was somewhat common, ranking this from medium to high level of common use (Likert 3-5). 67.9% of participants (n=38) ranked audio books as uncommon (Likert 1-2). These results indicate that users prefer physical books to digital books for reading for leisure..

Q12 - How do you consume books for leisure?

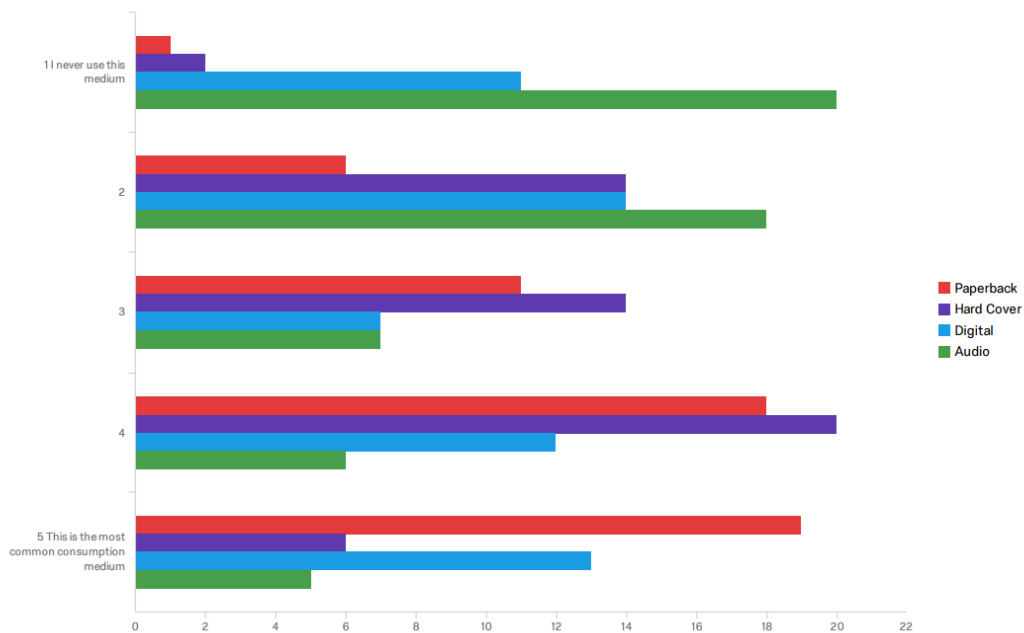
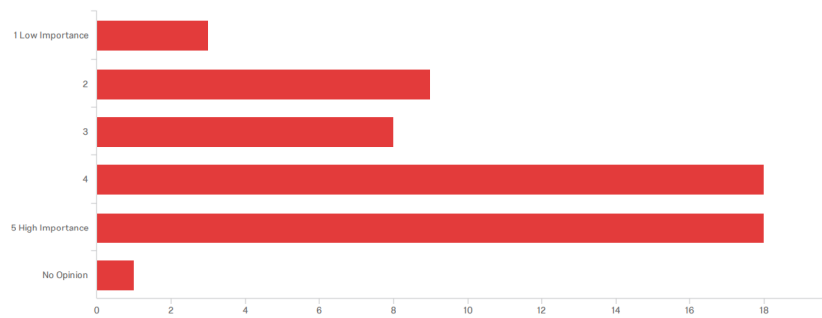


Figure 10: Typical consumption medium

Also, among participants (n=57), 63.2% (n=36) rated the consumption medium of high importance (4-5 Likert scale) (Figure 11 below).

Q13 - How important or unimportant is the consumption medium?



*Figure 11: Ranking of consumption medium*

Next, we asked survey participants (n=56) to rate the importance of certain criteria that have been discovered through our previous research (Figure 12 below). The criteria that were given to participants included genre, author, being a part of a series, book sampling, pricing, page count and reading level. The highest ranked criteria was 'Genre' with 48.2% (n=26) of participants ranking genre as highly important (Likert 5). The next highest ranked criteria was 'Author', with 23.6% (n=13) of participants ranking author as highly important (Likert 5). The least important criteria was a book being a part of a series, with 31.6% (n=18) of participants ranking series as low importance (Likert 1).

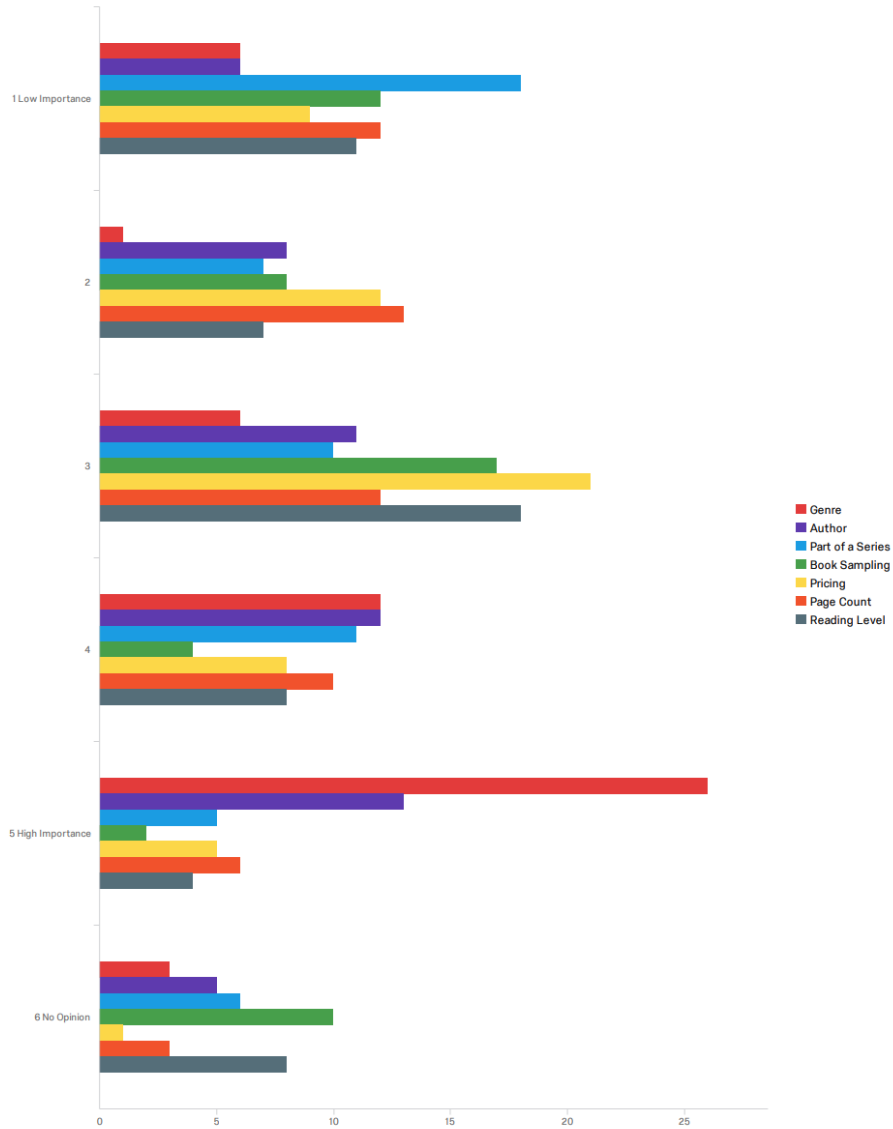


Figure 12: Ranking of individual criteria

We hypothesized that there would be no clear preference of criteria when deciding on what book to read when comparing our active versus non-active readers.

We conducted a Mann Whitney U test to compare the preference of criteria from non-active and active readers. There was no significant difference of the medians between the preference of criteria at alpha level .05 ( $U_{(54)} = 275$ ,  $Z = 1.02$ ,  $p = .31$ ). (The mean ranks of non-active and active readers were 29.95 and 25.18, respectively).

## C. Reviews and Recommendations

### 1. Observations

Three of four participants, Erin, Jade, and Sarah, also examined reviews and recommendations. We defined reviews and recommendations as opinion-oriented social content based on what other readers had

to say about a specific title. This included asking people our participants knew personally, researching friends' book lists on website and app platforms (e.g., GoodReads), and/or researching reader reviews on various platforms (e.g., Amazon). Participants had different approaches to reading recommendations from strangers.

When reading reviews from strangers on platforms like Google, GoodReads or Amazon (all used five-star ratings), participants typically focused on the most negative reviews first and then compared them to the top positive reviews to form a final decision. Titles that did not have 4-stars or more within the 5-star rating were not typically chosen. In addition, Erin told us that reviews with more substantial comments or in-depth analysis of the book were more helpful in deciding.

## **2. Interviews**

Findings from our interviews confirmed the step of reviews and recommendations that we defined from the observations. All four participants mentioned Reviews and Recommendations multiple times throughout their interviews, however, they spoke about the categories differently.

### **a. Reviews**

All four participants mentioned reading and considering reviews from people they did not know. These occurred on review and rating sites, as well as on blogs. Brian noted that he found the substance of the review the most important aspect to consider:

*"If people seem engaged with the subject of the book, rather than the topic. I guess rather than just you know a laundry list of you know I don't like this character or I don't like run-on sentences or whatever, or if the topic illuminated something in the reviewer. Then I think, Ok, then this might be...I might read it differently than this person, but it spurs more thought than the basic easy review."*

Two participants, Eugene and Brian, also mentioned the use of specific rating systems for reviews. When asked about what feature of Amazon he liked the best, Eugene noted:

*"Definitely a rating system."*

Brian, on the other hand, was skeptical of rating systems and did not often consult them when deciding on a book:

*"It's not a rating. Ya know. It's not like this book got three and a half out of five stars. I don't like the Goodreads kind of style for that, or the Yelp, just because any book is inherently idiosyncratic...and that's the alchemy between the writer and the reader and you can't put a number to it. I mean you really can't to movies or music or anything either."*

### **b. Recommendations**

All readers specified personal recommendations from their own social networks as being important to them or a reason they chose to read a book. Brian, an active reader, said:

*“I think really important. Yeah, it's like if someone whose opinion I respect that they like a book I'll get it ya know sight unseen. Yeah, there's a handful of people who say that “I've enjoyed this,” then I don't have to look at any reviews or anything. I already got it. Umm yeah. Or if there's someone who yeah. Even if I'm not really interested in the book and there's a personal recommendation...yeah that's absolutely... that's enormously important.”*

The non-active readers. AJ and Jingru, read books almost solely from personal recommendations. Jingru discussed how she received recommendations from friends and other people through social media. AJ picked most of his books from recommendations and described their importance:

*“Pretty important because they will, the people are making them for you probably know you better than most things so usually having friends, they recommend a book because they enjoyed it. You're friends with them for a reason, so they probably have similar tastes but not always.”*

### 3. Survey

We asked survey participants to rate the importance or unimportance of three different types of reviews: (1) online book reviews, (2) star ratings and (3) personal recommendations. For the importance of online book reviews the responses were somewhat evenly distributed, see Figure 13.

Q23 - How important or unimportant are online book reviews from people you do not personally know, e.g, on blogs, lists, magazines when selecting a book?

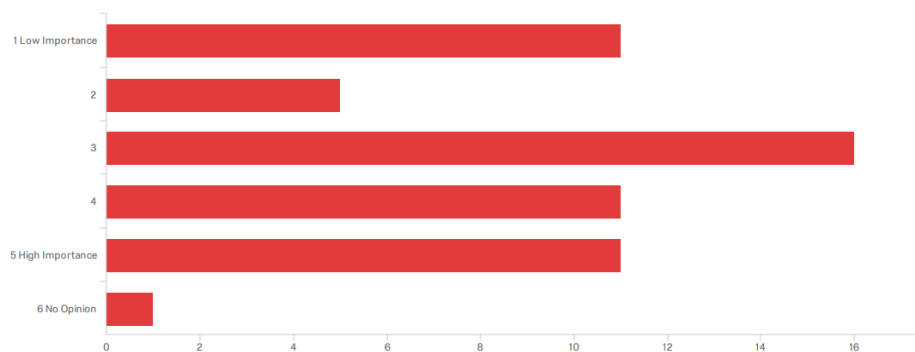


Figure 13: Ranking of third-party reviews

Responses to the importance of a star rating system (Figure 14 below), most (55.4% - n=31) ranked star rating systems as high importance (4-5 Likert).

Q25 - How important or unimportant are star rating systems when selecting a book?

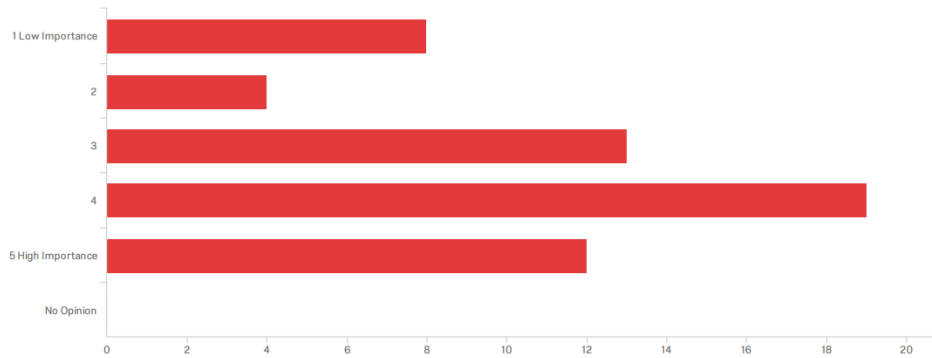


Figure 14: Ranking of star rating systems

Finally, when asked about the importance of personal recommendations, most (76.8% n=43) rated personal recommendations as important (Likert 4-5), see Figure 15

Q34 - How important or unimportant are personal recommendations when selecting a

book?

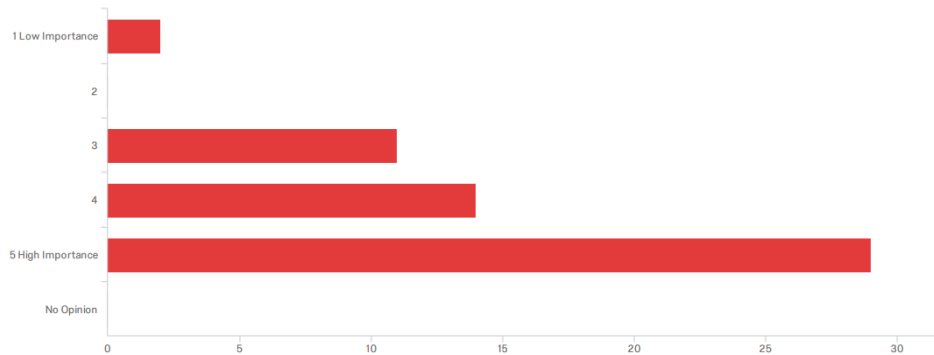


Figure 15: Ranking of personal recommendations

Of the three types of reviews, personal recommendations had the highest rate of importance (Likert 4-5) among readers in general. Personal recommendations also had the highest average score for both active and non-active readers, at 4.2 and 4.4 respectively (Figure 16 below).

	Q20_1	Q20_2	
	personal recommendations	online book reviews	star rating systems
nonActive	4.41	3.16	3.49
active	4.22	3	3.24

Figure 16: Average scores for active and non-active readers

We expanded upon the idea of reviews by asking survey participants (n=56) where they typically look for reviews (Figure 17 below). We used the four most frequently cited resources throughout the course of our research to frame this question; these resources were Amazon, Google, blogs, and GoodReads. Results were not evenly distributed. About half (50.9% - n=28) ranked Amazon as used often. Google was a close second with 48.2% (n=27). GoodReads and Blogs, which were commonly mentioned in the observations and interviews, were both frequently ranked as never used (Likert 1), at 53.6% (n=30) and 40.7% (n=22) respectively.

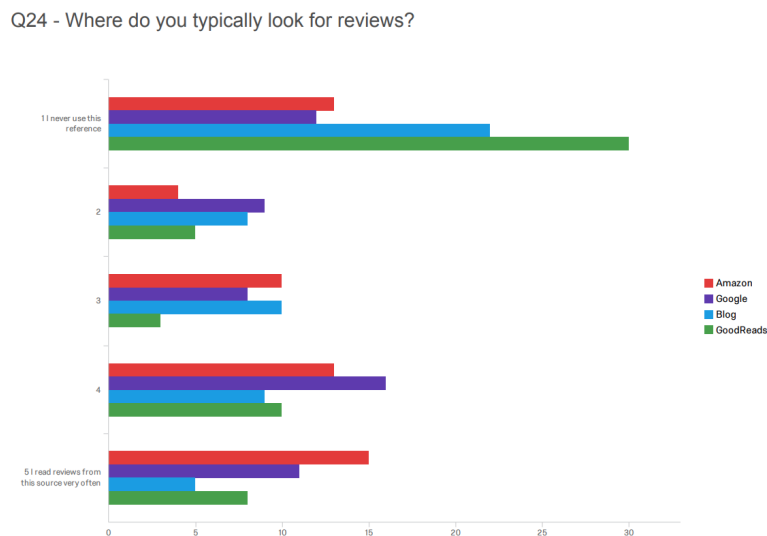


Figure 17: Ranking of review source

We hypothesized that personal recommendations were more important than reviews from unknown sources or rating systems. We conducted three separate Mann Whitney U on online reviews, star rating systems, and personal recommendations with the intent to compare final results.

We conducted a Mann Whitney U test to compare the importance of online book reviews from non-active and active readers. There was no significant difference in the medians between the importance of online book reviews at alpha level .05 ( $U_{(52)} = 293$ ,  $Z = .41$ ,  $p = .68$ ). (The mean ranks of non-active and active readers were 28.08 and 26.24, respectively).

We also conducted a Mann Whitney U test to compare the importance of star rating systems from non-active and active readers. There was no significant difference of the medians between the importance of star rating systems at alpha level .05 ( $U_{(54)} = 302.5$ ,  $Z = .54$ ,  $p = .59$ ). (The mean ranks of non-active and active readers were 29.24 and 26.79, respectively).

We conducted a Mann Whitney U test to compare the importance of personal recommendations from non-active and active readers. There was a significant difference of the medians between the importance of personal recommendations at alpha level .05 ( $U_{(54)} = 209$ ,  $Z = 2.39$ ,  $p < .05$ ). (The mean ranks of and active readers were 31.64 and 21.29, respectively). Which means personal recommendations are more important for active readers when compared to non-active readers when selecting a book.

## **D. Motivations**

### **1. Interviews**

Through the interview process, we identified a new, non-step-related theme, we named 'Motivations'. This theme helped to provide context around our second project goal: encouraging more people to become active readers.

We found that participants had varied motivations for reading. Brian, Jingru, and Eugene were motivated to expand their knowledge bases. Jingru mentioned her motivation to read was to learn more about her area of study. She explained:

*“For now, I like to read books about my major, like books about the storyboard. Cause I want to learn some skills about that. But that’s just my plan, haha.”*

Brian discussed this in terms of world view and seeking different opinions:

*“To find authors that you might not have already looked at to kind of break out of the habit of genre - fiction or nonfiction, or taking one particular type of author and never looking for something else. Expanding your horizons.”*

### **2. Survey**

We asked survey participants an open-ended question on what motivates them to read (n=40 responded). There was a large amount of overlap between many of the written responses; these answers included the topic/content of a book, learning something new or seeing a new perspective, time, and relaxation. The most frequent answer was relaxation, which was recorded in 13 of the 40 responses.

We then asked survey participants (n=59 responded) how much six specific factors motivated them to read (Figure 18 below). The factors included were escapism, learning, work, school, boredom and passing time. Of these motives, escapism was rated the highest motivating factor with 47.5% (n=28) of participants ranking this as important (Likert 5). Learning was rated a close second with 44.1% (n=26) ranking this as important (Likert 5). The least motivating factor was boredom, which was marked as not at all motivating (Likert 1) by 27.6% (n=16) of participants.

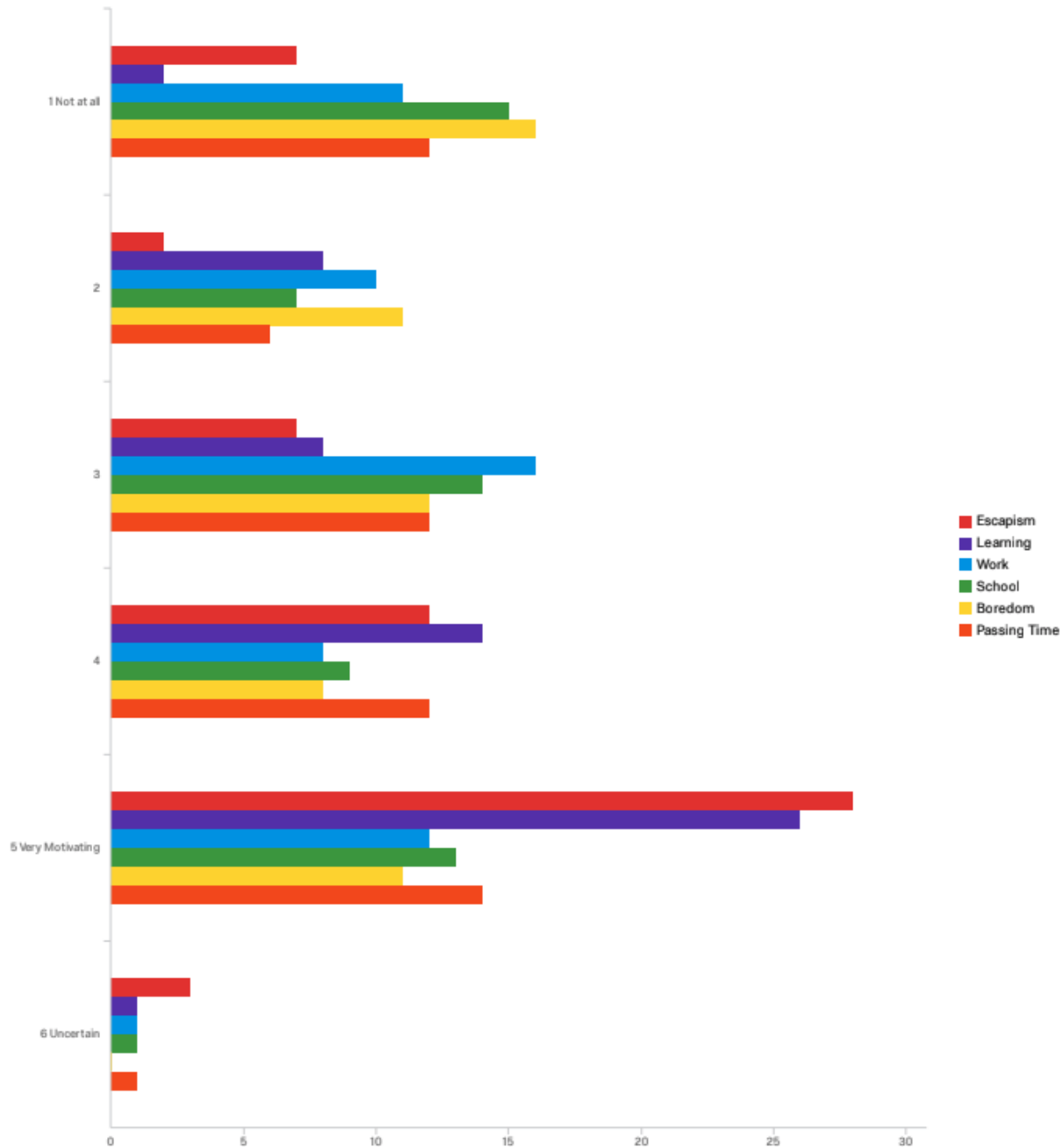


Figure 18: Ranking of motivational factors

Building off the idea of motivation, we asked survey participants an open-ended question on what would encourage them to read more (n=53 responded). There was also a large amount of overlap between many of the written responses in these questions; these answers included time, getting a recommendation, interesting topics, and price. The most frequent answer was time, which was recorded in 15 of the 53 responses. The next most frequent response was interest in a topic, which was recorded in seven of the 53 responses.

Through this question we found a social motivation. Some participants said they would be motivated by reading with another person or club, while others were instead would be more motivated by personal recommendations. Another similar factor that was mentioned by two participants was the motivation of a reward for reading.

We hypothesized that escapism would be the biggest motivating factor for reading.

We conducted a Mann Whitney U test to compare the motivation importance from non-active and active readers. There was no significant difference of the medians between the motivation importance's at alpha level .05 ( $U_{(55)} = 316$ ,  $Z = 0.21$ ,  $p = .83$ ). (The mean ranks of non-active and active readers were 28.25 and 29.29, respectively).

#### **D. Personas**

We used the interviews to map characteristics to spectrums that we identified while coding the interview reports. These were refined these personas through our survey analysis. We identified two main personas - Active and Non-Active Readers. Active Readers had a higher level of reading frequency, enjoyment, speed, the volume of books read, and variety of content, while non-active readers fell more towards the middle or low end of these spectrums. Both Active and Non-Active Readers were likely to use the three steps identified previously (high-level search, criteria, and reviews and recommendations), however, Active Readers used these methods more frequently and more motivated to read in general.

The following are our identified personas:

# Eric Smallton - Active Reader



*“Reading is an addiction for me.”*

## Bio

Eric received his Master’s Degree in business 2 years ago and he is constantly looking to expand his knowledge in his industry within the art and science of coffee. Though he is currently focused on expanding the one business location that he owns, he is willing to read almost anything that will offer an interesting perspective, teach him something new, or just tell a good story. Eric needs a solution that will offer a variety of recommendations and information on books that may or may not be from family and friends.

Age: 35

Sex: Male

Location: Chicago, IL

Profession: Small business owner

Martial Status: Single

Character: Intellectual

**Ambitious**

**Professional**

**Business Oriented**

**Articulate**

## Goals

- Looming to expand his existing business.
- Aggressively searching for new knowledge within his industry.
- Wants to read anything that is recommended by a friend/family.
- Connect with like minded individuals who read the same material.

## Frustrations

- Purchasing a book that falls short of his expectations.
- Not being able to find a physical copy of a book he is looking for.
- Spending money on a book that has negative reviews on an Internet forum.
- Reading a faddish book.

## Spectrum

### Passive Reader Vs Active Reader



### Reading Frequency



### Level of Enjoyment While Reading



### Reading Speed



### Volume of Content in Books Read



### Use of Broad Search w/Looking For New Book



### Acceptance of Price Value of Books Purchased



### Regard to User Reviews Before Purchase



# Jane Williams - Non-Active Reader



*"I'm busy, so I don't usually have time to spend on books when I can wait for the movie."*

## Bio

Jane is a full time marketing coordinator. She works long hours and is usually exhausted by the time she goes home. When she does have time, she would rather spend it with friends or catching up on TV shows. Occasionally though, she hears about a book through a friend or popular media and gets an urge to check it out. She's really picky in regard to what she reads and hates investing in something that she ends up not liking. Jane needs a solution that will offer a variety of trustworthy recommendations while meeting her interests and time schedule before she buys it.

**Age:** 26

**Sex:** Female

**Location:** New York City, NY

**Profession:** Marketing Manager

**Martial Status:** Married

**Character:** Young Professional

**Intelligent**

**Busy**

**Selective**

**Assertive**

## Goals

- Looking for entertaining books that are currently in the spotlight.
- Finding books that are easy for her to read.
- Talking about a hip book with friends and coworkers.
- Staying up-to-date with pop culture to give her an advantage in her career.

## Frustrations

- Wasting time and money on boring or uninteresting books.
- Lack of quality, trustworthy reviews.
- Investing in a high level book that is hard to comprehend.
- Beginning a book that has way more content than she immediately realized.

## Spectrum

### Passive Reader Vs Active Reader



### Volume of Content in Books Read



### Reading Frequency



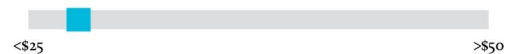
### Use of Broad Search w/Looking For New Book



### Level of Enjoyment While Reading



### Acceptance of Price Value of Books Purchased



### Reading Speed



### Regard to User Reviews Before Purchase



## E. Feature Matrix

Based on our observations, interviews, and surveys, we identified potential features for a technology-based solution that will help users research and select books to read. These features are listed in the following Feature Matrix in order of priority.

No.	Feature	User Type	Priority	Impact	Feasibility
1	Personal Reviews - allows user to write personal reviews and read reviews from other users	Active Reader	High	High	High
		Non-Active Reader	High	High	High
2	Book Criteria (author, genre, synopsis, series, length, price, availability, medium, samples, difficulty.)	Active Reader	High	High	High
		Non-Active Reader	High	Medium	High
3	Book Search (by all major criteria)	Active Reader	High	High	High
		Non-Active Reader	High	High	High
4	Filter System (by all major criteria)	Active Reader	High	High	High
		Non-Active Reader	High	High	High
5	Profile	Active Reader	High	High	High
		Non-Active Reader	Medium	Medium	High
6	(Page) - allows users to customize page views to see what's important to them first.	Active Reader	High	High	Medium
		Non-Active Reader	High	High	Medium
7	Criteria Weight System (R&R) - provides recommendations based off of preferred criteria	Active Reader	High	High	Medium
		Non-Active Reader	High	High	Medium
8	Star-Rating System	Active Reader	Medium	High	High
		Non-Active Reader	Medium	Medium	Medium
9	Professional Review Aggregate - allows user to see reviews from outside,	Active Reader	Medium	Medium	Medium
		Non-Active Reader	Low	Low	Low

	professional publications				
10	Average time to complete	Active Reader	Medium	Medium	Medium
		Non-Active Reader	High	High	Medium
11	Social feed	Active Reader	Low	Medium	Medium
		Non-Active Reader	Medium	Medium	Medium
12	Chat / messaging functionality	Active Reader	Low	Low	Low
		Non-Active Reader	Low	Low	Low
13	Online Book Club	Active Reader	Medium	Medium	Low
		Non-Active Reader	Low	Low	Low
14	Rewards/Achievements	Active Reader	Low	Low	Low
		Non-Active Reader	Low	Low	Low

## F. User Scenarios

Based on our observations, interviews, survey results, and the features outlined in our feature matrix, we identified two possible scenarios where the proposed digital application could meet the needs of our personas during the process of searching for a new book to read.

### 1. Eric the Active Reader

Eric is a small business owner who earned his MBA two years ago. He has successfully started his small coffee business. He would like to expand this business into multiple locations over the next five years. Even though he has finished his master's degree, he does not want to stop learning and expanding his knowledge in the field, so he continually reads new books in the area. Eric typically searches on Google for good business or coffee related books available, but he is not always sure of the quality of the results. He would feel more comfortable investing in a book when he knows more about content.

Eric has found a new application for finding books that is more personalized to him and provides the information he needs to decide. This application allows Eric to reconnect with his former classmates from his MBA that have also been in the field of opening their own businesses. He can now see business-related books that his former classmates have read and if they would recommend them. He can also chat with them directly and get a more personalized understanding of the book.

In addition to these personal connections he was able to make, he personalized what information he would receive about the books he was interested in. In the past, he has found that knowing the genre, author and page count are the main things he wants to know. For this application, he was able to set his profile to show this information upfront. Having personalized settings and recommendations gave him a quick, one-stop experience to choose his next book to read.

## **2. Jane the Non-Active Reader**

Jane is a marketing coordinator who is in a demanding job that requires her to work long days. When she does have some free time, she just wants to relax and shut off her brain. She doesn't frequently seek out books, but occasionally gets inspired when she hears about a new book from a friend or colleague, or hears a lot of talk about a book on the internet.

Jane recently found a new application that helps her find the information she is looking for in one place. She uses the application to connect with friends and colleagues to get recommendations on books that they read. She also frequently checks the blog for recommendations and reviews, and to see what books are the most popular. Her favorite posts showcase what popular books are being made into movies so she can read them before the movie comes out and get involved in the excitement. When she sees something that interests her, she conducts further research to make sure it's a genre she will enjoy.

Jane uses the app on the train during her commute to look for a book to read on her upcoming vacation. She goes right to the blog section to see if there are any new articles about popular books. She uses the filter system to narrow down her results, looking for books with enough buzz to be made into movies. She sees an article on a new sci-fi book being made into a movie, and it triggers a memory of something she heard from a friend. From the blog post, she clicks on the book title for more information. Seeing that it is a sci-fi book of about 250 pages, she becomes more intrigued. She scrolls slightly further down the page to see which of her friend have read it. The list shows four of her connections reviewed this book, each one giving it 4 or 5 stars. One of these is her colleague at work, who she generally trusts more than anyone else. She then looks for the price to make a final decision. She sees a few prices from the publisher and major book retailers like Barnes and Noble and Amazon. She sees that Amazon is selling the book for \$20, which is ten dollars less than the publisher. Remembering that she has Prime, she clicks the Amazon link, and purchases the book so it will be delivered by the time she goes on vacation. She scrolls further down the page to find a few other articles related to this book, which she skims with excitement before she reaches her stop and closes the app.

## **V. Discussion**

In this study, we examined how readers search for and discover books to read. The goal of this project is to understand user needs of technology to help people (1) select new books for their individual interests; and (2) become more active readers. Our initial observations identified three iterative steps that users followed to research and select books; these steps were high level search, specific criteria, and reviews and recommendations. Our interviews and surveys allowed us to confirm these steps, and expand upon the different, unique aspects of each one. Our interviews and surveys also allowed us to address our second research goal (encouraging people to become active readers) by identifying the theme of motivations. Our findings have several implications for the design of such technology.

## **A. Implications**

We found two main areas where technology can improve the decision-making process for selecting books.

All of the participants in the observation used an aggregate of two or more sources (websites/apps) to help aid in the research process. Additionally, all participants looked at multiple criteria in each source to build a model of their available choices. These methods were echoed in the interviews, where each participant identified and elaborated upon two or three of the described methods, while also commenting on the level of importance of each theme. The survey provided additional context, further highlighting the importance of different aspects of each step. The to-be-designed technology should scaffold all three steps to create a more efficient research tool. This model should provide initial content for inspiration, while also giving concrete details on book criteria, and providing ratings and reviews from both friends and respected websites/reviewers.

In addition, participants from the observations, interviews, and surveys emphasized varying levels of importance on book attributes. While some focused on specific criteria of the book itself, for example, plot or price, others focused more on direct feedback through reviews and recommendations. Even when narrowing down preferences, our participants demonstrated different priorities, for example, reviews from friends or subject matter experts were frequently noted in both the interviews and survey results as much more important than reviews from unknown people on the internet. Our product, therefore, should clearly identify elements from all three steps, while allowing users to weigh attributes and mediums when providing both recommendations and other content. This would surface information that each specific user considers important, and streamline the decision-making process.

We also found an area where technology can motivate people to read more. We found from the interviews and surveys that many participants mentioned a social aspect to reading. Aside from the previously mentioned concept of personal recommendations, many readers brought up the idea of being motivated by reading with another person or club. Another similar factor that was mentioned was the motivation of a reward for reading. Noting the importance of these social elements, our the to-be-designed technology, therefore, should include aspects of social media that extend beyond strictly writing reviews. Elements of social interaction could include individual profiles, messaging systems, likes, contests, online forums or groups, or more structured online book clubs that function.

## **B. Limitations & Future Work**

Both the observations and the interviews were limited by the small sample size ( $n = 4$ ). We also encountered areas in the observations, interviews, and survey results where the demographics were too similar. The demographics for the observation included only younger females in the Chicago area who were all frequent readers. We included a broader demographic of gender and reading frequency in the interviews, but the participants were still predominantly male and fell within a similar age range.

The surveys were evenly split between genders, but age range, education level, and income level were all very unevenly distributed. A majority of participants who completed the survey were between the ages of

18 and 35, and generally had a higher level of education, but a lower level of income. Our surveys failed to account for older, and possibly more financially stable demographics. Future studies should include a larger sample and incorporate a wide demographic of sex, age range, education level, income level, and reading frequency.

We also found that our results lacked information in certain use cases, for example dealing with problems or difficulties in research, or specific aspects of frequently used platforms. We should aim to explore these ideas further through additional interviews and surveys.

## **VI. Bibliography**

Berkovsky, Shlomo, Cantador, Ivan, Cremonesi, Paolo & Fernandez-Tobias, Ignacio. (2012). "Cross Domain Recommender Systems" Universidad Autonoma de Madrid. Madrid, Spain.

Perrin, Andrew. (2018). "Who Doesn't Read Books in America?" Pew Research Center. Washington, DC.

Spektor, Brandon. (2017). "Here's Why Your Brain Needs You to Read Every Single Day." Reader's Digest.

Towle, Brendon, & Quinn, Clark. (2000, July). "Knowledge based recommender systems using explicit user models." In Proceedings of the AAAI Workshop on Knowledge-Based Electronic Markets. California.

## **VII. Appendix**

### **A. Observation Informed Consent Form**

#### **ADULT CONSENT TO PARTICIPATE IN RESEARCH**

##### **Book Readers and Enthusiasts**

**Principal Investigator:** Harry Cao, Jenny Falzone, Anthony Gladney, Chris Poynton (Graduate Students)

**Institution:** DePaul University, Chicago, Illinois, USA

**Department (School, College):** Computing and Digital Media ("CDM")

**Faculty Advisor:** Cynthia Putnam, Ph.D., CDM, DePaul University

***What is the purpose of this research?***

We are asking you to be in a research study because we are trying to learn more about the process of how people research and make decisions on which book they want to read. This study is being conducted by Harry Cao, Jenny Falzone, Anthony Gladney, and Chris Poynton at DePaul University as a requirement to obtain their Master's degree. This research is being supervised by their faculty advisor, Cynthia Putnam

We hope to include about 4 people in the research.

***Why are you being asked to be in the research?***

You are invited to participate in this study because you are an avid book reader.

You must be age 18 or older to be in this study. This study is not approved for the enrollment of people under the age of 18.

***What is involved in being in the research study?***

If you agree to be in this study, being in the research involves a brief interview, a 20-30 minute observation where you will be asked to complete a task, and an additional wrap up interview about the task.

The observation will include notes, but may also include audio and video recordings. All data collected will be transcribed to provide an accurate record of the observation and analyzed by our team. If allowed, audio and video may be reused for our final project.

***How much time will this take?***

This study will take about 20-30 minutes of your time. Most of this time will be spent on observation.

***Are there any risks involved in participating in this study?***

Being in this study does not involve any risks other than what you would encounter in daily life. You may feel uncomfortable or embarrassed about answering certain questions. You do not have to answer any question you do not want to. There is the possibility that others may find out what you have said, but we have put protections in place to prevent this from happening.

***Are there any benefits to participating in this study?***

There are no personal benefits for participating in this study.

***Can you decide not to participate?***

Your participation is voluntary, which means you can choose not to participate. There will be no negative consequences, penalties, or loss of benefits if you decide not to participate or change your mind later and withdraw from the research after you begin participating.

***Who will see my study information and how will the confidentiality of the information collected for the research be protected?***

The research records will be kept and stored securely. Your information will be combined with information from other people taking part in the study. When we write about the study or publish a paper to share the research with other researchers, we will write about the combined information we have gathered. We will not include your name or any information that will directly identify you. We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. However, some people might review or copy our records that may identify you in order to make sure we are following the required rules, laws, and regulations. For example, the DePaul University Institutional Review Board may review your information. If they look at our records, they will keep your information confidential.

Audio and video recordings will be kept until each member of this program finishes the Depaul HCI Master's program to ensure that this data is available if this project needs to be revisited.

***Who should be contacted for more information about the research?***

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study or you want to get additional information or provide input about this research, you can contact the researchers:

Harry Cao  
[xyharry@gmail.com](mailto:xyharry@gmail.com)  
773-543-3319

Jenny Falzone  
[jfalzonedesign@gmail.com](mailto:jfalzonedesign@gmail.com)  
815-985-0006

Anthony Gladney  
[lee\\_gladney@hotmail.com](mailto:lee_gladney@hotmail.com)  
618-954-6587

Chris Poynton  
[iamchrispoynton@gmail.com](mailto:iamchrispoynton@gmail.com)  
847-917-5309

Depaul Faculty Advisor:  
Cynthia Putnam  
[cputnam@cdm.depaul.edu](mailto:cputnam@cdm.depaul.edu)

You may also contact DePaul's Office of Research Services if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.

*You will be given a copy of this information to keep for your records.*

**Statement of Consent from the Subject:**

I have read the above information. I have had all my questions and concerns answered. By signing below, I indicate my consent to be in the research.

Signature: \_\_\_\_\_

Printed name: \_\_\_\_\_

Date: \_\_\_\_\_

**B. Observation Protocol**

**Materials**

- Notebook
- Computer (Laptop)
- Smartphone or Tablet
- Audio Recording
- Video Recording

**Step 1: Introduction**

Hi, my name is \_\_\_\_\_. Thank you for agreeing to be a part of this study today. I am studying the process of how people research and make decisions on which book they want to read.

*Explain the Purpose*

The data collected during this observation will be used only for this class project. Only our research team will know your identity. Your identity will not be shared with the public. This research will help us understand how people research which books they want to read, and what goes into the decision-making process of what to read next.

*Explain the What Will Happen*

I will observe you performing the requested activity. I just want to watch what you do and hear what you have to say. There are no right or wrong ways to complete this activity. I may ask you additional questions to clarify actions or comments before, during, and after the activity. Your actions and responses will be recorded. You will be identified by a pseudonym. This meeting should last 20-30 minutes.

*Informed Consent*

This activity is completely voluntary. You have the right to refuse to do any activity, or answer any questions. You may stop this interview at any time. Your actions and responses will be confidential and only used for this project. You will only be identified by your first name. You may also request a pseudonym for anonymity.

## **Step 2: Warm Up and Rapport Building**

How often do you read books?  
How many books do you read in a year?  
What type of books do you like to read?  
Do you have a favorite book or author?  
What are the last three books you have read?  
Do you like to read physical books, ebooks, or listen to ?

## **Step 3: Observation**

Now let's start the activity. I am interested in observing how you would find a book that you would like to read sometime in the near future. This can be accomplished in any way. I have a laptop that you can use, though you do not have to. You can also use any other medium available to you, for example, your smartphone or tablet. Use the tools that you would use if I was not here.

## **Step 4: Wrap Up**

Did you choose a book? If yes, which book did you pick and why?  
Which research methods are the most helpful to you?  
Which research methods are the least helpful to you?  
What criteria do you look for most when selecting a book?  
What criteria do you look for the least when selecting a book?  
Are you satisfied with your choice?  
Would you like additional information about this book before reading it? If yes, what information?  
Have you been satisfied from your book recommendations in the past?

Ask any questions that came up during the observation.

Do you have any questions for me at this time?

Make sure you have recorded demographic information. Clarify or add any missing information.

What was this experience like for you?  
How could this process be improved?

## **C. Observation Task Grid**

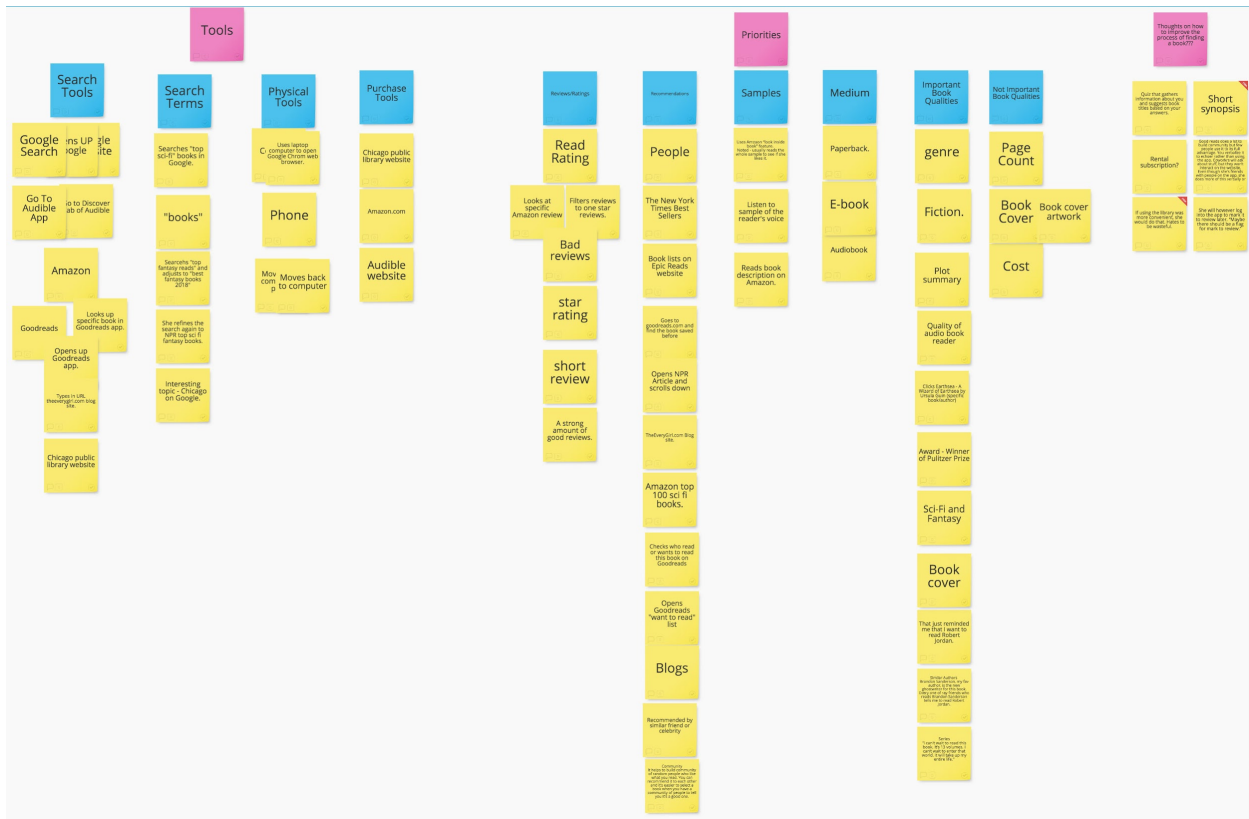
[Task Grid](#) (Axure link for closer detail)

Subtasks	Researcher uses a search engine.	Researcher reads random article.	Researcher visits a blog they have bookmarked and visits frequently.	Researcher visits Amazon.	Researcher reads reviews on Amazon.	Researcher reads sample of the book on Amazon.	Researcher researchers finer points about a book on Amazon.	Researcher visits Goodreads for community recommendations.	Researcher visits Goodreads for "to read" list.	Researcher visits Audible.
Goals	Find content that provides a recommendation on books or authors.	Find a book or author from the article content.	Go to a reliable source for a book or author recommendation.	Look at reviews, samples, and book details.	Read reviews and ratings for more information on a specific book.	Get an idea about the voice, tone, and style of the book.	Find out more about the book itself.	See who in their community has read or wants to read a particular book.	Explore their "to read" list of saved books.	Find an audio book.
Considerations/Influence	How easy is it to find a good article? What genres/authors do the search results cover?	Is this article about a specific genre or author? Have I read any of the books/authors in this article? Who wrote this article?	How much success have you found in this blog before? What is the subject of the blog? What is the subject of the specific article?	Are there recommendations based on previously purchased books? Is the book I want in stock in the medium I prefer?	Who is writing this review? Are the reviews well written? Does this review provide any context into the reviewer's reading habits/preferences? Does the star rating accurately reflect the review?	Is this the correct genre? Is this well written? Is the story captivating right away?	Who is the author? What is the genre? What is it about? What is the price? What does the cover look like? What format is this available in?	Who has read this book? Who wants to read this book? Who recommends this book? Do I have a similar taste to those who have recommended or plan to read this book? Who has read similar books or authors?	Do I remember why I put this book on my list? Do I still want to read this book?	Who is reading the book? What does their voice sound like?
Pain Points	Information overload. Unhelpful recommendations. Poorly organized articles.	Information overload. Unhelpful recommendations. Poorly organized articles.	Lack of new content. Change in quality of articles.	Information overload. Lack of reviews. Poor quality of reviews. Misleading ratings.	The book does not meet the goals or preferences of the user. Lack of sample. Length of sample.	Lack of information.	Lack of community. Lack of community communication.	Forgetting why something is on the list. Changing one's mind.	Annoying reader.	
Tools	Computer Smart Phone	Computer Smart Phone Website	Computer Smart Phone Website	Computer Smart Phone Website App	Computer Smart Phone Website App	Computer Smart Phone Website App	Computer Smart Phone Website App	Computer Smart Phone Website App	Computer Smart Phone Website App	Computer Smart Phone Website App
				Reviews (Written Reviews and Ratings)	Written-Digital sample of the first X chapters.	Book Details-Synopsis	Recommendations Community			Audio Sample

KEY:   Crucial to task   Helpful, but not necessary

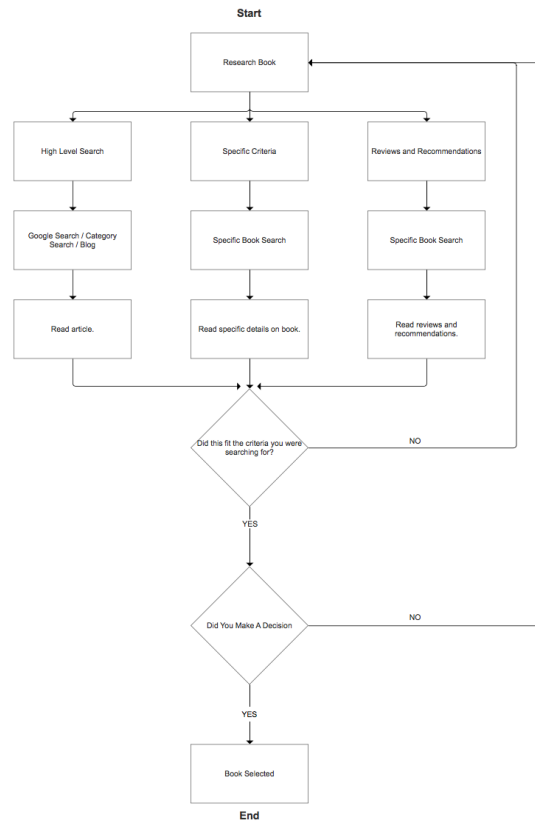
## D. Affinity Diagram

[Stormboard Link](#) (Axure link for closer detail - image below)



## E. Observation Flow Diagram

[Flow Diagram](#) (Axure link for closer detail)



## F. Interview Informed Consent Form

### ADULT CONSENT TO PARTICIPATE IN RESEARCH

#### Active and Non-Active Readers

**Principal Investigator:** Harry Cao, Jenny Falzone, Anthony Gladney, Chris Poynton (Graduate Students)

**Institution:** DePaul University, Chicago, Illinois, USA

**Department (School, College):** Computing and Digital Media (“CDM”)

**Faculty Advisor:** Cynthia Putnam, Ph.D., CDM, DePaul University

#### *What is the purpose of this research?*

We are asking you to be in a research study because we are trying to learn more about the process of how people research and make decisions on which book they want to read. This study is being conducted by Harry Cao, Jenny Falzone, Anthony Gladney, and Chris Poynton at DePaul University as a requirement

to obtain their Master's degree. This research is being supervised by their faculty advisor, Cynthia Putnam

We hope to include about 8 people in the research.

***Why are you being asked to be in the research?***

You must be age 18 or older to be in this study. This study is not approved for the enrollment of people under the age of 18.

***What is involved in being in the research study?***

If you agree to be in this study, the research involves a 40-minute interview including warm-up, deep focus, retrospective, and demographic questions. This interview will be audio recorded for future reference.

***How much time will this take?***

This study will take about 30 minutes of your time.

***Are there any risks involved in participating in this study?***

Being in this study does not involve any risks other than what you would encounter in daily life. You may feel uncomfortable or embarrassed about answering certain questions. You do not have to answer any question you do not want to. There is the possibility that others may find out what you have said, but we have put protections in place to prevent this from happening.

***Are there any benefits to participating in this study?***

There are no personal benefits for participating in this study.

***Can you decide not to participate?***

Your participation is voluntary, which means you can choose not to participate. There will be no negative consequences, penalties, or loss of benefits if you decide not to participate or change your mind later and withdraw from the research after you begin participating.

***Who will see my study information and how will the confidentiality of the information collected for the research be protected?***

The research records will be kept and stored securely. Your information will be combined with information from other people taking part in the study. When we write about the study or publish a paper to share the research with other researchers, we will write about the combined information we have gathered. We will not include your name or any information that will directly identify you. We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. However, some people might review or copy our records that may identify you in order to make sure we are following the required rules, laws, and regulations. For example, the DePaul University Institutional Review Board may review your information. If they look at our records, they will keep your information confidential.

Audio recordings will be kept until each member of this program finishes the Depaul HCI Master's program to ensure that this data is available if this project needs to be revisited.

***Who should be contacted for more information about the research?***

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study or you want to get additional information or provide input about this research, you can contact the researchers:

Harry Cao  
[xyharry@gmail.com](mailto:xyharry@gmail.com)  
773-543-3319

Jenny Falzone  
[jfalzonedesign@gmail.com](mailto:jfalzonedesign@gmail.com)  
815-985-0006

Anthony Gladney  
[lee\\_gladney@hotmail.com](mailto:lee_gladney@hotmail.com)  
618-954-6587

Chris Poynton  
[iamchrispoynton@gmail.com](mailto:iamchrispoynton@gmail.com)  
847-917-5309

Depaul Faculty Advisor:  
Cynthia Putnam  
[cputnam@cdm.depaul.edu](mailto:cputnam@cdm.depaul.edu)

You may also contact DePaul's Office of Research Services if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.

***You will be given a copy of this information to keep for your records.***

**Statement of Consent from the Subject:**

I have read the above information. I have had all my questions and concerns answered. By signing below, I indicate my consent to be in the research.

Signature: \_\_\_\_\_

Printed name: \_\_\_\_\_

Date: \_\_\_\_\_

## **G. Interview Protocol**

### **Research Question**

What are user needs for a technology-based product/service to help people find books to read?

- How do people research which books they want to read, and what goes into the decision-making process?
- How could the process of finding a new book to read be improved?

### **Screener Questions**

Are you at least 18 years of age or older?

- If no, thank them for their time and end the interview.

### **Introduction**

Hi, my name is \_\_\_\_\_. Thank you for agreeing to be a part of this study today. I am studying the process of how people research and make decisions on which book they want to read.

[Hand user informed consent form.]

Do you mind if I record this interview with audio?

[Proceed if they agree]

As we move through this interview, please feel free to ask me questions for clarification. Please keep in mind that there are no right or wrong answers. If there is a question that you would prefer not to answer or do not have an answer, please let me know and we can skip it.

Do you have any questions before we begin?

Let's get started.

### **Warm Up Questions**

In this interview, I want to focus on the process that you use to research and select books to read. I want to start with a few questions about your reading habits and preferences.

What does it mean to be an active reader (of books)?

- Do you consider yourself an active reader?  
(Label subject accordingly in order to categorize them, Active Reader or Non-Active Reader)

In the last 3 months, how many books did you read?

- When did you read?
  - Where did you read? (home, train, public areas?)
- About how much time did you spend reading books daily in the last three months?
  - Is that pretty typical?

(This will further reinforce their response to the previous question)

What medium do you prefer?

- Is your preference dependent on the type of book?

(Coach their answer if they need it: “Physical/paperback, digital copy, audio”)

What type of books do you currently like to read? Why?

Who are your favorite authors? Why?

Any favorite books?

- When did you read [x], [x]?

### **Deep Focus Questions**

Thinking about the last time you chose a book that you have already read (or currently reading), walk me through how you chose that book?

- If online, Probe - If search engine, what search engine do you prefer?
- If app, Probe - Which app do you prefer?
- Are you currently reading, or have you completed the book?
  - Did you enjoy it? Why, why not?

Where did you buy this book?

- (If they did not buy online – ask – Have you ever bought a book online?)
- If yes, Tell me about the last time.

What criteria did you look for when selecting [title]?

- If reviews - what aspects of reviews do you look for? Why?
- If personal recommendations - how does someone's recommendation affect your decision?
- If a blog - how does that affect your decision?
- If a series - why would you select a series?
- If price – what is the range? What is too expensive?

[If the user mentions multiple criteria] Is there a specific criterion you value the most?

Now we want you to tell us about criteria that you did not mention. How important are \_\_\_\_ to you decision? :

- Reviews/Ratings - what aspects of reviews do you look for? Why?

- Personal recommendations - how does someone's recommendation affect your decision?
- Blog - how does that affect your recommendation?
- Series - why would you select a series?
- If price – what is the range? What is too expensive?

### **Retrospective**

What is the best book you've been recommended and why did you like it? How did you find the book?

What is the worst book you've been recommended and why did you not like it? How did you find the book?

In a perfect world, what would have made the worst experience better?

We are thinking about creating a tool to help people find books. What features should that tool contain?

What would encourage you to read more?

### **Demographics**

How old are you?

What gender do you identify as?

Where do you live?

What is your profession?

### **Closing**

Thank you for your time today.

Is there anything else that you feel we did not discuss, or that you would like to elaborate on?

Do you have any questions for me?

Thank you for your time. This was very helpful to our research.

### **Schedule**

Monday, February 4

- Revise and complete Observation Report
- Complete Idea Report Draft

Sunday, February 10

- Draft Informed Consent Form for interview questions.
- Submit Interview Draft

Monday, February 11

- Start reviewing other group's Interview Protocol

Wednesday, February 13

- Complete review of other group's Interview Protocol

Saturday, February 16

- Review critique of our Interview Draft
- Update Interview Draft

Sunday, February 17 - Tuesday February 19

- Recruit participants
- Conduct interviews
- Transcribe and Code Interviews

Wednesday, February 20 - Saturday February 23

- Complete Coding and Affinity Diagram
- Combine team notes
- Develop and refine themes and findings

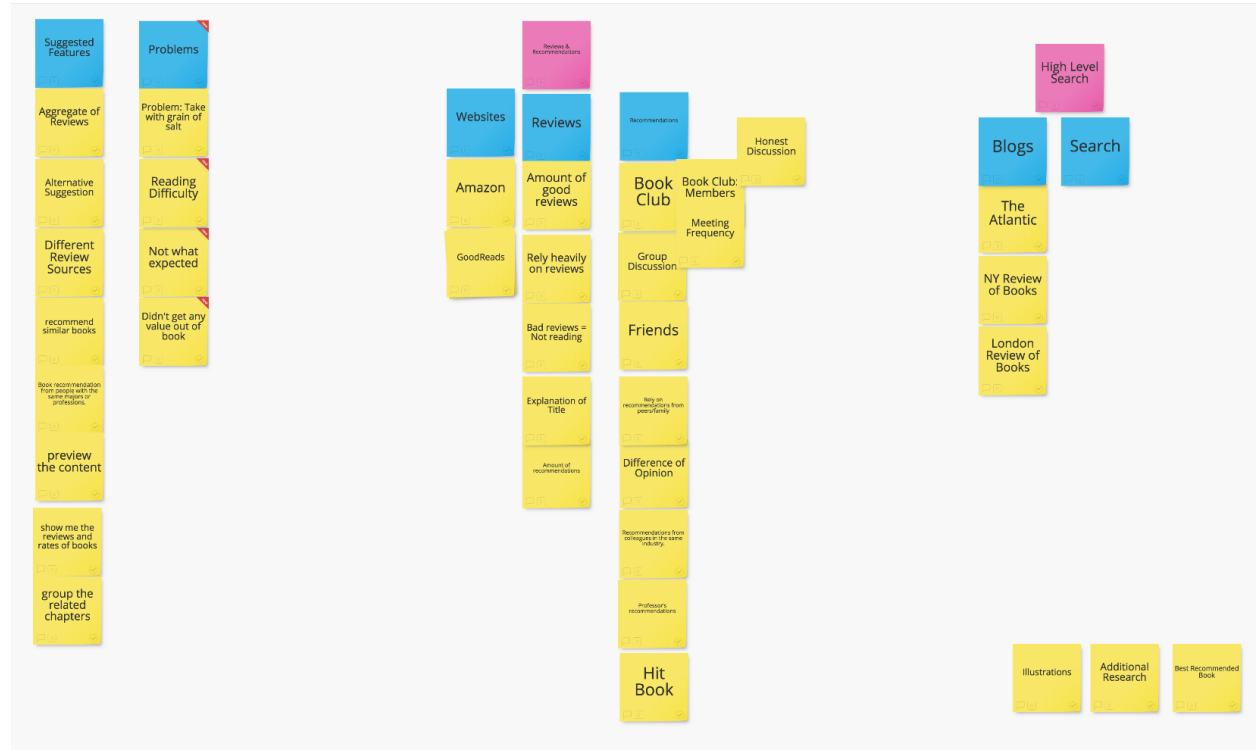
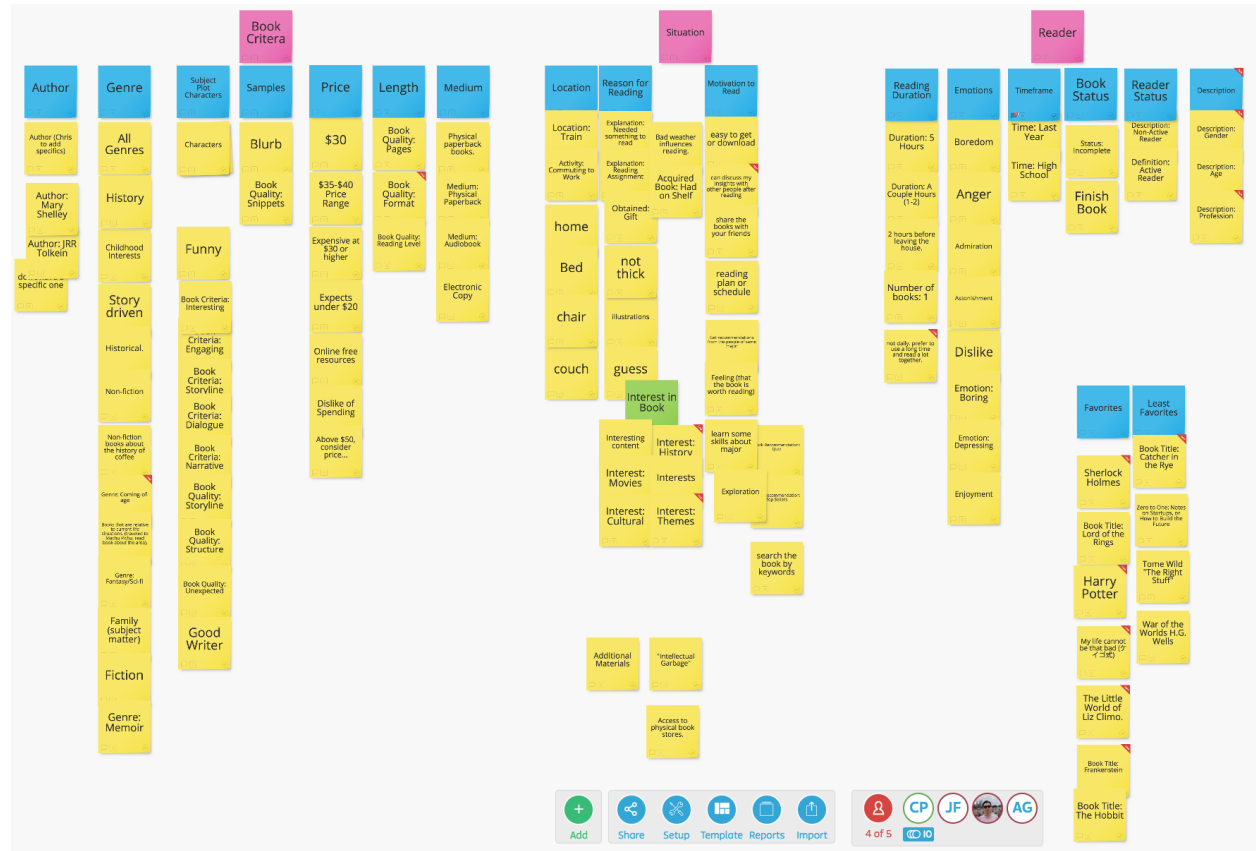
Saturday, February 23

- Draft Interview Report

Sunday, February 24

- Complete Final Interview Report and Peer Grade Template

# H. Interview Affinity Diagram

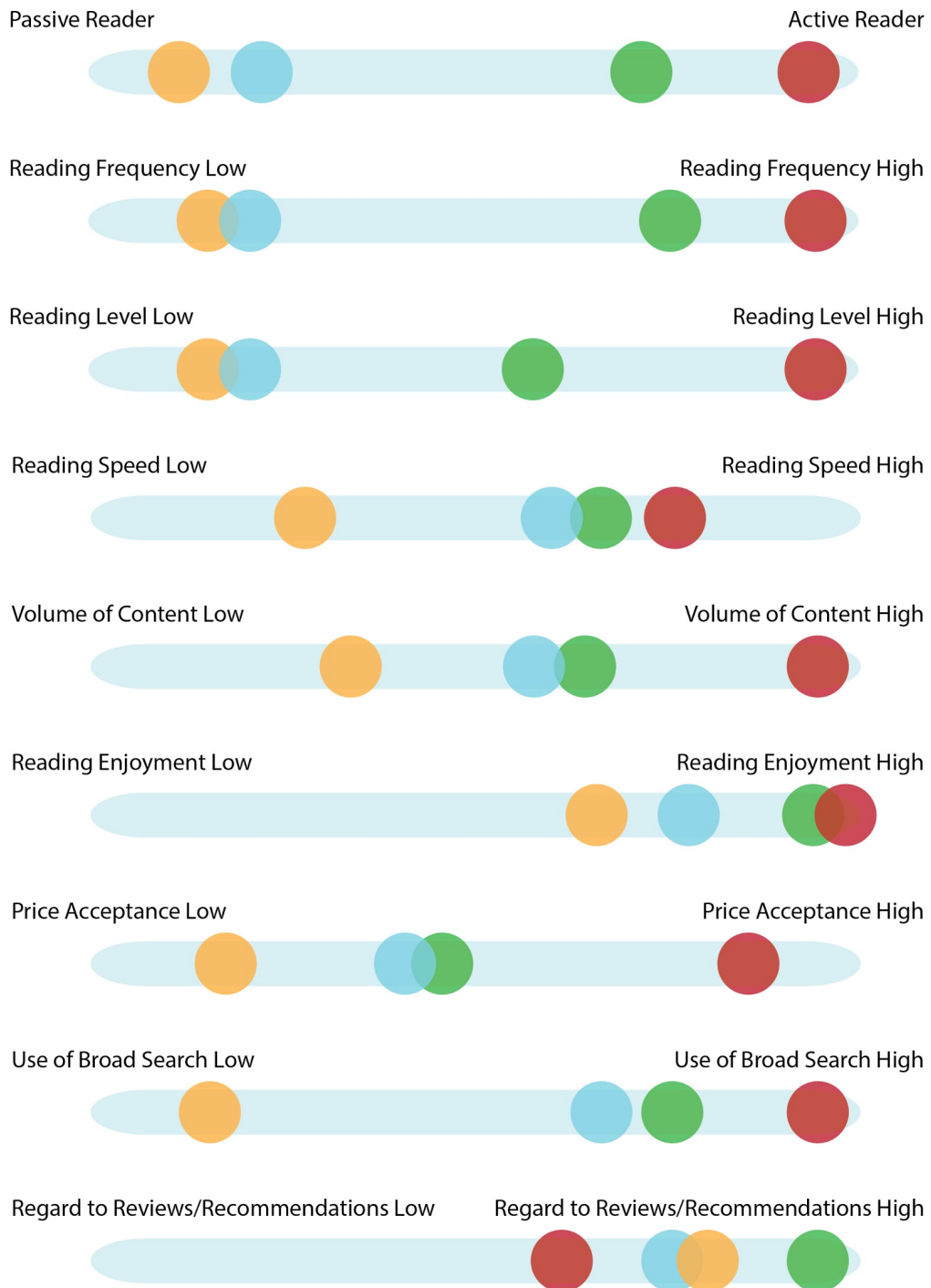


# I. Interview Final Codes

Name	Count	Name	Count
Additional Research	1	Purchase: Little to No Research	1
Blog vs Rating	1	Purchase: Publisher	1
Book Criteria	0	Reader	0
Book Criteria: Author	3	Reader: Book Count: 20	1
Book Criteria: Author: Colson Whitehead	2	Reader: Book Status	0
Book Criteria: Author: Demographic	1	Reader: Book Status: Completed	2
Book Criteria: Author: Demographic: Yo...	1	Reader: Book Status: Dislikes not finish...	1
Book Criteria: Author: George Saunders	1	Reader: Book Status: Read Multiple Tim...	1
Book Criteria: Author: Jesymn WArD	1	Reader: Demographics	1
Book Criteria: Author: Jonathan Francin	1	Reader: Demographics: Age	1
Book Criteria: Author: Jonathan Franzen	4	Reader: Demographics: Gender	1
Book Criteria: Author: New Authors	1	Reader: Demographics: Location	1
Book Criteria: Author: Orwell	1	Reader: Demographics: Profession	1
Book Criteria: Author: Thomas Pynchon	1	Reader: Desire: More Time	0
Book Criteria: Author: World View	1	Reader: Emotion	0
Book Criteria: Author: Zadie Smith	1	Reader: Emotion: Admiration	1
Book Criteria: Genre	2	Reader: Emotion: Anger	2
Book Criteria: Genre: Contemporary Lit	1	Reader: Emotion: Astonishment	1
Book Criteria: Genre: Dinosaurs	2	Reader: Emotion: Boredom	1
Book Criteria: Genre: Fiction	4	Reader: Emotion: Enjoyment	2
Book Criteria: Genre: History	4	Reader: Emotion: Funny	1
Book Criteria: Genre: NonFiction	4	Reader: Emotion: Obsession	1
Book Criteria: Genre: Russian Lit	1	Reader: Emotion: Positive	2
Book Criteria: Genre: Science	1	Reader: Emotion: Tired	1
Book Criteria: Genre: Variety	1	Reader: Favorite	3
Book Criteria: Length	0	Reader: Favorite: Master and Margarita	2
Book Criteria: Length: 300 Pages	1	Reader: Favorite: Melita	2
Book Criteria: Medium	0	Reader: Favorite: Moby Dick	2
Book Criteria: Medium: Digital Copy	1	Reader: Favorite: Sing Unburried Sling	2
Book Criteria: Medium: Physical Copy	2	Reader: Least Favorite	3
Book Criteria: Price	2	Reader: Location	1
Book Criteria: Price: Max	2	Reader: Location: Bed	1
Book Criteria: Publisher	1	Reader: Location: Chair	1
Book Criteria: Samples	2	Reader: Location: Couch	1
Book Criteria: Series	1	Reader: Motivation: Discussion	2
Book Criteria: Subject/Plot	3	Reader: Reader Status	0
Book Criteria: Subject/Plot: "Self Indulg...	1	Reader: Reader Status: Fast Reader	1
Book Criteria: Subject/Plot: Clearly Writ...	1	Reader: Reading Duration	0
Book Criteria: Subject/Plot: Episodic	1	Reader: Reading Duration: 1-2 Hours	2
Book Criteria: Subject/Plot: Fake Tension	1	Reader: Reading Duration: 1-2 Weeks	1
Book Criteria: Subject/Plot: Funny	1	Reader: Reading Duration: 5 Hours	1
Book Criteria: Subject/Plot: Noodling	1	Reader: Reading Duration: Read in 1 W...	1
Book Criteria: Subject/Plot: Self Indulg...	1	Reader: Timeframe	1
Book Criteria: Subject/Plot: Upper-Mid...	1	Reader: Timeframe: Before Bed	2
Criteria: Medium: Paperback	1	Reader: Timeframe: Just Finished	1
High Level Search	0	Reader: Timeframe: Weekends	1
High Level Search: Blogs/Lists	1	Reviews: Aggregation	1
High Level Search: Search	1	RR	0
Problems	0	RR: Articles	1
Purchase: Howell's	1	RR: Recommendations	6
Purchase: Online	1	RR: Recommendations: Book Club	4
Purchase: Publisher	1	RR: Recommendations: GoodReads	7
Purchase: Publisher: University of Chic...	1	RR: Recommendations: Honest Conver...	0
Purchase: Amazon	4	RR: Recommendations: Hype	1
Purchase: Impulse	1	RR: Recommendations: Personal Reco...	3
Purchase: Little to No Research	1	RR: Recommendations: Personal Reco...	1
		RR: Recommendations: Personal Reco...	1
		RR: Recommendations: Recently Reco...	1
		RR: Recommendations: Success Rago...	1
		RR: Recommendations: Twitter	2
		RR: Recommendations: Yelp	1
		RR: Reviews	11
		RR: Reviews: Amazon	2
		RR: Reviews: Amazon: Bad Reviews	1
		RR: Reviews: Basic Reviews	2
		RR: Reviews: Basic vs Detailed Reviews	1
		RR: Reviews: Detailed Reviews	1
		RR: Reviews: Different Sources	2
		RR: Reviews: Engaged with Topic	1
		RR: Reviews: Good Reviews	1
		RR: Reviews: Harpers	1
		RR: Reviews: Literary Critics	3
		RR: Reviews: Literary Critics: David RE...	1
		RR: Reviews: Literary Critics: James W...	1
		RR: Reviews: London Review of Books	1
		RR: Reviews: Good Reviews	1
		RR: Reviews: Harpers	1
		RR: Reviews: Literary Critics	3
		RR: Reviews: Literary Critics: David RE...	1
		RR: Reviews: Literary Critics: James W...	1
		RR: Reviews: London Review of Books	1
		RR: Reviews: Magazines	1
		RR: Reviews: New York Review of Books	1
		RR: Reviews: Ratings	2
		RR: Reviews: Subject Matter Experts	2
		RR: Reviews: Subject Matter Experts: EL...	1
		RR: Reviews: The Atlantic	1
		RR: Reviews: The New Yorker	1
		RR: Word of Mouth	0
		Situation	0
		Situation Reason: Lack of Interest	1
		Situation: Motivation	0
		Situation: Motivation: Education	2
		Situation: Motivation: Ethics	3
		Situation: Motivation: Exploration	3
		Situation: Motivation: Visible Progress	1
		Situation: Reason	0
		Situation: Reason: Different Point of View	1
		Situation: Reason: Good Feeling	1
		Situation: Reason: Interest	4
		Suggested Features	2

## J. Draft Personas Scales

- Eugene
- Brian
- AJ
- Jingru



## K. Draft Personas

### Jane Williams - *Non-Active Reader*



*"I am busy, so I don't usually have the time to spend on books when I can just wait for the movie."*

#### DEMOGRAPHICS

Age: 26

Sex: Female

Location: New York City

Profession:

Marketing Coordinator

#### BIO

Jane is a full time marketing coordinator. She works long hours and is usually exhausted by the time she gets home. When she does have time, she would rather spend it with friends or catching up on TV shows. Occasionally though, she hears about a book through a friend or popular media. She is hesitant to read because the risk of wasting her time on a bad book outweighs the possible benefit. She is also picky on what she reads. She occasionally reads for work, but more often than not wants some form of escapism. Jane needs a solution that she knows will offer her a variety of trustworthy recommendations, while allowing her to dive more into what the books is about to make sure it meets her interests before she buys it.

Intelligent

Busy

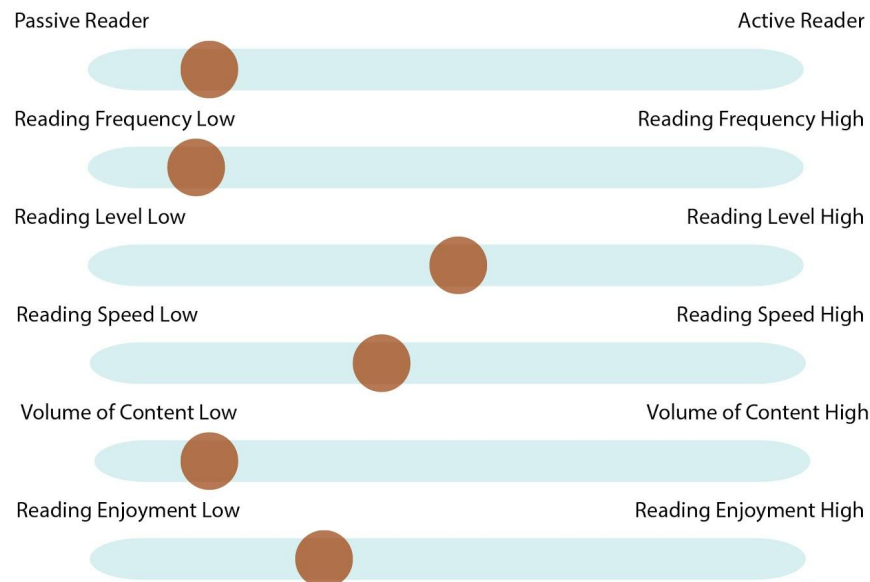
Selective

#### Goals

- Looking for entertaining books that are currently in the spotlight.
- Finding books that are easy for her to read.
- Talking about a hip book with friends and coworkers.

#### Frustrations

- Wasting time on boring or uninteresting books.
- Lack of quality, trustworthy reviews.



## Eric Smallton - *Active Reader*



*"Reading is an addiction for me."*

### BIO

Eric received his Masters Degree in business 2 years ago, and he is constantly looking to expand his knowledge within his industry. He is a small business owner who specializes in the art and science of coffee. Though he is currently focused on expanding his business, he is willing to read almost anything that will offer an interesting perspective, teach him something new, or just tell a good story. Eric needs a solution that will offer a variety of recommendations and information on books he may or may not be familiar with.

Ambitious

Professional

Business Oriented

### DEMOGRAPHICS

**Age:** 35

**Sex:** Male

**Location:** Chicago, IL

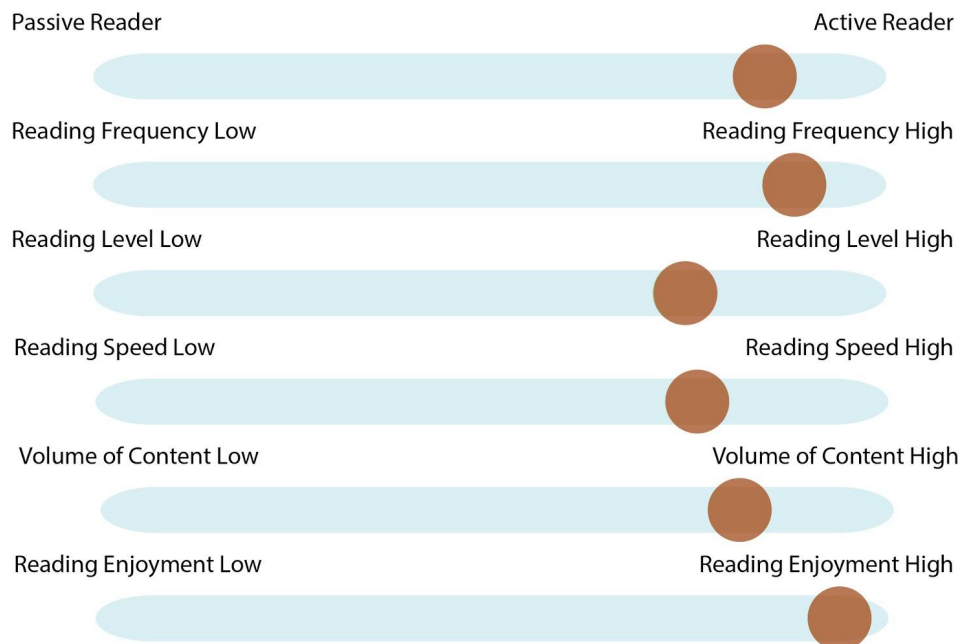
**Profession:** Small business owner

### Goals

- Looking to expand his existing business.
- Aggressively searching for new knowledge within his industry.
- Wants to read anything that is recommended by a friend/family.
- Connect with like minded individuals who read the same material.

### Frustrations

- Purchasing a book that falls short of his expectations.
- Not being able to find a physical copy of a book he is looking for.
- Spending money on a book that has negative reviews on an internet forum.



## L. Survey

### Research Question

What are user needs for a technology-based product/service to help people find books to read?

- How do people research which books they want to read, and what goes into the decision-making process?
- How could the process of finding a new book be improved?

### Hypothesis

#### 1. Escapism is the biggest motivating factor for reading.

Section: General

IV: Active Readers and Non Active Readers (Nominal)

DV: Motivation Influence: (1)Not at All to (5)Very Motivating (Ordinal)

Test: Mann Whitney U

#### 2. There is no clear preference of criteria when deciding on what book to read.

Section: Criteria

IV: Active Readers and Non Active Readers (Nominal)

DV: Importance: (1)Low to (5)High (Ordinal)

Test: Mann Whitney U

#### 3. Personal reviews are more important than reviews from unknown sources or rating systems.

Section: Reviews and Recommendations

IV: Active Readers and Non Active Readers (Nominal)

DV: Importance: (1)Not Important to (5)Very Important (Ordinal)

Test: Mann Whitney U

### Introduction

Thank you for agreeing to be a part of this survey today. We are studying how people research and make decisions on books they want to read for leisure. Also, we want to understand people's reading habits and motivations. This study is conducted by Harry Cao, Jenny Falzone, Anthony Gladney and Chris Poynton through DePaul University. Our professor, Cynthia Putnam, is supervising our research.

To participate in this study you must fulfill the following requirements:

1. You must be 18 years of age or older.
2. Have read (or listened to) at least one book for leisure in the past year.

This survey will take about 20-30 minutes to complete. All responses are anonymous and we will not collect identifiable, personal information. Your participation in this survey is voluntary and you may discontinue your participation at any time.

If you have any further questions please contact:

- Harry Cao: xxyharry@gmail.com
- Jenny Falzone: jfalzonedesign@gmail.com
- Anthony Gladney: anthony.l.gladney@gmail.com

- Chris Poynton: [iamchrispoynton@gmail.com](mailto:iamchrispoynton@gmail.com)

You may also contact our Depaul Faculty Advisor:

- Cynthia Putnam: [cputnam@cdm.depaul.edu](mailto:cputnam@cdm.depaul.edu)

### Reading Habits:

Question	Instructions	Answers	Reasons
How many books did you read (or listen to) for leisure in the last year?	Pick One  If less than 4, branch to non-active reader.	1 or less, 2-4, 5-10, 11-20, 21-50, 51-100, over 100	To identify reading habits
Is this volume of reading typical for you?	Pick One	Yes/No	To identify reading habits
How often did you read (or listen to) a book for leisure in the last week?	Pick One	0 days, 1-2 days, 3-4 days, 5-6 days, every day, uncertain	To identify reading habits
On average, about how long did you read (or listen to) a book for leisure in the last sitting?	Pick One	Less than 15 mins, 15-30 mins, 30-60 mins, more than 1 hour, other, uncertain	To identify reading habits
What motivates you to read (or listen to) books for leisure?	Open-Ended	Open-Ended	To identify reading motivations
What would encourage you to read and/or listen to audiobooks for leisure more?	Open-Ended	Open-Ended	To identify reading motivations
What benefits do you feel you receive from reading or listening to audiobooks, if any?	Open-Ended	Open-Ended	To identify personal opinions on the benefits of reading

### High Level Search:

Question	Instructions	Answers	Reasons
How often do you actively seek out new books for leisure?	Pick One  (If user picks 'Never', skip next two questions.)	1 Never 2 3 4 5 Frequently Uncertain	To identify frequency of book seeking

Thinking over the last year, how often have you used the following resources to help choose a book for leisure?	Matrix of choices Internet/Blogs, Friends/Family, Book Stores, Book Club Amazon Good Reads Other (Fill In Own)	1 Never 2 3 4 5 Very often Uncertain	To identify primary tools used in book seeking
How much do you value book lists provided on blogs and/or websites?	Pick One	1 None 2 3 4 5 High Value No Opinion	To identify value of blog-related sources
How difficult is it for you to find something to read or listen to?	Pick One	1 Very Difficult 2 3 4 5 Very Easy No Opinion	To identify success rate

**Book Criteria:**

Question	Instructions	Answers	Reasons
How do you consume books for leisure?	Matrix of Choices Paperback, Hard Cover, Digital, Audio, No Opinion, Fill In Own	1. I never use this medium 2 3 4 5 This is my most common consumption medium	To identify preference of previously established criteria
How important or unimportant is the consumption medium?	Pick One	1 Low Importance 2 3 4 5 High Importance No Opinion	To identify importance of previously established criteria
Page Break			
What were (up to five) your most favorite books you read for leisure in recent memory?	Open-Ended	Open-Ended	To identify book titles enjoyed by the user

Why did you select that book(s) as a favorite?	Open-Ended	Open-Ended	To understand preferences
Are you currently reading a book for leisure?	Yes/No	Yes/No *Branching (skip next 2 questions)	To identify current reading status of user
Page Break			
What are you reading right now?	Open-Ended	Open-Ended	To identify current reading status of user
Why did you choose that book?	Open-Ended	Open-Ended	To understand motivation behind book choices
Page Break			
How important is the following criteria when choosing a book for leisure?	Genre, Author, Part of a Series, Book Sampling, Price, Page Count, Reading Level	1 Low Importance 2 3 4 5 High Importance No Opinion	To define parameters around previously established criteria
Have you spent extra time to compare book prices or look for cheaper options in the last year?	Pick One	Yes/No	To identify importance of previously established criteria
What is your preferred price range when buying a book?	Pick One	Less than \$10, \$10-\$15, \$16-\$25, \$26-\$35, \$36+, I don't know.	To define parameters around previously established criteria

**Reviews and Recommendations:**

Question	Instructions	Answers	Reasons
How important or unimportant are online book reviews from people you do not personally know, e.g. on blogs, lists, magazines when selecting a book?	Pick One	1 Low Importance 2 3 4 5 High Importance No Opinion	To identify importance of reviews
Where do you typically look for reviews?	Matrix of choices  Amazon, Google, Blog,	1. I never use this a reference 2 3 4	To define parameters around review sources

	GoodReads, I do not read book reviews Fill In Own	5 I read reviews from this source very often	
How important or unimportant are star rating systems when selecting a book?	Pick One	1 Low Importance 2 3 4 5 High Importance No Opinion	To identify importance rating systems
How important or unimportant are personal recommendations when selecting a book?	Pick One	1 Low Importance 2 3 4 5 High Importance No Opinion	To identify importance of reviews
The last time you selected a book for leisure, about how many reviews (personal or other) did you consult before selecting a book?	Pick One	None, 1-3,4-6. 7-9, 10+, Uncertain	To define amount of reviews needed to make a decision

**Demographics:**

Question	Instructions	Answers	Reasons
How old are you?	Fill In	Fill In	To understand users identity
What gender do you identify as?	Pick One	Male Female Text Entry Rather Not Say	To understand users identity
What is your race?	Pick One	1. White 2. Black or African-American 3. American Indian or Alaskan Native 4. Asian 5. Native Hawaiian or other Pacific islander 6. From multiple races 7. Some other race (please specify)	To understand users identity

What state do you live in?	Fill In	Fill In	To understand users identity
What is your highest level of education completed?	Pick One	<ol style="list-style-type: none"> <li>1. Less than a high school degree</li> <li>2. High school degree or equivalent (GED)</li> <li>3. Some college but no degree</li> <li>4. Associate Degree</li> <li>5. Bachelor Degree</li> <li>6. Graduate Degree</li> </ol>	To understand users identity
What is your employment status?	Pick One	<ol style="list-style-type: none"> <li>1. Employed, working 1-39 hours per week</li> <li>2. Employed, working 40 or more hours per week</li> <li>3. Not employed, looking for work</li> <li>4. Not employed, NOT looking for work</li> <li>5. Retired</li> <li>6. Disabled, not able to work</li> </ol>	To understand users identity
What is your income level for 2018?	Pick One	<ol style="list-style-type: none"> <li>1. \$0 – \$9,999</li> <li>2. \$10,000 – \$19,999</li> <li>3. \$20,000 – \$29,999</li> <li>4. \$30,000 – \$39,999</li> <li>5. \$40,000 – \$49,999</li> <li>6. \$50,000 – \$59,999</li> <li>7. \$60,000 – \$69,999</li> <li>8. \$70,000 – \$79,999</li> <li>9. \$80,000 – \$89,999</li> <li>10. \$90,000 – \$99,999</li> <li>11. \$100,000 or more</li> <li>12. Rather Not Say</li> </ol>	To understand users identity

**Thank you for your time and completing this survey.**

**Schedule**

Tuesday 2/26

- Complete survey draft
- Submit survey draft to D2L

Wednesday 2/27

- Review survey draft in class

Saturday 3/2 - Sunday 3/3

- Review survey feedback
- Update survey

Sunday 3/3

- Submit survey draft 2

Monday 3/4

- Receive other group's survey draft

Monday 3/4 - Wednesday 3/6

- Critique other group's survey draft

Wednesday 3/6

- Submit other group's survey draft to D2L

Thursday 3/7 - Saturday 3/9

- Refine survey based off feedback from instructor and other group
- Create online survey
- Recruit Participants

Saturday 3/9 - Saturday 3/16

- Complete recruiting

Saturday 3/16 - Sunday 3/17

- Analyze Results
- Develop Themes and Visualizations
- Write Report
- Start Presentation

Monday 2/18 - Tuesday 3-19

- Finalize Report
- Finalize Presentation

Tuesday 3/19

- Submit Final Report
- Submit Final Presentation

Wednesday 3/20

- Present report

Thursday 3/21 - Saturday 3/24

- Critique other group's final report

Saturday 3/24

- Submit critique of other groups final report.

## M. Survey Data

- [LINK TO FULL RESULTS PDF](#)

## N. Survey Analysis

### 1. Hypothesis 1

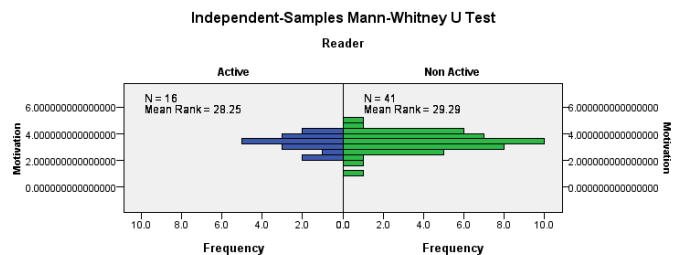
Escapism is the biggest motivating factor for reading.

$$U_{(55)} = 316, Z=0.21, p = .83$$

We conducted a Mann Whitney U test to compare the motivation importance from non active and active readers. There was no significant difference of the medians between the motivation importances at alpha level .05 ( $U_{(55)} = 316, Z = 0.21, p = .83$ ). (The mean ranks of non active and active readers were 28.25 and 29.29, respectively).

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Motivation is the same across categories of Reader.	Independent-Samples Mann-Whitney U Test	.831	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.



Total N	57
Mann-Whitney U	316.000
Wilcoxon W	452.000
Test Statistic	316.000
Standard Error	56.098
Standardized Test Statistic	-.214
Asymptotic Sig. (2-sided test)	.831

## Mann-Whitney Test

		Ranks		
	Reader	N	Mean Rank	Sum of Ranks
Motivation	Non Active	41	29.29	1201.00
	Active	16	28.25	452.00
	Total	57		

### Test Statistics<sup>a</sup>

Motivation	
Mann-Whitney U	316.000
Wilcoxon W	452.000
Z	-.214
Asymp. Sig. (2-tailed)	.831

a. Grouping Variable: Reader

## 2. Hypothesis 2

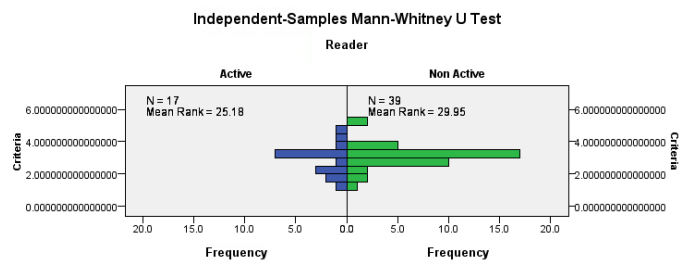
There is no clear preference of criteria when deciding on what book to read.

$$U_{(54)} = 275, Z=1.02, p = .31$$

We conducted a Mann Whitney U test to compare the preference of criteria from non active and active readers. There was no significant difference of the medians between the preference of criteria at alpha level .05 ( $U_{(54)} = 275, Z = 1.02, p = .31$ ). (The mean ranks of non active and active readers were 29.95 and 25.18, respectively).

Hypothesis Test Summary			
Null Hypothesis	Test	Sig.	Decision
1 The distribution of Criteria is the same across categories of Reader.	Independent-Samples Mann-Whitney U Test	.313	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.



Total N	56
Mann-Whitney U	275.000
Wilcoxon W	428.000
Test Statistic	275.000
Standard Error	55.988
Standardized Test Statistic	-1.009
Asymptotic Sig. (2-sided test)	.313

## Mann-Whitney Test

		Ranks		
	Reader	N	Mean Rank	Sum of Ranks
Criteria	Non Active	39	29.95	1168.00
	Active	17	25.18	428.00
Total		56		

### Test Statistics<sup>a</sup>

	Criteria
Mann-Whitney U	275.000
Wilcoxon W	428.000
Z	-1.009
Asymp. Sig. (2-tailed)	.313

a. Grouping Variable:  
Reader

### 3. Hypothesis 3

Personal recommendations are more important than reviews from unknown sources or rating systems.

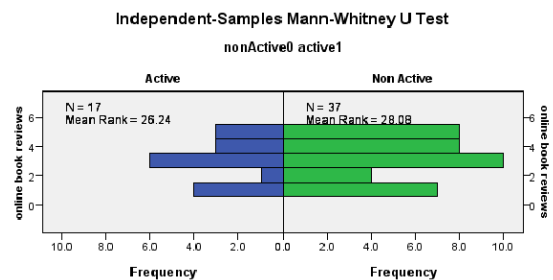
#### Online Book Reviews

$$U_{(52)} = 293, Z = .41, p = .68$$

We conducted a Mann Whitney U test to compare the importance of online book reviews from non active and active readers. There was no significant difference of the medians between the importance of online book reviews at alpha level .05 ( $U_{(52)} = 293, Z = .41, p = .68$ ). (The mean ranks of non active and active readers were 28.08 and 26.24, respectively).

Hypothesis Test Summary			
Null Hypothesis	Test	Sig.	Decision
1 The distribution of online book reviews is the same across categories of nonActive0 active1.	Independent-Samples Mann-Whitney U Test	.681	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.



Total N	54
Mann-Whitney U	293.000
Wilcoxon W	446.000
Test Statistic	293.000
Standard Error	52.283
Standardized Test Statistic	-.411
Asymptotic Sig. (2-sided test)	.681

## Mann-Whitney Test

	nonActive0	active1	N	Mean Rank	Sum of Ranks
online book reviews	Non Active		37	28.08	1039.00
	Active		17	26.24	446.00
	Total		54		

### Test Statistics<sup>a</sup>

	online book reviews
Mann-Whitney U	293.000
Wilcoxon W	446.000
Z	-.411
Asymp. Sig. (2-tailed)	.681

a. Grouping Variable: nonActive0  
active1

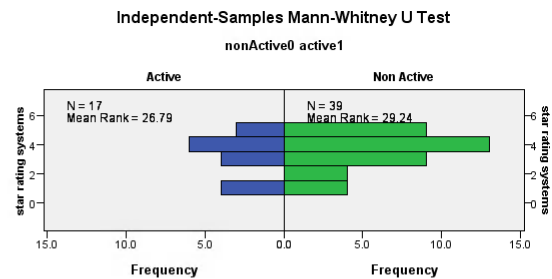
## Star Rating Systems

$$U_{(54)} = 302.5, Z = .54, p = .59$$

We conducted a Mann Whitney U test to compare the importance of star rating systems from non active and active readers. There was no significant difference of the medians between the importance of star rating systems at alpha level .05 ( $U_{(54)} = 302.5, Z = .54, p = .59$ ). (The mean ranks of non active and active readers were 29.24 and 26.79, respectively).

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of star rating systems is the same across categories of nonActive0 active1.	Independent-Samples Mann-Whitney U Test	.593	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.



Total N	56
Mann-Whitney U	302.500
Wilcoxon W	455.500
Test Statistic	302.500
Standard Error	54.281
Standardized Test Statistic	-.534
Asymptotic Sig. (2-sided test)	.593

## Mann-Whitney Test

		Ranks				
		nonActive0	active1	N	Mean Rank	Sum of Ranks
star rating systems	Non Active			39	29.24	1140.50
	Active			17	26.79	455.50
	Total			56		

### Test Statistics<sup>a</sup>

		star rating systems
Mann-Whitney U		302.500
Wilcoxon W		455.500
Z		-.534
Asymp. Sig. (2-tailed)		.593

a. Grouping Variable: nonActive0 active1

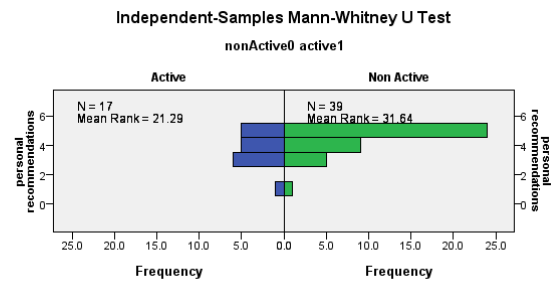
### Personal Recommendations

$$U_{(54)} = 209, Z=2.39, p < .05$$

We conducted a Mann Whitney U test to compare the importance of personal recommendations from non active and active readers. There was a significant difference of the medians between the importance of personal recommendations at alpha level .05 ( $U_{(54)} = 209, Z = 2.39, p < .05$ ). (The mean ranks of non active and active readers were 31.64 and 21.29, respectively). Which means personal recommendations are important for active and non-active readers when selecting a book.

Hypothesis Test Summary			
Null Hypothesis	Test	Sig.	Decision
1 The distribution of personal recommendations is the same across categories of nonActive0 active1.	Independent-Samples Mann-Whitney U Test	.017	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.



Total N	56
Mann-Whitney U	209.000
Wilcoxon W	362.000
Test Statistic	209.000
Standard Error	51.376
Standardized Test Statistic	-2.384
Asymptotic Sig. (2-sided test)	.017

## Mann-Whitney Test

		Ranks				
		nonActive0	active1	N	Mean Rank	Sum of Ranks
personal recommendations	Non Active			39	31.64	1234.00
	Active			17	21.29	362.00
	Total			56		

### Test Statistics<sup>a</sup>

	personal recommendations
Mann-Whitney U	209.000
Wilcoxon W	362.000
Z	-2.384
Asymp. Sig. (2-tailed)	.017

a. Grouping Variable: nonActive0 active1

## O. Final Persona Scales



## P. Final Personas

# Eric Smallton - Active Reader



*“Reading is an addiction for me.”*

## Bio

Eric received his Master’s Degree in business 2 years ago and he is constantly looking to expand his knowledge in his industry within the art and science of coffee. Though he is currently focused on expanding the one business location that he owns, he is willing to read almost anything that will offer an interesting perspective, teach him something new, or just tell a good story. Eric needs a solution that will offer a variety of recommendations and information on books that may or may not be from family and friends.

**Age:** 35

**Sex:** Male

**Location:** Chicago, IL

**Profession:** Small business owner

**Martial Status:** Single

**Character:** Intellectual

**Ambitious**

**Professional**

**Business Oriented**

**Articulate**

## Goals

- Looming to expand his existing business.
- Aggressively searching for new knowledge within his industry.
- Wants to read anything that is recommended by a friend/family.
- Connect with like minded individuals who read the same material.

## Frustrations

- Purchasing a book that falls short of his expectations.
- Not being able to find a physical copy of a book he is looking for.
- Spending money on a book that has negative reviews on an Internet forum.
- Reading a faddish book.

## Spectrum

### Passive Reader Vs Active Reader



### Volume of Content in Books Read



### Reading Frequency



### Use of Broad Search w/Looking For New Book



### Level of Enjoyment While Reading



### Acceptance of Price Value of Books Purchased



### Reading Speed



### Regard to User Reviews Before Purchase



# Jane Williams - Non-Active Reader



*"I'm busy, so I don't usually have time to spend on books when I can wait for the movie."*

## Bio

Jane is a full time marketing coordinator. She works long hours and is usually exhausted by the time she goes home. When she does have time, she would rather spend it with friends or catching up on TV shows. Occasionally though, she hears about a book through a friend or popular media and gets an urge to check it out. She's really picky in regard to what she reads and hates investing in something that she ends up not liking. Jane needs a solution that will offer a variety of trustworthy recommendations while meeting her interests and time schedule before she buys it.

**Age:** 26

**Sex:** Female

**Location:** New York City, NY

**Profession:** Marketing Manager

**Martial Status:** Married

**Character:** Young Professional

**Intelligent**

**Busy**

**Selective**

**Assertive**

## Goals

- Looking for entertaining books that are currently in the spotlight.
- Finding books that are easy for her to read.
- Talking about a hip book with friends and coworkers.
- Staying up-to-date with pop culture to give her an advantage in her career.

## Frustrations

- Wasting time and money on boring or uninteresting books.
- Lack of quality, trustworthy reviews.
- Investing in a high level book that is hard to comprehend.
- Beginning a book that has way more content than she immediately realized.

## Spectrum

Passive Reader Vs Active Reader



Volume of Content in Books Read



Reading Frequency



Use of Broad Search w/Looking For New Book



Level of Enjoyment While Reading



Acceptance of Price Value of Books Purchased



Reading Speed



Regard to User Reviews Before Purchase

