Transforming digital experiences through Design Thinking methodology

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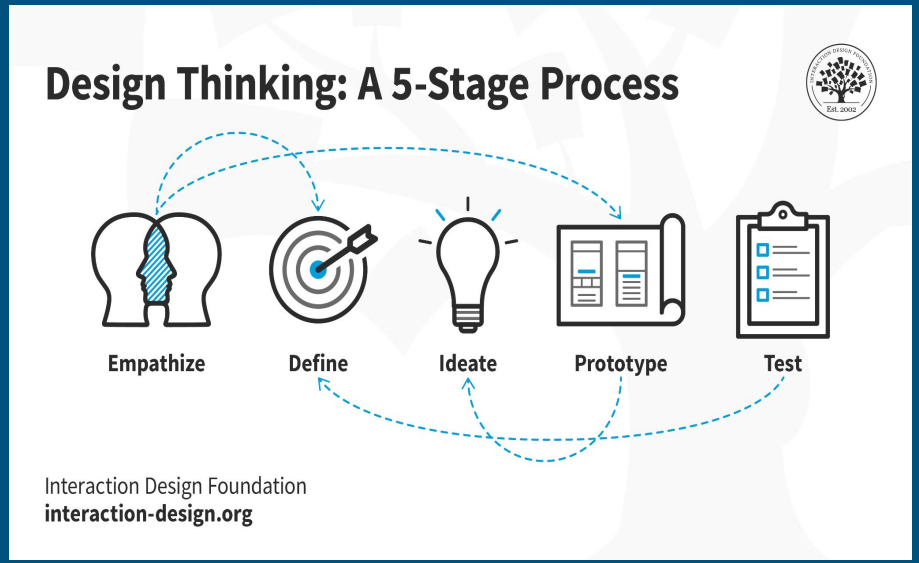
Empathise or not?

How can libraries empathise with their users and transform their digital experiences?

This case study shows the method and tools used for the AGBU Papazian Library in redesigning the webpage and digital services.

- The Design Thinking iterative process was used for empathising with users, understanding needs and pain-points.
- Surveys and Google analytics, libguides statistics, online chat were used to collect data, analyse the results and turn them into usable services.
- Figma was used to prototype the user flows and content layout for the website redesign, to improve digital services and make them accessible and responsive.

Design Thinking Methodology



Design thinking is an iterative and non-linear process that contains five phases: 1. Empathize, 2. Define, 3. Ideate, 4. Prototype and 5. Test.

“Design thinking is an iterative process in which you seek to understand your users, challenge assumptions, redefine problems and create innovative solutions which you can prototype and test. The overall goal is to identify alternative strategies and solutions that are not instantly apparent with your initial level of understanding.” Dam, R. F. and Teo, Y. S. (2025, March 2)

Design Thinking Stages & Corresponding UX Research Activities

Empathize	**Conduct interviews, observations, surveys** to understand users' needs, behaviors, and pain points.
Define	Analyze research findings to identify core problems and create u**ser personas and problem statements**.
Ideate	Use insights from UX research to **brainstorm solutions** that are grounded in real user needs.
Prototype	Develop wireframes or mockups; **validate ideas early through usability feedback** from users.
Test	**Conduct usability testing**, A/B testing, or gather feedback to see how well the solution works for users.

Testing our biases (Empathize stage)

1. User research
2. 2 User Personas
3. 1 User Journey Map
4. 5 Usability studies

User Research

User Research

4 colleges: 1800 Graduate and Undergraduate students

1. Manoogian Simone College of Business and Economics
2. College of Humanities and Social Sciences
3. Zaven P. & Sonia Akian College of Science and Engineering
4. Gerald & Patricia Turpanjian College of Health Sciences

We conducted primary and secondary research to identify pain points and needs.

Primary Research

- Interviews
- Surveys/Questionnaires
- Observations
- User testing

Secondary Research

- Academic papers, usability reports, analytics, industry trends

Collecting User Feedback

We identify the metrics to measure and assess the user experience

1. UX metrics
    a. Quantitative metrics (Numerical data that measures user behavior and outcomes)
        i. Engagement rates and Click-through
    b. Qualitative metrics (Data that explores user perceptions, opinions, and emotion)
        i. User feedback and Satisfaction scores
2. Google analytics
3. User testings

Problem statement (Define stage)

Students should be able to easily locate library catalog and e-resources on the website, to perform a search and access them using both mobile and PCs.

“I work and study full time, I don’t have time to read that much, and library is too noisy for studying”

Goals

- Finish her studies and successfully submit her research projects.

Frustrations

- She needs to concentrate more on her studies and she can do that only at home.

Liza

Age: 33
Education: MA in IRD
Hometown: Yerevan
Family: Single
Occupation: Program Coordinator

Liza is a part-time Masters student, she also works for the university, she tries to manage to be the best student, and she tries to perform well at her job. She doesn't have time and she wants to find the e-resources for her studies as efficiently as possible. She can not study in the library, as its noisy and she needs to concentrate on her research projects.

“I don’t do research and I don’t use library webpage. I come to the library only for the space.”

Goals

- Find a job and also submit his homeworks.

Frustrations

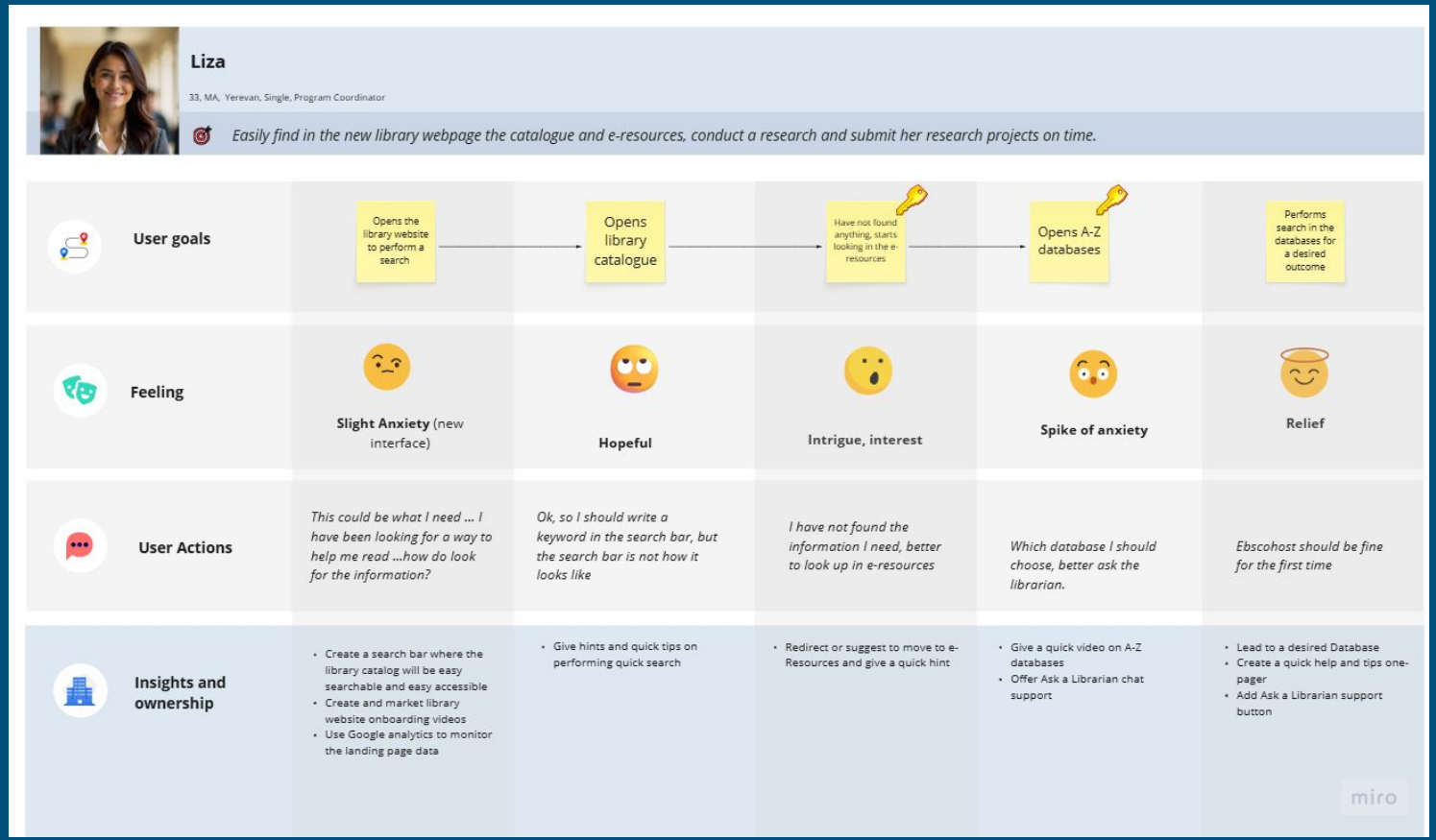
- I want to have a space where I can concentrate and do my homework.

Vardan

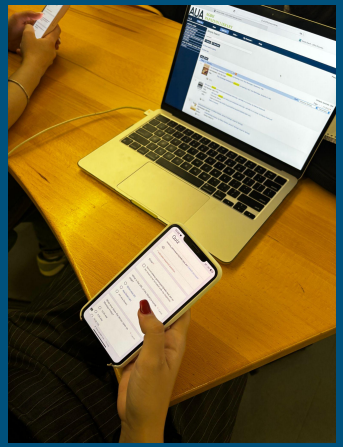
Age: 20
Education: CS Freshman
Hometown: Yerevan
Family: Single
Occupation: BA Student

Vardan is a full time first year Computer Science student, he is not working and he only studies, he is not using the library, as his homework is not research based, he only does use Google and one math application for his studies. He thinks the library should be a space where he can come and work with his peers and get back to his daily tasks.

User Journey Map



User testings



Website Analysis

Google Analytics

Analysis from 3 reports were taken to collect data.

1. Acquisition: where the users are coming to our website
2. Engagement: which pages are users visiting and how they interact with the features
3. Tech: what devices users use to engage with our website content.

The time frame of the reports was taken from 02.10.23-02.10.24

Libguides statistics

The most searched and used list is AZ list of e-resources

Most used databases:

- EBSCO/EBSCOHOST
- JSTOR
- Taylor & Francis Online Journals

The time frame of the reports was taken from 02.10.23-02.10.24

Redesigning the Landing Page (Ideate stage)

Library website will let our users perform search/research by affecting the searching behavior change in our users. We will redesign the library searching features and we will measure the effectiveness by the number of downloaded articles and checked out books.

Design (Test stage)

Website prototype

Old website

Figma Prototype

What Our Research Revealed About User Behavior

Outcomes of the Design Thinking Methodology

- Enhance Search Functionality
- Consider Accessibility metrics
- Boost Engagement with Clicks and Scrolls
- Refresh Content & Marketing
- Increase Social Media Engagement
- Monitor User Behavior: Conduct user testing or surveys to gather insights into user needs and preferences, which can inform future content and design improvements.

User Insights That Drive Change

What worked

1. User Research
2. Data collection
3. Design Thinking Methodology
4. User Testings

Challenges that surprised us:

This was our bias and we thought that students should have been able to do that very easily, but it looks like completely different in real life. What does Design Thinking Methodology taught us and what we have identified as a problem.

- Case 1. We never thought but students don't tell they have accessibility issues- like eyesight problems.
- Case 2. library can act as a space, if it's not connected with their assignments
- Case 3. They are not born with digital skills though they use facebook and Instagram, but digital literacy skills are really important
- Case 4. Good Design really matters.

Lessons learned

- Enlarge User testing base
- Prioritize Accessibility as a Core UX Component
- Clearly define UX design strategy and UX research metrics that needs to be measured
- Strengthen User Research & Feedback Loops
- Sometimes it's not only design but the environment, everything is interrelated and all stakeholders should be identified

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