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Implementation of Design Thinking in Student Organization Profile UI/UX Website Design at the University of PGRI Wiranegara

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Abstract
Student organizations, often called ORMAWA at the University of PGRI Wiranegara (UNIWARA), struggle to attract new members due to limited information about ORMAWA profiles and activities. This study aims to design a prototype UI/UX for the ORMAWA UNIWARA profile website using the Design Thinking method, which includes Empathize, Define, Ideate, Prototype, and Testing stages. Six students were interviewed to identify user needs in the Empathize stage, while the Define stage pinpointed key issues in accessing ORMAWA information. Solutions were brainstormed in the Ideate stage, and a prototype was created using Figma. Usability was assessed with the System Usability Scale (SUS) and Single Ease Question (SEQ), yielding an SUS score of 84 ("Excellent") and an SEQ average of 6.6, indicating high usability and ease of use. These results demonstrate that the Design Thinking method effectively meets student needs for ORMAWA information and enhances the quality of information provided to students about UNIWARA's student organizations.

Keywords: design thinking; single ease question (SEQ); system usability scale (SUS); user experience ; user interface

1. Introduction

Student Organization is a forum formed and operated by students to provide space to explore and develop their talents, interests, and potential to the maximum [1]. Student Organizations, often known as ORMAWA, are common among students. As in the University of PGRI Wiranegara, it has many active organizations.

The University of PGRI Wiranegara has many active organizations, often called ORMAWA. These student organizations are the Student Executive Board (BEM), Study Program Student Association (HMPS), and Student Activity Unit (UKM). These organizations are essential in supporting students' lives outside of academics and helping them develop their potential and soft skills.

However, in recent years, there has been a decline in the number of members joining ORMAWA at the University of PGRI Wiranegara. One of the factors causing the decrease in the number of members joining is the lack of information obtained by students about ORMAWA at the University of PGRI Wiranegara. Many students do not know about the types of ORMAWA available, the activities carried out, and the benefits of joining ORMAWA. Therefore, efforts must be made to increase the amount of information about ORMAWA for students.

This study addresses the problem of a decreasing number of members joining ORMAWA at Universitas PGRI Wiranegara. The background of this problem is rooted in students' ignorance about various types of ORMAWA, the activities carried out, and the benefits that can be obtained by joining. In this study, the authors use the Design Thinking approach to design the User Interface (UI) and User Experience (UX) of the website containing the ORMAWA profile to make information about ORMAWA more accessible to students. The motivation for this study is to create a more effective solution for providing targeted information to students about ORMAWA, which can ultimately increase the number of members who join.

In this effort, this study, the author conducted User Interface (UI) and User Experience (UX) Design for a website containing the profile of ORMAWA University of PGRI Wiranegara using the Design Thinking method.

2. Related Works

Designing a User Interface (UI) and User Experience (UX) is an essential initial step in creating a website or application. The User Interface (UI) is the visual aspect of a product that includes the shape, size, color, and layout of the elements in it, as well as a bridge between the user and the system, while User Experience (UX) is the user's experience when interacting with the product, including usability, influence, and problems experienced [2]. Both are interrelated and equally important to ensure users interact with the product quickly and enjoyably. The method used in the design process is Design Thinking.

Design thinking is a human-centered design approach. The design thinking method is a holistic thinking process that focuses on creating solutions, starting with the empathy stage for specific human-centered needs that aim to achieve sustainable innovation following user needs [3]. Therefore, the authors use the design thinking method in designing the UI/UX of the ORMAWA profile website to get a UI/UX that is under user needs.

UI/UX design is essential because it ensures that the website developed has a user-friendly interface, is easily accessible, and has an optimal user experience. The Design Thinking method was chosen because this approach focuses on a deep understanding of user needs (in this case, students) and creating real data-based solutions. By using Design Thinking, we can design a website that is visually appealing, intuitive, and easy to use so that students can easily access information about ORMAWA.

3. Methods

This research used the design thinking method, which includes several stages in designing the UI/UX of the ORMAWA profile website. The stages in the Design Thinking method are shown in Figure 1.

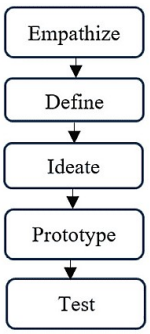

Figure 1: Design Thinking Stage [4]

3.1 Empathize

The first stage in the Design Thinking method is the empathize stage. The empathize stage is critical for capturing users' thoughts, statements, feelings, and actions so that software design can genuinely meet their [5]. The Empathize stage can also be interpreted as an effort to understand and pay close attention to users as best as possible to gain insight into what they want [6].

At this stage, the authors identified user needs through interviews with six students (respondents). The research involved collecting interview data with students, conducting surveys, and observating on how students access information about ORMAWA at Universitas PGRI Wiranegara. From the interview, the insights from ORMAWA administrators regarding challenges faced in conveying information to students was obtained. Then, the results of the interviews were processed using the Empathize tool, namely the empathy map. The empathy map includes data on what someone says, does, thinks, and feels [7]. Interviews and the preparation of empathy maps were conducted to understand user needs, including the information and preferences desired by users related to the design of the UI/UX of the ORMAWA profile website.

3.2 Define

The Define stage is where the problems found in the Empathize stage are analyzed and processed [8]. The data obtained through Empathize are then examined thoroughly to formulate a problem statement, which is the main focus of the research. The problem is formulated at this stage by compiling pain points and How-Might-We (HMW).

3.2.1 Pain Point

A Pain point is a process that aims to identify problems experienced by users. The results of this identification then become the basis for designing solutions to overcome these problems [5]. At this stage, the issues that have been identified were compiled.

3.2.2 How-Might-We (HMW)

How Might We (HMW) is a technique used to turn problems into questions, shift the way designers think, and help them realize that every problem has a solution [9].

3.3 Ideate

Ideate is the stage where the problems that have been analyzed are sought for various possible solutions to solve the issues identified in the previous stage [9]. In this stage, there are some outputs produced:

- Solution ideas to address the identified problems. For example, creating a website containing ORMAWA information features like activity search, ORMAWA profile, and online registration form.
- An initial sketch or wireframe of the website's appearance illustrates the interface design concept.

In the ideation process, the main focus is to produce ideas that will be the basis for making a prototype design that will be developed [3]. At this stage, the authors analyze the problems in the Define stage and looks for ideas or solutions that can be used to solve the problem, then compiles an affinity diagram.

The preparation of affinity diagrams aims to group ideas or solutions obtained based on their respective categories [10]. In this study, the author provides two categories: interface category and information category. The interface category covers aspects of visual design and user interaction with the system, while the information category covers content and presentation of valid information for users.

3.4 Prototype

The prototype is the fourth stage in the design thinking method, which aims to realize ideas or solutions generated in the previous stage and display them visually [7]. Prototypes allow designers to simulate and test interactions within a web or application, thereby saving costs and time by identifying potential errors before the development stage [11].

Prototypes can come in various forms, from physical prototypes, such as accurate models or prints, to digital prototypes, such as wireframes, mockups, or working software [6]. The author will create user flows, UI style guides, wireframes, and mockups at this stage.

3.4.1 User Flow

User flow is a step or process that the user will carry out when designing the system to be created. User flow is vital in determining a project's functional path [12]. At this stage, the author will create a user flow based on the features on the ORMAWA UNIWARA website.

3.4.2 Wireframe

A wireframe is a basic framework that provides a rough overview of the appearance of a website or mobile application design. The wireframe only displays the basic appearance without using color, usually black and white, and does not include images or logos [8] At the wireframe stage, the authors will conduct an initial design regarding features, content, interfaces, and other essential elements before realizing it in a mockup design by adjusting the UI style guide.

3.4.3 UI Style Guide

A UI style guide is an important document containing rules and guidelines for designing, including specific implementations, visual references, and design principles, aiming to maintain consistency in each design element. The authors created a UI style guide to reference the components in the ORMAWA UNIWARA website mockup design. These components include typography, color palettes, and other custom elements.

3.4.4 Mockup

A mockup is an essential stage in the design process that perfects the wireframe by providing a more precise and realistic product appearance. The study by [13] explains that the purpose of designing a mockup is to represent the design or model of a design concept that will be applied to the product. The product will be more visible in this Mockup, including colors, images, icons, and others.

3.5 Testing

Testing is the final stage of the design thinking method that focuses on testing the product to users. The purpose of the testing stage is to collect feedback from respondents and evaluate the user experience of the prototype design that has been created [2]. The testing process is carried out to collect relevant responses and feedback from the prototype results to ensure whether the resulting solution can solve the problems faced by respondents. At this stage, the author will conduct testing using the usability testing method, the System Usability Scale (SUS), and Single Ease Question (SEQ).

3.5.1 System Usability Scale (SUS)

The System Usability Scale (SUS) method is a valuable tests for assessing how easy a website is to use based on the subjective views of users. The study by [14] stated that a system, service, or product that 20 to 30 respondents evaluate can provide relatively stable results. Therefore, the number of respondents will meet the requirements for the desired product evaluation.

At this stage, a SUS test is conducted by asking 10 questions to 30 respondents. The respondents are the University of PGRI Wiranegara students who participate in student organizations or do not. The questions are shown in Table 2. Of the 10 questions, an answer score with a Likert scale ranging from 1 to 5, starting from Strongly Disagree (STS) to Strongly Agree (SS), is shown in Table 1.

Table 1: SUS Scoring Rating Scale

Answer	Score
Strongly Disagree (SD)	1
Disagree (D)	2
Neutral (N)	3
Agree (A)	4
Strongly Agree (SA)	5

The aspects of the level of acceptance of the average SUS score results are as follows:

1. Acceptable: the result value is above 71, which means users can accept the product
2. Marginal, the result value is between 70-51, which means that improvements are needed in the system that has been developed
3. Unacceptable: the result value is below 50, which means users do not accept the product

Table 2: List of SUS Questions

No.	Questions
1	I think I will use this website often.
2	I find this website complicated to use.
3	In my opinion, this website is easy to use.
4	I need help from another person or technician to use this website.
5	In my opinion, the features of this website work well.
6	In my opinion, many things are inconsistent on this website.
7	I think most users will be able to learn how to use this website quickly.
8	I find this website confusing.
9	In my opinion, there are no obstacles to using this website.
10	In my opinion, I need to get used to it first before using this website.

The steps in calculating the SUS score are as follows [15]:

1. Calculate the score value of each question by considering odd and even numbered questions.
2. Odd-numbered questions have a positive tone and are assessed by the answer score minus 1 (score-1)
3. Even numbered questions have a negative tone and are assessed by 5 minus the answer score (5-score)
4. Add up the results and then multiply by 2.5
5. Calculate the average score using the Equation 1:

$$\bar{x} = \frac{\sum x}{n} \quad (1)$$

With:

$\bar{x}$ = Average value

$\sum x$ = SUS Total score results

n = number of respondents

After the average SUS value is obtained, the next stage determines the feasibility of the trial results by adjusting three aspects: the level of acceptance (acceptability), grade scale, and rating (adjective rating). Table 3 shows the aspects of SUS Grade and Adjective Assessment.

Table 3: SUS Grade and Adjective Assessment Aspects

SUS Acore	Grade	Adjective
> 80,3	A	Excellent
68 - 80,3	B	Good
68	C	Okay
51 - 68	D	Poor
< 51	E	Awful

3.5.2 Single Ease Question (SEQ)

Single Ease Question (SEQ) is a testing method used to evaluate the ease of users in completing a given task. This technique uses questions with a rating scale from 1 to 7, from Very Difficult to Very Easy [5]. The SEQ Rating Scale is shown in Table 4.

Table 4: SEQ Rating Scale

Answer	Score
Very difficult	1
Difficult	2
Not easy	3
Enough	4
Not Difficult	5
Easy	6
Very Easy	7

At this stage, a task based on the features of the ORMAWA UNIWARA website was created. Then, it was given to respon dents, and they will assess the ease or difficulty of the task us ing a rating scale of 1 to 7. Research conducted by [16] explains that one question in the SEQ test only applies to one task.

Based on research by [13] and [10], the Single Ease Question (SEQ) method test was carried out with 10 respondents. Therefore, in this SEQ test, the authors in[17]volved 10 University of PGRI Wiranegara, both those who participate in student organizations and those who do not . These respondents were assigned to test the ORMAWA UNIWARA profile website.

According to [2], the SEQ assessment results are divided into two categories: values 1 to 4 are considered lacking or insufficient, while values 5 to 7 are considered good or successful. In addition, research by [17] stated that based on the SEQ assessment, results with a minimum score of 5 (relatively easy) are considered successful. The final results of the ORMAWA UNIWARA profile web testing using SEQ will be assessed based on these two categories, where if the value obtained is between 1-4, then it can be said to be lacking or insuf ficient. However, if the value obtained is between 5-7, it can be said to be successful or good.

4. Results and Discussions

4.1 Empathize

At this stage, this research involved interviews with six respondents. These respondents were students from University of PGRI Wiranegara who participated in ORMAWA and those who did not . Interviews were conducted to identify user needs, including information and preferences desired by users related to the design of the UI/UX of the ORMAWA profile web. The interview questions are presented in Table 5.

Then, after the interview with the six respondents, an empathy map was compiled, including data related to what someone says, does, thinks, and feels. The results of the empathy map compilation can be seen in Figure 2.

We can see in Figure 2 that the Says section includes direct statements expressed by respondents during the interview, such as comments, opinions, or criticisms related to Student Organizations. Afterwards, the Does section refers to actions taken by respondents related to Student Organizations, such as joining or not joining Student Organizations. The Think section describes what respondents think related to information about Student Organizations, such as assumptions or expectations that respondents believe. The Feel section includes emotions or feelings experienced by respondents related to information about Student Organizations.

Table 5: Interview Questions

No.	Question
1.	Have you heard about Student Organizations (ORMAWA) before?
2.	Do you know what student organizations there are at UNIWARA?
3.	Do you join one or more of these Student Organizations?
4.	Where do you get information about registration or matters related to ORMAWA?
5.	Are you having difficulty finding information about ORMAWA in UNIWARA? Explain what kind of difficulties you are experiencing!
6.	Are you having difficulty finding information about ORMAWA in UNIWARA? Explain what kind of difficulties you are experiencing!
7.	What kind of website contains the information you want so that you can easily find information about the ORMAWA you are looking for at UNIWARA?

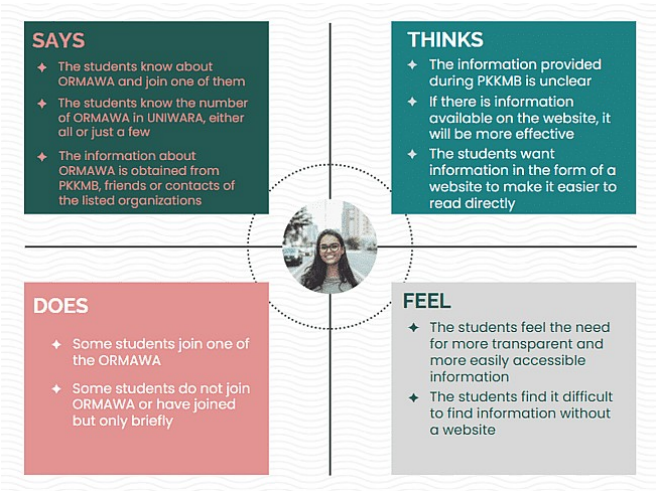

Figure 2: Empathy Map

4.2 Define

After conducting interviews in the previous stage, namely the empathize stage, the data obtained from the interviews will be analyzed thoroughly to formulate problem statements experienced by users. The authors will compile pain points and How-Might-We (HMW) at this stage.

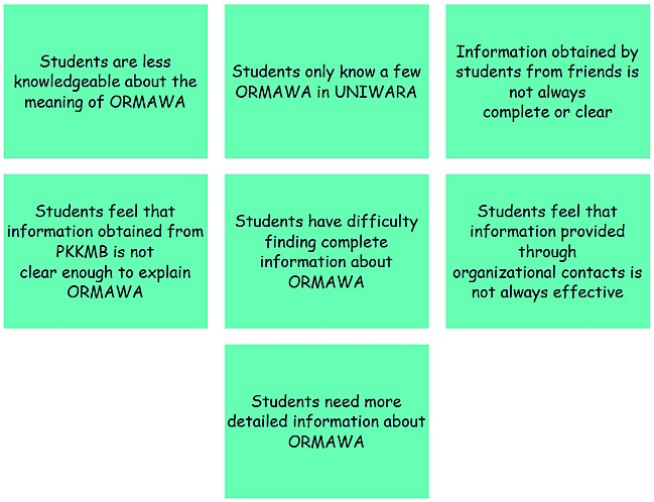

Figure 3: Pain Point

4.2.1 Pain Point

Pain points are problem points that are being experienced or faced by users. At this stage, the data obtained from Empathize will be analyzed to find problem points, and then pain points are compiled. The results of the pain points can be seen in Figure 3.

4.2.2 How-Might-We (HMW)

In the next stage, the author will conclude the problem points based on the compilation of pain points and change them into questions. The goal is to get ideas and solutions to the problems obtained. This stage is usually called How-Might-We (HMW). The results of How-Might-We (HMW) can be seen in Figure 4.

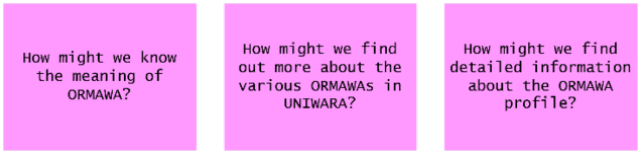

Figure 4: How-Might-We (HMW)

4.3 Ideate

The Ideate stage meant looking for various ideas and solutions to solve the previously identified problems. Next, the authors compile an affinity diagram to group the ideas based on two categories, namely the Interface and Information categories. The following results of compiling the affinity diagram can be seen in Figure 5.

4.4 Prototype

A prototype is the initial stage in designing the interface of a digital product. At this stage, the author designs the interface according to the ideas and solutions obtained and then creates a user flow, Wireframe, Mockup, and prototype design.

4.4.1 User Flow

User flow is a flow or process that users will carry out to complete various tasks in the designed system. User flow is essential in determining a website's functional path. The compilation of user flow is carried out based on ideas and solutions obtained at the ideate stage. In this study, the author compiled a user flow as a reference related to the user flow of the ORMAWA UNIWARA web features. There are several user flows on the ORMAWA UNIWARA website, as follows:

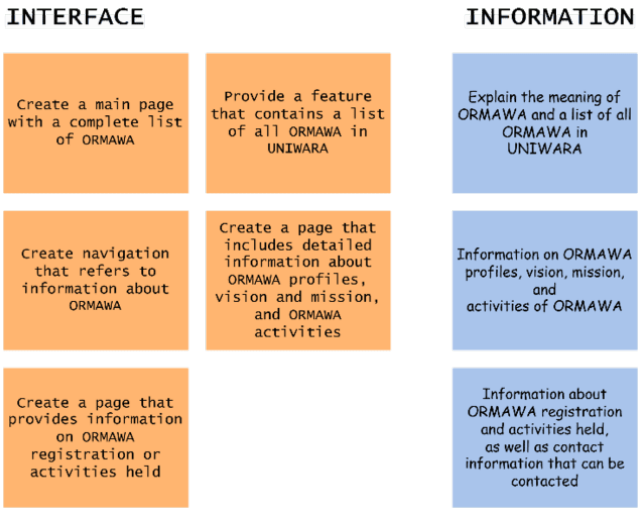

Figure 5: Affinity Diagram

User Flow ORMAWA Home

This user flow describes the steps users take when searching for the meaning and benefits of joining ORMAWA on the ORMAWA UNIWARA website. The user flow can be seen in Figure 6.

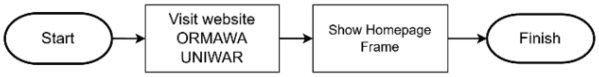

Figure 6: User Flow ORMAWA Home

User flow Searching for Student Organization Information

This user flow describes the steps users take when searching for information on the UNIWARA Student Organization website regarding what Student Organizations are available at the University of PGRI Wiranegara and searching for information about the desired Student Organization. The user flow is shown in Figure 7.

User Flow News and Event

This user flow describes users' steps when searching for information on the ORMAWA UNIWARA website regarding registration and activities organized by ORMAWA at the University of PGRI Wiranegara. The user flow can be seen in Figure 8.

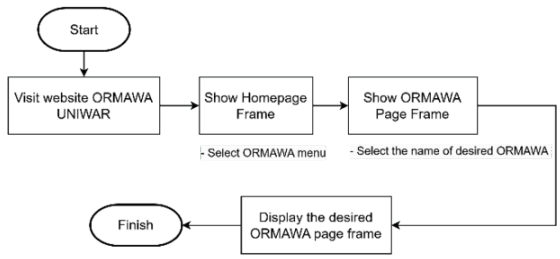

Figure 7: User Flow Searching for Student Organization Information

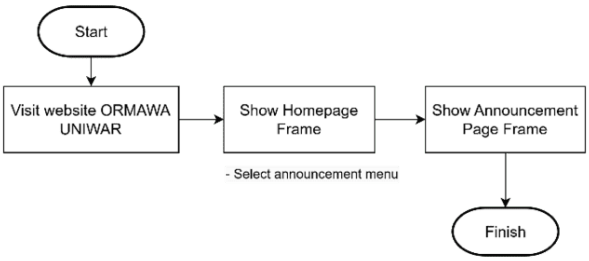

Figure 8: User Flow News and Event

4.4.2 Wireframe

At the wireframe stage, the ideas obtained will be presented as a UI wireframe display. The UI wireframe display includes the layout or placement of components on the ORMAWA UNIWARA website. The wireframe was created using the Figma tool, which will be the authors' reference when making a mockup design. The wireframe includes the home page, organization page, organization page, and announcement page. The following are the results of the ORMAWA UNIWARA website wireframe:

Wireframe Home Page

This wireframe displays the home page, which contains information about the meaning and benefits of joining a Student Organization. The following is the result of the home page wireframe, which can be seen in Figure 9.

Figure 9: Wireframe Home Page

Wireframe Organization Page

This wireframe displays the organization page, which contains information about the University of PGRI Wiranegara student organizations. The following is the result of the organization page wireframe, which can be seen in Figure 10.

Figure 10: Wireframe Organization Page

Figure 11: Wireframe Each Organization's Page

Wireframe Each Organization's Page

This wireframe displays each page, which contains information about the description, vision and mission, organizational structure, and activities of the Student Organization. The following are the results of the wireframe of each page, which can be seen in Figure 11.

Wireframe Announcement Page

This wireframe displays the announcement page, which contains information about registration and activities held by the Student Organization at the University of PGRI Wiranegara. The following is the result of the announcement page wireframe, which can be seen in Figure 12.

4.4.3 UI Style Guide

The UI style guide was created to maintain consistency in every visual element designed in making the Mockup. The primary color chosen is adjusted to the basic color of the University of PGRI Wiranegara logo, which is blue. The results of creating the UI style guide are as follows:

UI Style Guide Color Palette

This UI style guide is standard color elements for the ORMAWA UNIWARA website. The following are the results of

the UI style guide color palette, which can be seen in Figure 13.

Figure 12: Wireframe Announcement Page

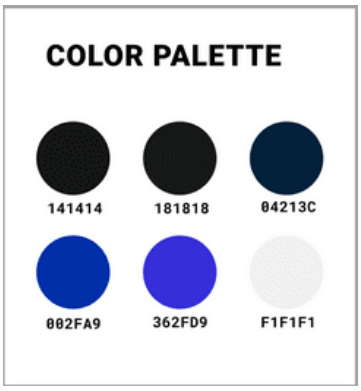

Figure 13: UI Style Guide Color Palette

UI Style Guide Typography

The design uses this UI style guide to design the types of fonts on the ORMAWA UNIWARA website. The following are the results of the UI style guide typography, which can be seen in Figure 14.

Figure 14: UI Style Guide Typography

UI Style Guide Button

The design uses this UI style guide to design the buttons on the ORMAWA UNIWARA website. The following are the results of the UI style guide button, which can be seen in Figure 15.

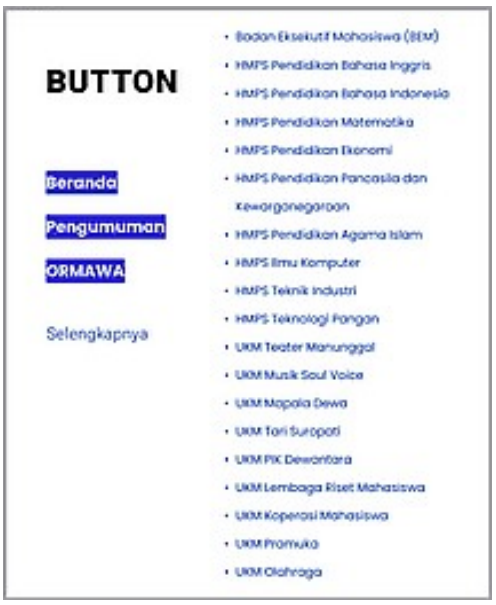

Figure 15: UI Style Guide Button

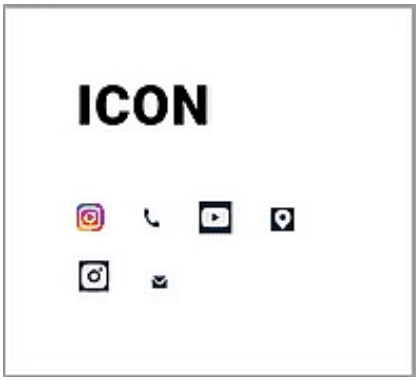

Figure 16: UI Style Guide Icon

UI Style Guide Icon

The design uses this UI style guide to guide the design of icons on the ORMAWA UNIWARA website. The following results of the UI style guide icon can be seen in Figure 16.

4.4.4 Mockup

After creating a wireframe, the next stage is to create a mockup. At this mockup stage, the appearance of the ORMAWA UNIWARA website will look more explicit, such as colors, images, icons, etc. The mockup design was created using the Figma tool. The complete results of the ORMAWA UNIWARA web mockup design can be seen in the appendix chapter of this study. The following is a scenario of using the ORMAWA UNIWARA website that will be used in the testing phase for target users:

Home Page

This home page contains information about the meaning and benefits of joining a Student Organization. To display the home page, users must access the ORMAWA UNIWARA website, which will appear on the main page. In addition, users can also display the home page on the Home menu avail able on the ORMAWA UNIWARA website. The home page can be seen in Figure 17.

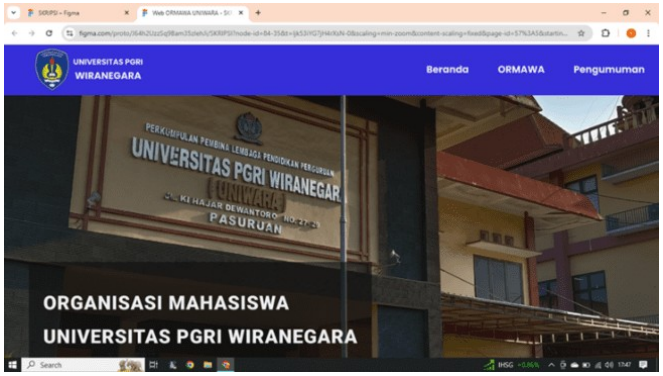

Figure 17: Home Page

ORMAWA Page

This ORMAWA page contains information about the names of ORMAWA at the University of PGRI Wiranegara. On this page, there is a feature on the left bar that contains Student Organizations' names. This feature will direct users to display information about ORMAWA according to what is being searched. The results of the organization page can be seen in Figure 18.

Figure 18: ORMAWA Page

Each Organization Page

This page contains information about the profile of each ORMAWA. This information includes descriptions, vision and mission, organizational logos, social media and organizational structures, and organizational activities. Users can display this page on the Organization menu and select the desired Student Organization name. The results of each organization's page can be seen in Figure 19.

Figure 19: Each Organization Page

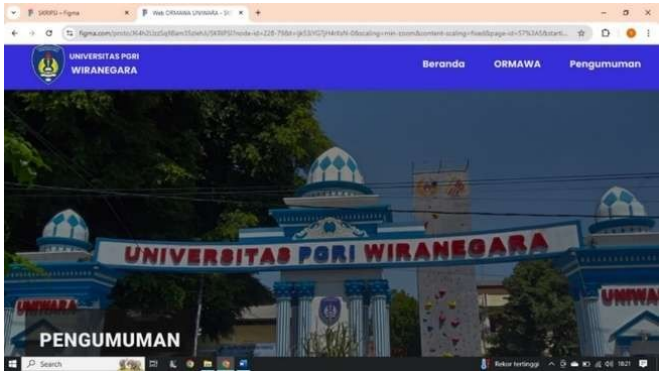

Figure 20: Announcement Page

Announcement Page

This announcement page contains information about registration and activities held by Student Organizations at the University of PGRI Wiranegara. Users can display this announcement page on the Announcement menu on the ORMAWA UNIWARA website. The results of this announcement page can be seen in Figure 20.

4.5 Testing

The testing stage in design thinking is the final stage that focuses on testing the prototype design to respondents to get feedback based on user experience. At this stage, the ORMAWA UNIWARA website prototype was tested using the usability testing method using the System Usability Scale (SUS) and Single Ease Question (SEQ).

4.5.1 System Usability Scale (SUS)

Testing using the System Usability Scale (SUS) was carried out by distributing a questionnaire containing 10 questions to 30 respondents. The questionnaire was distributed from July 29, 2024 to August 3, 2024. The results of the SUS answers can be seen in Table 6.

The SUS answer results in Table 6 are the questionnaire results that have not been calculated. Furthermore, the questionnaire data is converted into the SUS calculation. The questionnaire data is processed based on quantitative analysis because it is in the form of a score. The following SUS calculation results can be seen in Table 7.

Table 6: SUS Answer Results

Respondent	Question									
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
R1	5	1	5	1	5	1	5	1	5	1
R2	4	2	5	2	4	3	5	2	4	3
R3	4	1	5	1	4	1	5	2	3	3
R4	3	2	4	2	5	1	4	1	5	1
R5	5	1	5	1	5	1	4	1	5	4
R6	3	3	4	1	4	1	4	1	5	2
R7	4	3	4	1	5	1	3	2	5	1
R8	4	1	5	2	4	1	4	1	5	1
R9	4	2	5	2	4	2	4	3	5	3
R10	3	1	5	3	5	3	4	1	5	2
R11	4	2	5	1	5	2	4	1	5	3
R12	3	2	4	2	4	3	5	1	5	2
R13	4	1	5	1	4	2	4	1	5	1
R14	3	1	4	1	4	1	4	1	4	3

Respondent	Question									
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
R15	**5**	2	5	1	5	3	5	2	4	3
R16	4	2	5	1	4	2	5	1	5	**2**
R17	4	1	5	1	4	1	4	1	5	1
R18	3	2	5	2	5	2	5	1	5	1
R19	4	3	3	2	4	2	3	2	4	2
R20	4	2	4	2	4	2	4	2	4	1
R21	5	1	4	3	4	1	5	1	5	1
R22	5	2	5	1	5	1	3	1	5	1
R23	5	1	5	1	5	1	3	4	5	1
R24	4	2	4	2	5	1	4	2	4	2
R25	5	2	5	2	5	3	3	1	5	1
R26	4	1	5	1	5	3	5	1	4	2
R27	3	1	5	2	5	1	4	1	5	1
R28	1	2	4	2	4	1	4	1	5	1
R29	4	1	5	2	5	3	2	2	5	1
R30	4	2	4	1	4	3	3	1	4	1

The initial stage of SUS calculation was undertaken by calculating odd and even numbered questions, and then the score results were added up and multiplied by 2.5. Next, the average score was determined by summing the previously multiplied scores and dividing by the number of respondents. The results of the average SUS score can be seen in Table 7, which is 84. This value indicates that the ORMAWA UNIWARA website prototype is included in the acceptable level of acceptance category or can be accepted by users with a grade scale or scale level A and an adjective rating in the range of values more than 80 or Excellent. These results indicate that the system being tested has an excellent level of usability and is positively received by users.

4.5.2 Singel Ease Question (SEQ)

The initial stage of prototype testing using Single Ease Question (SEQ) was conducted by creating tasks based on the features available on the ORMAWA UNIWARA website. Then, create questions related to the ease of each task based on a rating scale of 1 to 7. The SEQ test task scenario can be seen in Table 8.

Table 7: SUS Calculation Results

Respondent	Question										Total Score	Score Value
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10		
R1	4	4	4	4	4	4	4	4	4	4	40	100
R2	3	3	4	3	3	2	4	3	3	2	30	75
R3	3	4	4	4	3	4	4	3	2	2	33	83
R4	2	3	3	3	4	4	3	4	4	4	34	85
R5	4	4	4	4	4	4	3	4	4	1	36	90
R6	2	2	3	4	3	4	3	4	4	3	32	80
R7	3	2	3	4	4	4	2	3	4	4	33	83
R8	3	4	4	3	3	4	3	4	4	4	36	90
R9	3	3	4	3	3	3	3	2	4	2	30	75
R10	2	4	4	2	4	2	3	4	4	3	32	80
R11	3	3	4	4	4	3	3	4	4	2	34	85
R12	2	3	3	3	3	2	4	4	4	3	31	78
R13	3	4	4	4	3	3	3	4	4	4	36	90
R14	2	4	3	4	3	4	3	4	3	2	32	80
R15	4	3	4	4	4	2	4	3	3	2	33	83
R16	3	3	4	4	3	3	4	4	4	3	35	88
R17	3	4	4	4	3	4	3	4	4	4	37	93
R18	2	3	4	3	4	3	4	4	4	4	35	88
R19	3	2	2	3	3	3	2	3	3	3	27	68
R20	3	3	3	3	3	3	3	3	3	4	31	78
R21	4	4	3	2	3	4	4	4	4	4	36	90
R22	4	3	4	4	4	4	2	4	4	4	37	93
R23	4	4	4	4	4	4	2	1	4	4	35	88
R24	3	3	3	3	4	4	3	3	3	3	32	80
R25	4	3	4	3	4	2	2	4	4	4	34	85
R26	3	4	4	4	4	2	4	4	3	3	35	88
R27	2	4	4	3	4	4	3	4	4	4	36	90
R28	0	3	3	3	3	4	3	4	4	4	31	78
R29	3	4	4	3	4	2	1	3	4	4	32	80
R30	3	3	3	4	3	2	2	4	3	4	31	78
SUS Total score												2515
SUS Average score												84

Table 8: SEQ Testing Task Scenario

Task	Question
1. Users enter the main page/homepage to find information about the meaning and benefits of joining ORMAWA.	How easy is it to get to the Home page?
2. The user enters the Organization page by selecting the Organization menu.	How easy is it to get to the Organization page?
3. The user selects the name of the student organization they are searching for in the left bar on the Organization page and displays information about the student organization.	How easy is it to find the desired Ormawa name?
4. The user clicks on the social media name under the organization logo.	How easy is it to find Ormawa's social media?
5. The user enters the Announcement page by clicking the Announcement menu.	How easy is it to enter the Announcements page?

Table 9: SEQ Assessment Results

Responden t	Task				
	T1	T2	T3	T4	T5
R1	7	7	6	6	7
R2	7	7	6	6	7
R3	7	6	6	6	7
R4	7	6	7	6	7
R5	7	7	5	6	7
R6	7	7	7	7	7
R7	7	7	6	7	7
R8	6	6	5	6	6
R9	7	7	7	6	7
R10	7	7	7	7	7
	6.9	6.7	6.2	6.3	6.9
Average	6.6				

After determining the task scenario, the next SEQ test was carried out by distributing questionnaires to 10 respondents.

Then, the SEQ assessment was carried out by calculating the average value of the entire task. The results of the SEQ can be seen in Table 9.

Table 9 shows the calculation results of the average SEQ value obtained, 6.6. Based on the results of these calculations, it can be concluded that the prototype design of the ORMAWA UNIWARA website has met user needs with a value range of 5-7, which means it is good or successful.

5. Conclusions

This study successfully developed a prototype website profile of ORMAWA (Student Organization) University of PGRI Wiranegara (UNIWARA) using the Design Thinking method approach. The development process began with the empathize stage, where six UNIWARA students were interviewed as respondents to identify user needs and preferences. This interview resulted in a deep understanding of students' information needs and difficulties finding information about Student Organizations.

The usability testing results using the System Usability Scale (SUS) and Single Ease Question (SEQ) showed that the website prototype had an excellent level of usability. The SUS test obtained a score of 84 out of 1-100, which is included in the "Excellent" category with Grade A and is accepted by users. In addition, the average SEQ score of 6.6 indicates that the website design is easy to use and meets user needs well.

Based on the results of this test, it can be concluded that the design of the ORMAWA UNIWARA website prototype successfully meets user needs by providing clear and easily accessible information. The result shows that the Design Thinking approach effectively identifies and meets user needs and produces designs that target users well-received.

For this product to be utilized by more users, it is recommended to disseminate information about the existence and function of this website through various communication channels used by students, such as social media, campus email, and campus events such as seminars and open houses.

It is necessary to conduct a continuous evaluation of this website through user feedback to identify deficiencies or areas that still need improvement, as well as to consider adding other features that can increase user interactivity and convenience, such as discussion forums, more sophisticated search features, and integration with e-learning platforms available at the University.

Declaration of Conflicting Interests

The authors declare that there are no competing interests that could have influenced the work of our study.

References

[1] N. Janiati and N. Husin, "Sistem Forum Komunikasi Organisasi Mahasiswa Berbasis Website di Institut Bisnis Nusantara," *J. Esensi Infokom*, vol. 3, no. 2, pp. 7–12, 2019, doi: 10.55886/infokom.v3i2.330.

[2] V. K. Reynaldi and N. Setiyawati, "Perancangan UI/UX Fitur Mentor on Demand Menggunakan Metode Design Thinking Pada Platform Pendidikan Teknologi," *JIPI (Jurnal Ilm. Penelit. dan Pembelajaran Inform.*, vol. 7, no. 3, pp. 835–849, 2022, doi: 10.29100/jipi.v7i3.3109.

[3] A. A. Razi, I. R. Mutiaz, and P. Setiawan, "Penerapan Metode Design Thinking Pada Model Perancangan UI/UX Aplikasi Penanganan Laporan Kehilangan Dan Temuan Barang Tercecer," *Desain Komun. Vis. Manaj. Desain dan Periklanan*, vol. 3, no. 02, p. 219, 2018, doi: 10.25124/demandia.v3i02.1549.

[4] D. E. Cahyani, S. Wahyuningsih, D. Rahmadani, K. Khotimah, and N. A. Atan, "User Interface Design for Dyslexia Children Learning Application Using Design Thinking Approach," *Int. J. Interact. Mob. Technol.*, vol. 18, no. 6, pp. 84–96, 2024, doi: 10.3991/ijim.v18i06.47973.

[5] A. Maulana, A. Syazili, and M. Ariandi, "Perancangan Perangkat Lunak Sistem Parkir Kendaraan Menggunakan Metode Design Thinking," *KLIK Kaji. Ilm. Inform. dan Komput.*, vol. 4, no. 5, pp. 2646–2656, 2024, doi: 10.30865/klik.v4i5.1764.

[6] I. Darmawan, M. S. Anwar, A. Rahmatulloh, and H. Sulastri, "Design Thinking Approach for User Interface Design and User Experience on Campus Academic Information Systems," *Int. J. Informatics Vis.*, vol. 6, no. 2, pp. 327–334, 2022, doi: 10.30630/joiv.6.2.997.

[7] Real Ananda Kristi, Prisa Marga Kusumantara, and Nur Cahyo Wibowo, "Perancangan Antarmuka Aplikasi Penyewaan Florist Menggunakan Metode Design Thinking," *J. Ilm. Sist. Inf. dan Ilmu Komput.*, vol. 3, no. 3, pp. 33–42, 2023, doi: 10.55606/juisik.v3i3.622.

[8] Y. Febriyanto, P. Sukmasetya, and M. Maimunah, "Implementasi Design Thinking dalam Perancangan UI/UX Rumah Sampah Digital Banjarejo," *J. Inf. Syst. Res.*, vol. 4, no. 3, pp. 936–947, 2023, doi: 10.47065/josh.v4i3.3135.

[9] N. N. Arisa, M. Fahri, M. I. A. Putera, and M. G. L. Putra, "Perancangan Prototipe UI/UX Website CROWDE Menggunakan Metode Design Thinking," *Teknika*, vol. 12, no. 1, pp. 18–26, 2023, doi: 10.34148/teknika.v12i1.549.

[10] K. Hasna, M. Defriani, and M. H. Totohendarto, "KLIK: Kajian Ilmiah Informatika dan Komputer Redesign User Interface Dan User Experience Pada Website Eclinic Menggunakan Metode Design Thinking," *Media Online*, vol. 4, no. 1, pp. 84–92, 2023, doi: 10.30865/klik.v4i1.1072.

[11] M. Yasin and P. P. Widagdo, "Perancangan Desain Aplikasi Mobile Pada Dinas Pemberdayaan Masyarakat Dan Pemerintahan Desa Provinsi Kalimantan Timur Menggunakan Figma," *Pengabdi. Kpd. Masy. Bid. Teknol. dan Sist. Inf.*, vol. 1, no. 2, pp. 39–50, 2023, doi: 10.30872/petisi.v1i2.1144.

[12] C. S. Surachman, M. R. Andriyanto, C. Rahmawati, and P. Sukmasetya, "Perancangan UI/UX Aplikasi Toko Kue Dengan Metode Design Thinking," *TelKa J. Teknol. Inf. dan Komun.*, vol. 12, no. 2, pp. 157–169, 2022, doi: 10.51211/imbi.v7i1.1949.

[13] M. A. Alfani, F. E. M. Agustin, and D. Khairani, "Analisis dan Perancangan Prototype Desain Antar Muka Pengguna Aplikasi Mobile IDKarier Menggunakan Metode Lean UX," 2022. [Online].

Available: https://repository.uinjkt.ac.id/dspace/bitstream/123456789/68383/1/MUHAMMAD AULIA ALFANI-FST.pdf

[14] R. Mardhatillah, K. AR, and S. Wahyuni, "Implementasi Metode Design Thinking Dalam Perancangan Prototype UI/UX Aplikasi E-Event," Universitas Islam Negeri Ar-Raniry Banda Aceh, 2022. [Online]. Available: https://repository.uinjkt.ac.id/dspace/bitstream/123456789/68383/1/MUHAMMAD AULIA ALFANI-FST.pdf

[15] A. W. Illahi, N. Suarna, A. I. Purnamasari, and N. Rahaningsih, "Sistem Informasi Administrasi Kependudukan Berbasis Web Dengan Pengujian System Usability Scale Untuk Meningkatkan Pelayanan Pada Masyarakat," in *Jurnal Janitra Informatika dan Sistem Informasi*, 2022, pp. 107–115. doi: 10.25008/janitra.v2i2.147.

[16] M. S. Hadafi and B. A. Herlambang, "Pengembangan UI/UX Design Studi Kasus Aplikasi Campaign Menggunakan Metode Design Thinking," in *Science and Engineering National Seminar (SENS 6)*, Semarang, 2021, pp. 297–307. [Online]. Available: http://conference.upgris.ac.id/index.php/sens/article/view/2373.

[17] E. Y. Mahhendra and A. S. Y. Irawan, "Perancangan UI/UX Menggunakan Metode Design Thinking Aplikasi Amartha (Studi Kasus: Amartha Gold Investment)," *J. Pendidik. Tambusai*, vol. 7, no. 3, pp. 20071–20079, 2023. doi: 10.31004/jptam.v7i3.9437

