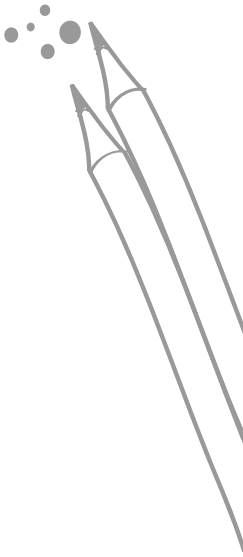
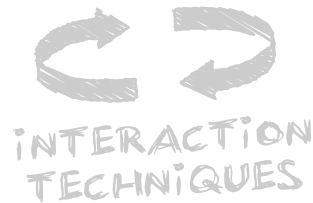


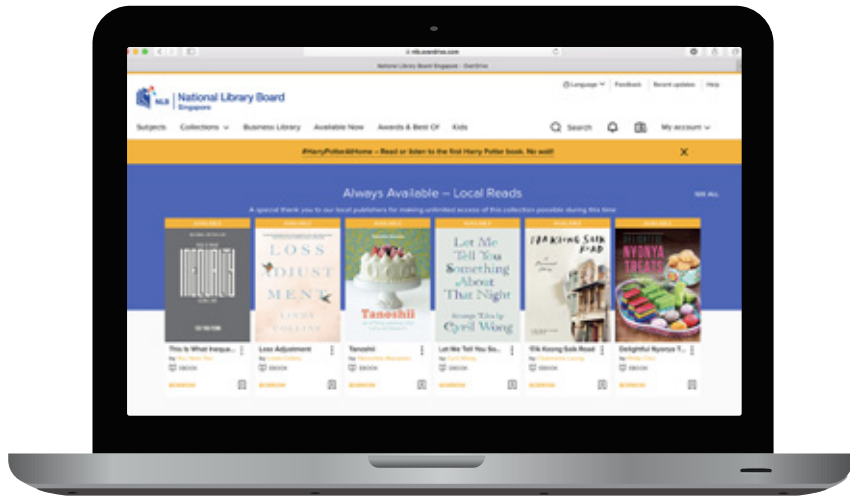
# USER EXPERIENCE



## Research Analysis & Communication



# INTRODUCTION



## GOAL

This research is to gather more insights for the NLB Overdrive website, and how we can give readers an enhanced reading experience.

## PROCESS

In the previous research methods, we used various techniques and methods to observe users and gathered data from it. Through that, we spotted areas which we can improve and saw opportunities which we can explore further.

# OVERVIEW OF PARTICIPANTS

3

users took part in  
empathy mapping

5

users took part  
in interviews

32

users took part  
in survey

5

professionals took part  
in heuristic evaluation



"I am very into healthy diets recently and if there is a platform for e-book's recipes it would be great!"

## e-Bookworm Gillian

“

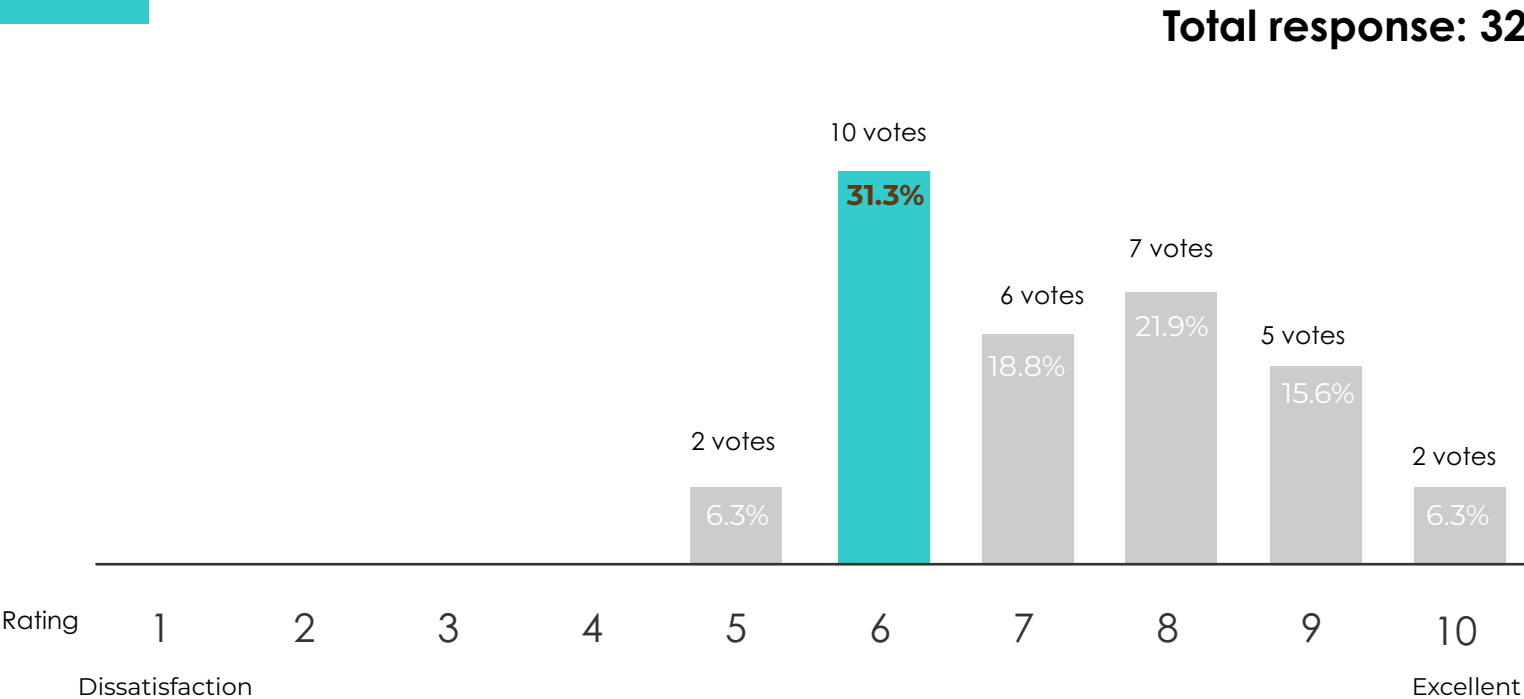
I would like to **discover new books** in my area of interest and to have **more realistic reading** experience”

To achieve the goal, i further explored on the above areas and came up with two areas which i wanted to focus on:

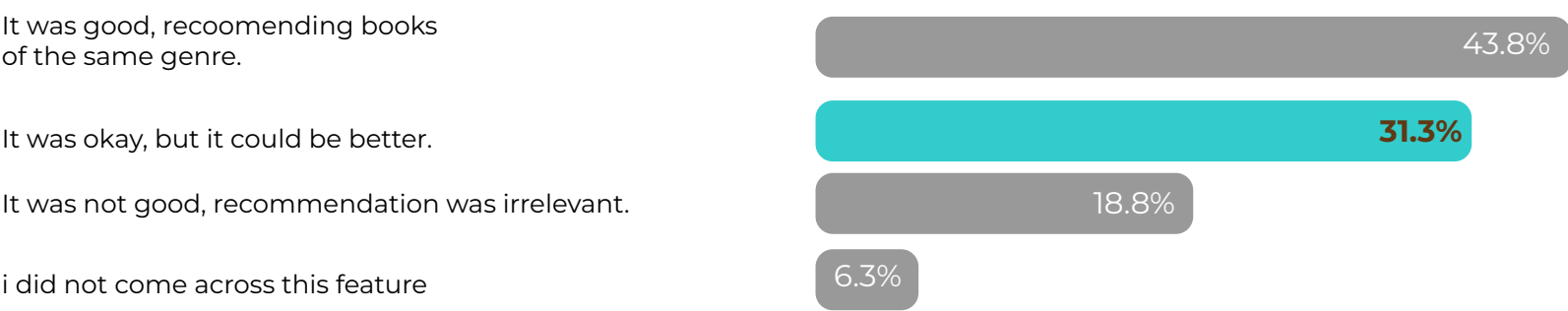
- 1. Recommendation of books**
- 2. Reading Customisation**

# METHOD ONE: SURVEY

Rate your overall experience while surfing the NLB Overdrive website.

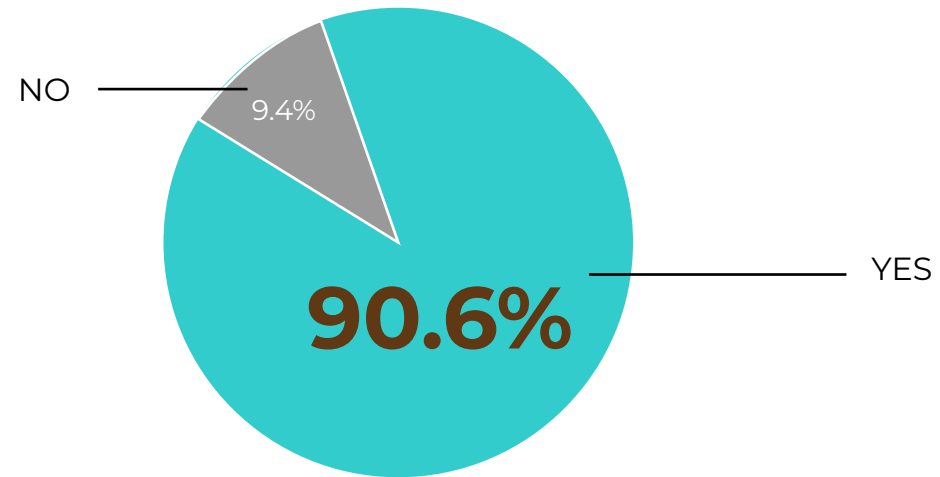


Rate your user experience of book recommendation interface while surfing the NLB Overdrive website.

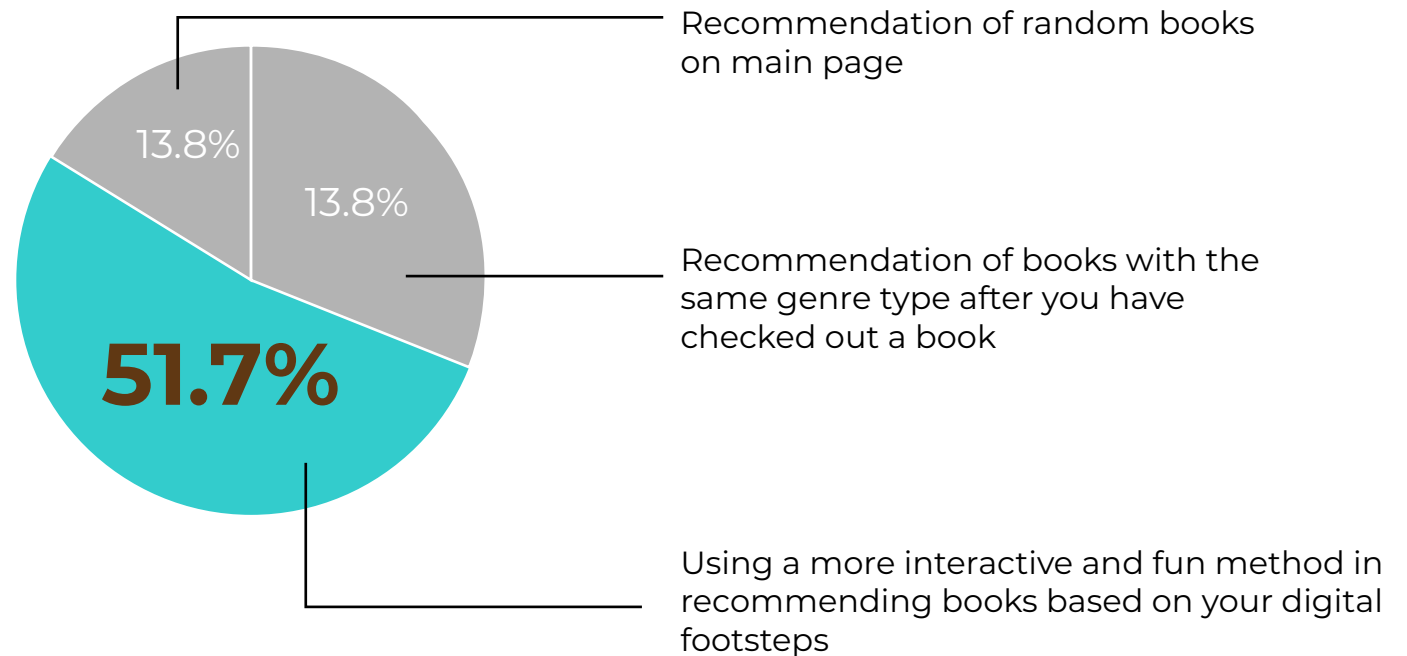


## METHOD ONE: SURVEY

**Would you like to have recommendation of books?**

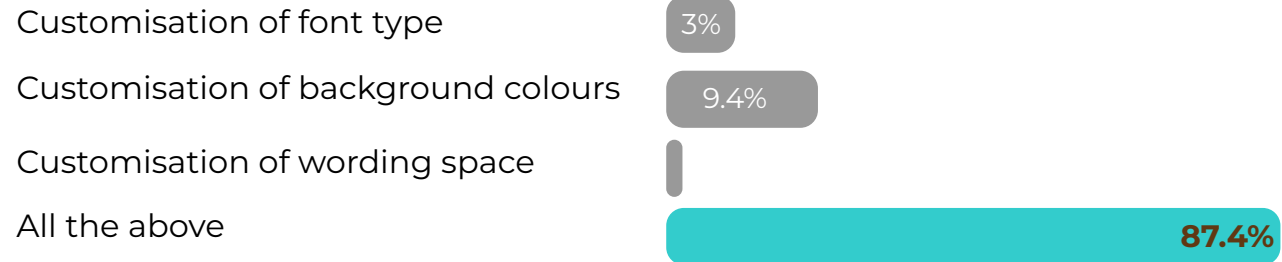


**If yes, how would you like us to recommend books to you?**



## METHOD ONE: SURVEY

**What kind of customised option(s) would you like to have when reading?**



## SURVEY FINDINGS

### OVERALL

- Most people felt that the website is just alright and can be improved.

### KEY HIGHLIGHTS (Recommendation of books)

- More than 90% hope to have recommendation of books.
- More than 50% of the users felt that the recommendation of book feature was not good.
- They do not wish to have random books.
- People wish that NLB tracks the digital footprint and hope it can present it in a fun and more interactive way.

### Key Highlights (Customisation)

- They wish to have full customisation on font type, font colour, background when reading on the browser.

## METHOD TWO: HEURISTIC EVALUATION

## PRIORITY LIST



### CONSISTENCY & STANDARDS

only **ONE** subject keyword tagged to the book which is not sufficient



### USER CONTROL AND FREEDOM

Pages only can flipped left and right but **NOT AVAILABLE** in scrolling up & down.



### VISIBILITY OF SYSTEM STATUS

**NO BUTTONS** available when user gets into reading page and it is very confusing

No recommendation on main page and there is no function to search by genre.

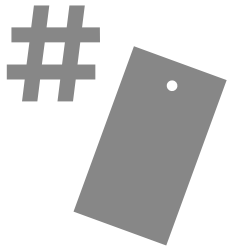


### MATCH BETWEEN SYSTEM AND REAL WORLD

There are **NO** recommendation based on **DIGITAL FOOTSTEPS**.

## METHOD TWO: HEURISTIC EVALUATION

## SOLUTIONS



### SUBJECT TAGS ACCURACY

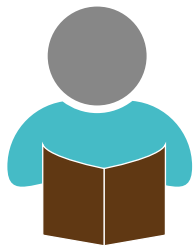
Improve on the backend system, to have more tags on all the books. This allow users to find books based on tags, similar to how hashtags work.



### BETTER DIGITAL TRACKING

Improve on user's digital footsteps, to have better insights of their past visits history in order to have better recommendation of books.

Recommendation of books can appear on homepage



### READING CUSTOMISATION

Improve on the customisation of the flipping of pages.

To let users feel as close as reading from a physical book. We can include customisation of font type, font colour and background colour.



### AN EASIER-TO-UNDERSTAND READING INTERFACE

When users get into the reading page, directive buttons such as flipping icons, content page icon should pop up immediately to let users know what they need to do next.



## RECOMMENDATIONS

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Font Size

A-  A+

Distance

Sides distance

Auto scrolling

Font type

Aa

Settings



Background



Progress



Audio



Chapters

## CUSTOMISATION SAMPLE LAYOUT

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Light Mode

Dark Mode

# RESEARCH HIGHLIGHTS & TAKEAWAY

**In conclusion, i find that most people find that the NLB overdrive website was alright. It meets the basic requirement of loaning a book, but there are definitely rooms for improvement such as:**



Confusion over NLB Main Webpage and NLB OverDrive



Tracking of digital footsteps

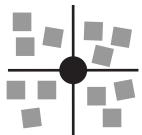


Recommendation of books

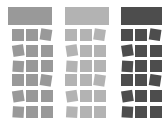


Reading experience / Customisation

**Combining both term's observation and researches, i've learnt that in order to have new or improvements on the product, user experience research is very important and it requires various research methods. Besides gathering data, we need to analyse it and able to communicate well to different stakeholders. I have learnt alot from this research process, and i am sure i can apply the same for other projects.**



**Empathy Map**



**Affinity Map**



**Customer Journey Map**



**Survey**



**Interviews**



**Persona**



**Storyboard**



**Heuristic Evaluation**

# Empathy Mapping



**For a clearer view, please visit link.**

<https://miro.com/welcomeonboard/yS2O0pSf51ftfyH1wXyqnvA02w3ZhRQtWqohusK0CvOFzDTMdZHe0EFJhFpA8Wdb>

**For session's screen recording, please visit link.**

[https://drive.google.com/drive/folders/1nCIAofYMZtDeb6\\_nlPJgj3K26QnpiLXy?usp=sharing](https://drive.google.com/drive/folders/1nCIAofYMZtDeb6_nlPJgj3K26QnpiLXy?usp=sharing)

## Interviews

### INTERVIEW QUESTIONS

Hi, this is Janet, I am from the NLB, researching on the NLB OverDrive. Do you live near the library?

Do you mind sharing with me your reading habits?

Have you tried using the NLB overdrive website?

What technical difficulties did you faced while surfing the NLB OverDrive?

What kind of topics are you interested in?

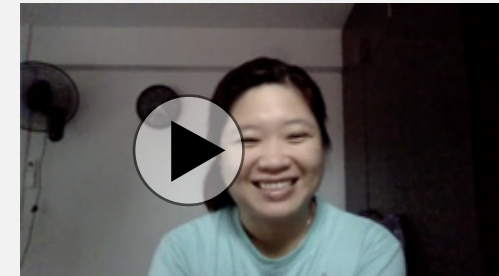
Would NLB OverDrive be your preferred choice to obtain digital reading materials?

If no, can you share with us the platforms which you have used and liked?

What kind of challenges do you encounter when reading an ebook? (content)

What are some of the functions you enjoy using?

### Interviews Videos



**Please visit link for full video.**

[https://drive.google.com/drive/folders/1nCIAofYMZtDeb6\\_nlPJgj3K26QnpiLXy?usp=sharing](https://drive.google.com/drive/folders/1nCIAofYMZtDeb6_nlPJgj3K26QnpiLXy?usp=sharing)

## Affinity Mapping Part One:





## Affinity Mapping Part Two:





"I am very into healthy diets recently and if there is a platform for e-book's recipes it would be great!"

# E-BOOKWORM GILLIAN

*"eBooks is better than old books"*

## DEMOGRAPHICS

Age: 31

Location: Singapore

Job Title: Digital Marketing Manager

Hobbies: Keeping fit and trying out new healthy diets.

Reading e-books whenever she is free

## ONLINE ACTIVITIES

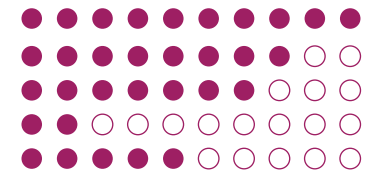
Internet

## Social Media

## Online Shopping

## Games

## Softwares



## GOALS

- Discovering new books in her area of interest
- More realistic reading experience
- Would not be fined if she forgets to return the book

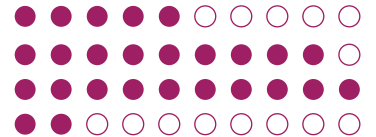
## DIGITAL PLATFORM

Desktop

Mobile

Laptop

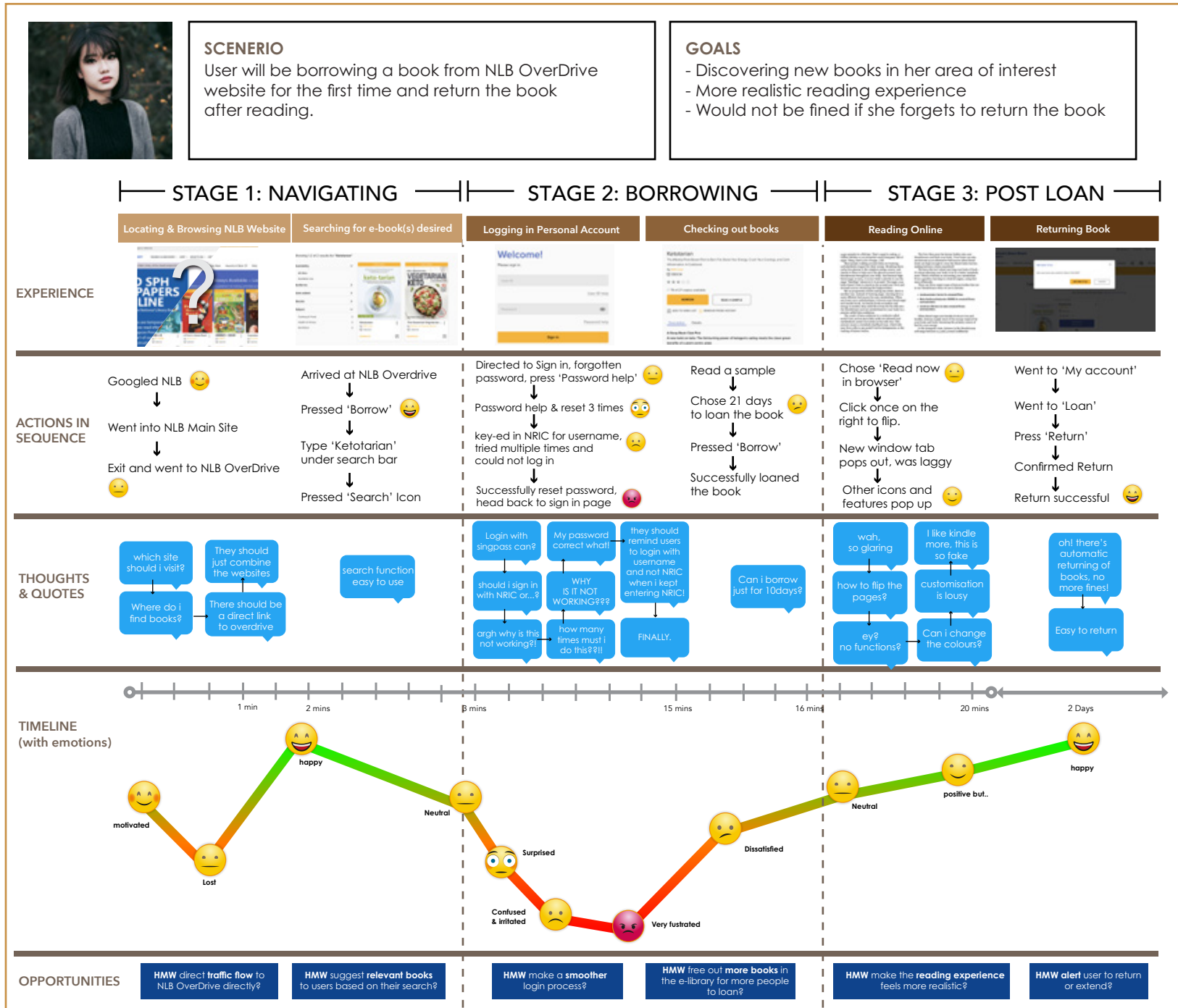
lpad



## FUSTRATIONS

- Major frustrations for logins, she resetted the password 3 times & could not log in. Eventually she realised it's not the password problem but the username. She has been trying to log in with NRIC.
- Navigation was bad as there were no obvious icons to flip the pages. She begin to trial and error to find the hidden 'next page' feature.
- Reading on NLB OverDrive was nothing compared to reading a physical book, website could be better with customisation of fonts, size, background to better enhance the reading experience.
- There was no other recommendation of books to read after she had borrowed the book. She could not find other books similar to diets.

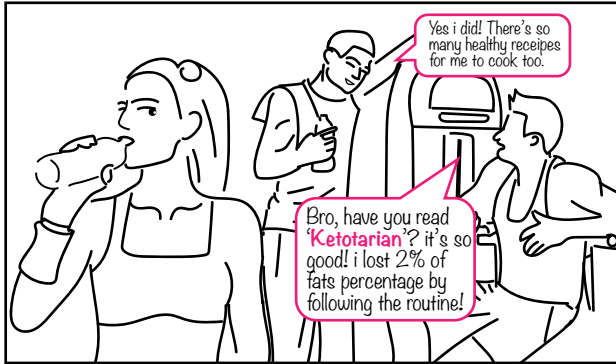
## Customer Journey Map





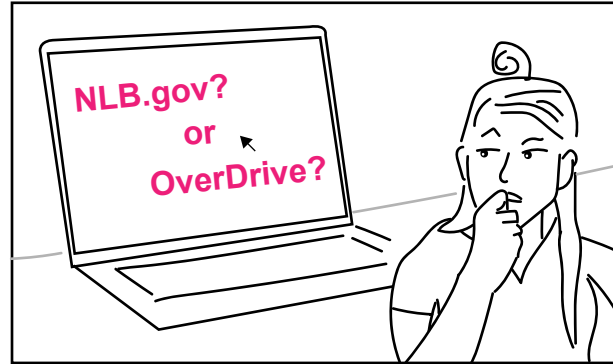
## Storyboard

scene 1

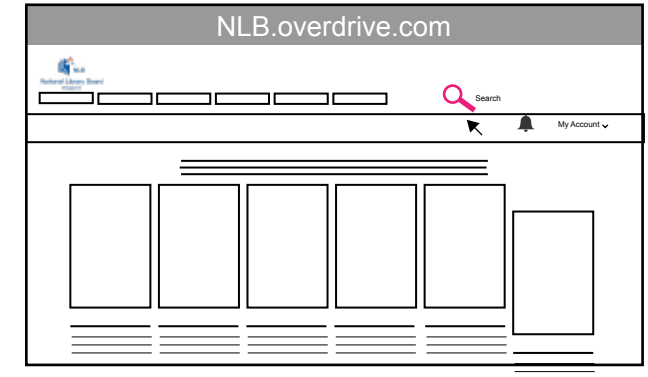


Gillian was attending gym and she overheard some gym goers mentioning about keto diet and they introduced a book titled '**Ketotarian**'. She showed **great interest in the diet** as recently she was trying hard to bring her fat percentage down due to health conditions.

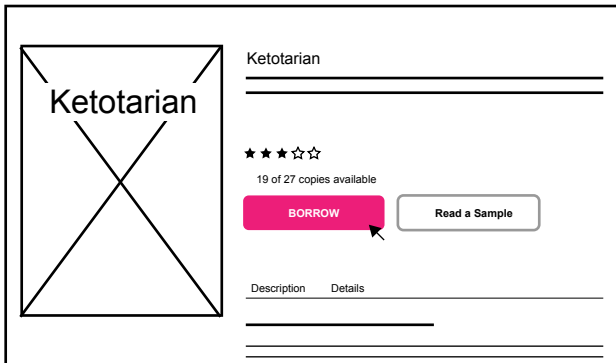
scene 2



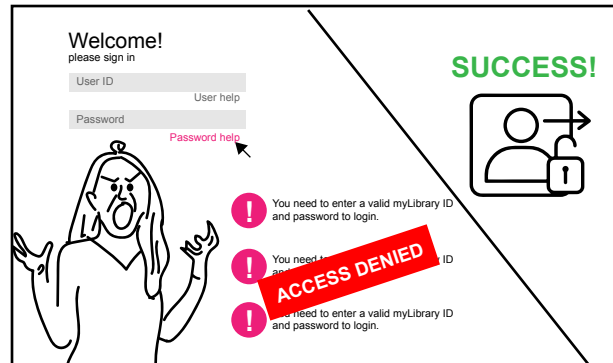
She went home immediately after gym and tried to find the book on NLB website. She googled and the search reflected **two NLB websites**. She visited the first NLB main website and realised the book is available on NLB OverDrive instead. She went back to google, and enter the second link, which was NLB OverDrive.



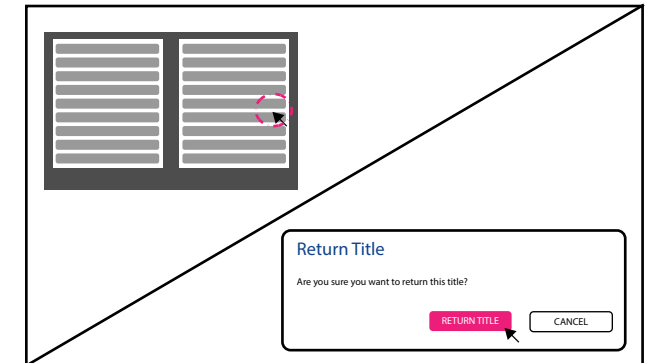
Searching for the book on OverDrive was a breeze as the **search icon** was available and was **found easily** on the homepage.



When Gillian found the book, she read a sample of it and finds it informative and interesting. She decided that she wants to borrow the book to read during her leisure time. She pressed the '**BORROW**' icon and it leads her to signing in. Gillian could not remember her password as it has been 3 years since she borrowed a book.



She seek **password help**, and she reseted her password. She tried to **sign in with her NRIC for three times** but it was unsuccessful. She thought it was still the password problem, so she reseted again. She **repeated this action three times**. At this point, Gillian was feeling **very frustrated** and has the intention to exit the website. When she went back to the sign in page, she took a closer look and begin to ponder what was the issue. Then she realised maybe she should **log in with the username** instead and TADA~ she got in.



She started reading through the browser. She was lost as there was **no buttons for her to click** or go to the next page. She trial-and-error and clicked on the page. Some buttons came up and she toggled with it for awhile. She wanted to change the **background colour to be less glaring** as it was hurting her eyes but she did not see such functions. She was **hoping for a more realistic reading experience** like kindle and it would be nice if there are recommendation of books to read after she had borrowed the book. 2 days later, she returned the book successfully.

## Survey Questions

[https://docs.google.com/forms/d/1PnrOhM\\_VReZ1iT697-mftSvDSwqZNo9mXryQRCLVhd8/edit](https://docs.google.com/forms/d/1PnrOhM_VReZ1iT697-mftSvDSwqZNo9mXryQRCLVhd8/edit)

## Survey Responses

[https://docs.google.com/forms/d/1PnrOhM\\_VReZ1iT697-mftSvDSwqZNo9mXryQRCLVhd8/edit#responses](https://docs.google.com/forms/d/1PnrOhM_VReZ1iT697-mftSvDSwqZNo9mXryQRCLVhd8/edit#responses)

## Heuristic Testing Feedbacks

<https://drive.google.com/file/d/1p92Kfsc1ZHwgBmzoEOU2LeTnrhQ6jdKx/view?usp=sharing>

Problems focusing recommendation of books	Heuristic Violated		Evaluator 1 - jeff	Evaluator 2 - mursh	Evaluator 3 - andy	Evaluator 4 - shaz	Evaluator 5 - Gerald
User could not find the recommendation she wants on main page,	1. Visibility of system status	Major usability problem	3	3	3	1	3
No recommendation based on digital footsteps.	2. Match between system and real world	Major usability problem	2	3	2	1	3
When user loan out a book, a list of recommended books showed up	4. Consistency & Standards	Minor problem	2	2	2	1	2
only one subject keyword is tagged to the loan book which is not sufficient	4. Consistency & Standards	Major usability problem	3	3	3	3	3
No buttons available when user get into reading page and it is very confusing	1. Visibility of system status	Major usability problem	3	2	3	3	2
only allowed to slide pages left and right, not able to slide up and downwards.	3. User control and freedom	Major usability problem	2	3	3	3	2
flipping of pages are not realistic	8. Aesthetic & Minimalist design	cosmetic problem	1	2	2	4	1
some books are not able to do the text scale function	7. Flexibility & efficiency of use	Minor problem	2	2	2	4	2
there are only 3 basic settings to change the colours of the website, but not the book itself	3. User control and freedom	cosmetic problem	1	1	1	3	1
not able to change the font colour	7. Flexibility & efficiency of use	cosmetic problem	1	1	1	3	1
not able to change the background colour	7. Flexibility & efficiency of use	cosmetic problem	1	1	1	2	1
big overview button is not necessary as user has already started reading the book	10. Help & Documentation	Minor problem	1	1	2	4	2
no back button to go back to NLB Loan page	3. User control and freedom	Minor problem	3	2	2	4	2

**THANK YOU**