

Redesign of the UI/UX for the KKN State Islamic University of Sultan Syarif Kasim Riau Website Using the Design Thinking Method

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ABSTRACT: The existing website for the Community Service Program (KKN) at UIN Suska Riau fall short in addressing the informational and interactive demands of its users. Key issues such as an unappealing user interface, confusing navigation, and limited interactive elements hinder effective communication with students. This study focuses on redesigning the KKN website using the Design Thinking approach. By conducting interviews and observations with 10 students, several shortcomings of the current system were identified. The redesigned version was evaluated using the Single Ease Question (SEQ), achieving an average score 6.01, falls into the very good/very satisfying category. This indicates that the majority of respondents have a very positive perception of the service that has been developed.

KEYWORDS: Design Thinking, UI/UX Redesign, Usability Testing, Single Ease Question, User-Centered Design, Academic Website Development

1. INTRODUCTION

The continuous evolution of technology drives the need for innovation in digital product development, including websites [1]. In academic settings, websites play a vital role in presenting the institution and offering administrative and informational access [2]. An effective website should be both functional and clear in delivering content [3], while a poorly designed one can cause confusion and dissatisfaction among users, resulting in frustration and high exit rates [4]. In redesign processes, special attention must be given to User Interface (UI) and User Experience (UX) [5]. UI focuses on the visual and interactive aspects of the system that users engage with, while UX is concerned with the overall impression and comfort felt during interaction [6]. This study applies the Design Thinking framework to redesign the KKN websites. Design Thinking is a user-centric, iterative problem-solving method that begins with the “Empathize” stage [7], aiming to understand to users’ behaviors and limitation in order to propose effective solutions [8].

2. RESEARCH METHOD

his research adopts the Design Thinking methodology, which consists of five key stages: empathize, define, ideate, prototype, and test.

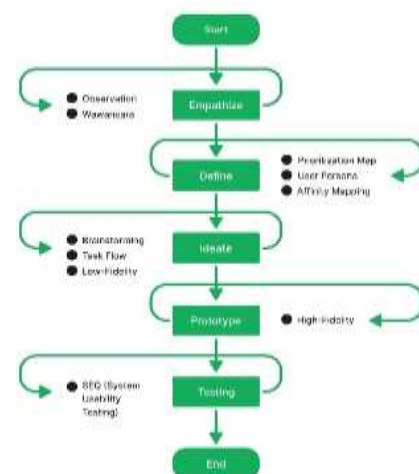


Image 1: Research Design

Each of these stages plays a specific role in creating a user-centered design. The primary objective of the study is to produce a redesigned version of the KKN website at Sultan Syarif Kasim Riau State Islamic University by following this structured, iterative process.

2.1 EMPATHIZE

The empathize phase involves engaging directly with users to gain insights into their needs, preferences, and behaviors [9]. Researches collect data through interviews and observations to better understand users’ perspectives and emotions. This

stage serves as the foundation for designing solutions that genuinely reflect user expectations. [10].

2.2 DEFINE

In the define phase, researches identify and articulate specific problems based on insights gathered during the empathize stage. This step focuses on framing the core issues from the user’s point of view and ensures that future design efforts are aligned their needs [11].

2.3 IDEATE

The ideate stage transitions that process from identifying problems to exploring possible solutions. Here, researches brainstorm a wide range of creatives ideas that could address the defined issues. These cocpets are later visualized through rough sketches to guide the next phase [12].

2.4 PROTOTYPE

A prototype is an early version of the system created to test and improve usability and design concepts [13]. This phase allows researchers to examine how to proposed interface performs and make necessary adjustments before final implementation [14].

2.5 TESTING

In this study, Single Ease Question (SEQ) were used as a measurement during usability testing. Single Ease Question (SEQ) is a test conducted after participants complete a given task during the testing. Participants were asked to provide a rating on a seven-point rating scale [15].

3. RESULTS AND DISCUSSION

3.1 EMPATHIZE

The first stage in the Design Thinking method is the **empathize** stage, which aims to understand the challenges and needs of the users. The initial phase of the Design Thinking approach involves understanding the challenges users face. This was done through direct engagement with 10 students from different faculties via interviews and observations. The insights gathered help shape a redesign that aligns with what users truly need and expect.

3.2 DEFINE

In the define phase, user problems identified during interviews are structured using affinity mapping. The issues were then categorized into three main groups: interface design, information accessibility, and feature functionality. This helps clarify the focus areas for improvement in the redesign process.

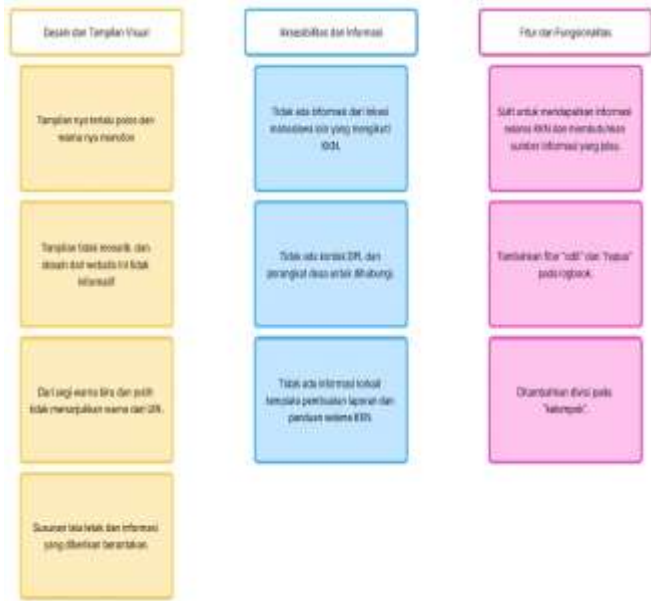


Image 2: Affinity Mapping

The subsequent action involves constructing a prioritization mapping, aimed at identifying elements with the most significant urgency and influence on user experience. This map serves as a key reference for selecting which enhancements should take precedence during the website’s redesign phase.

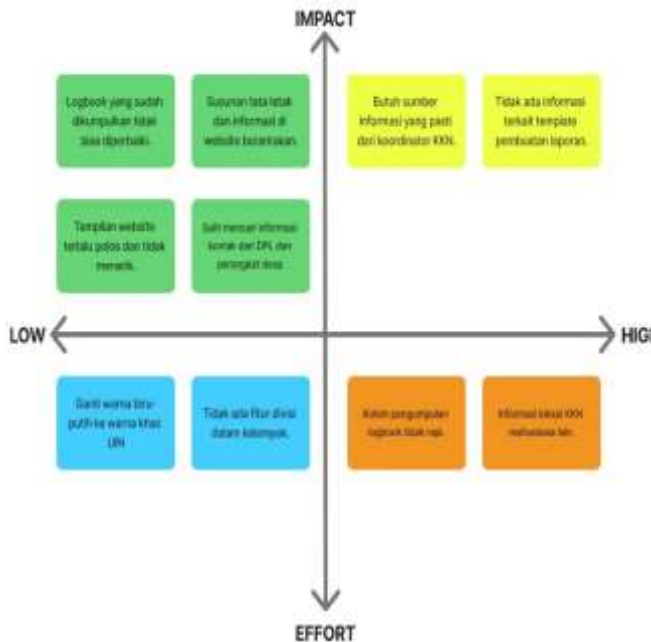


Image 3: Prioritization Mapping

Description:

- High Impact - Low Effort: This is a top priority that must be addressed immediately.
- High Impact - High Effort: These tasks are important and require careful planning, as their outcomes are highly significant to the project's objectives.

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- Low Impact - Low Effort: This task can be completed if time permits. Although it is not a priority, it can still yield some improvement.
- Low Impact - High Effort: This task should be postponed, as its impact is minimal and not particularly significant.

Once the prioritization mapping is established, the following step is to construct a user persona, a documented profile that plays a vital role in examining user’s goals, expectations, and preferences. [16].

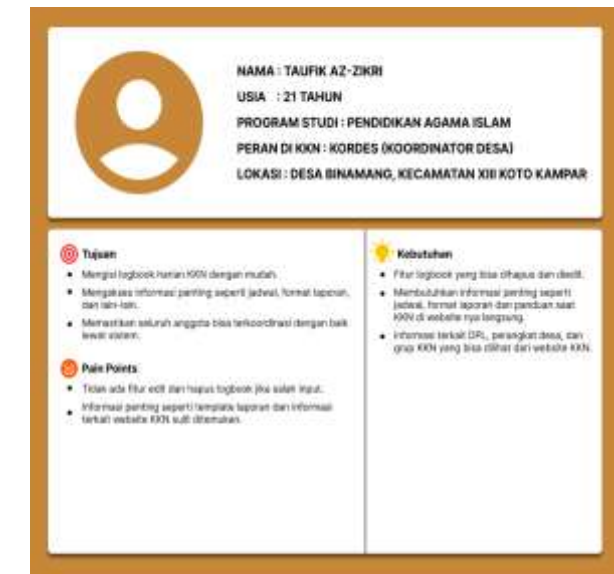


Image 4: User Persona

3.3 IDEATE

During the ideation phase, a brainstorming session is conducted to explore a wide array of innovative ideas intended to enhance features, improve visual design, and expand the content of the KKN UIN Suska Riau website.

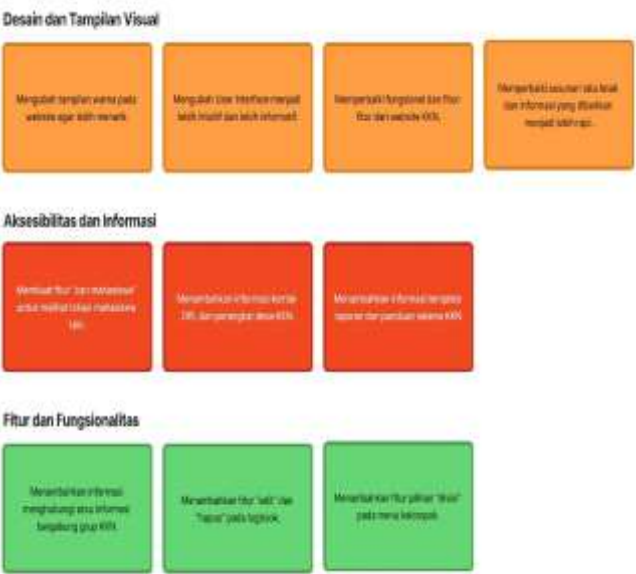


Image 5: Solution Idea

Information architecture serves as a structural blueprint in website planning. At this stage, the researcher defines the layout and hierarchy of the site based on previously identified user needs and proposed solutions [17].



Image 6: Information Architecture

Following that, a low-fidelity wireframe is created, this type of mockup includes minimal detail and focuses on quickly mapping out the interface’s overall structure and flow without delving into visual specifics [18].



Image 7: Low-fidelity Login



Image 8: Low-fidelity Beranda



Image 9: Low-fidelity Pradaftar



Image 10: Low-fidelity Pilih Lokasi



Image 11: Low-fidelity Cari Mahasiswa



Image 12: Low-fidelity Informasi Desa



Image 13: Low-fidelity Kelompok



Image 14: Low-fidelity Logbook



Image 15: Low-fidelity Info KKN

3.4 PROTOTYPE

3.4.1 HIGH FIDELITY

The high-fidelity prototype serves as a detailed visual representation of the final design for the KKN website. Created using figma, this prototype offers a realistic preview of the site’s appearance and functionality. It allows users to engage in direct usability testing, which plays a vital role in supporting the evaluation process.



Image 16: Before Redesign Login



Image 17: After Redesign Login



Image 18: Before Redesign Beranda



Image 19: After Redesign Beranda



Image 20: Before Redesign Pradaftar



Image 21: After Redesign Pradaftar



Image 22: Before Redesign Pilih Lokasi



Image 23: After Redesign Pilih Lokasi



Image 24: Before Redesign Kelompok



Image 25: After Redesign Kelompok



Image 26: Before Redesign Logbook



Image 27: After Redesign Logbook

3.5 TESTING

In the testing phase, the prototype is assessed to determine how well it fulfills user requirements. The evaluation method used is the Single Ease Question (SEQ), respondents completed the assigned tasks and then provided ratings on a scale of 1-7. The average result given by the respondents was **6.01**, indicating that the majority of respondents have a very positive perception of the service created.

4. DISCUSSION

This study aimed to redesign the KKN website at UIN Suska Riau using the Design Thinking method to address identified usability issues. The evaluation of the redesigned website, particularly through the Single Ease Question (SEQ), yielded a notable average score of **6.01**. This result, categorized as “very good/very satisfying” strongly indicates that the implemented design changes have significantly improved the user’s perception of ease and effectiveness when interacting

with the KKN website. The high SEQ score suggests that users found completing tasks on the new system intuitive and straightforward, a crucial outcome for a platform designed to enhance communication and information access for students. The successful outcome underscores the effectiveness of the Design Thinking approach in addressing complex user experience challenges. By deeply understanding user needs through empathy and iteratively prototyping solutions, this methodology allowed for the creation of a user-centric design that directly mitigated the previously identified shortcomings in interface, navigation, and interactive elements. This aligns with existing literature advocating for Design Thinking as a robust framework for UI/UX development, particularly in improving usability and user satisfaction.

While the high SEQ score is a positive indicator, the discussion should also consider potential areas for further exploration. Although the system achieved a very high perceived ease of use, future studies could delve deeper into other UX metrics, such as user engagement or long-term retention. Additionally, comparing these findings with similar KKN website redesign projects or other academic portal improvements could provide broader insights into best practices for university level platform development.

5. CONCLUSIONS

This study focused on redesigning the KKN website at UIN Suska Riau using the Design Thinking approach to address existing shortcomings in user interface, navigation, and interactive elements. Through interviews and observations with 10 students, key issues of the current system were identified. The redesigned website was evaluated using the Single Ease Question (SEQ), achieving an average score **6.01**. This result, falling into the “very good/very satisfying” category, indicates that the majority of respondents have a very positive perception of the developed service. The findings suggest that the Design Thinking method successfully led to an improved user experience for the KKN website.

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