Application of Design Thinking in Building a Product Design Study Program Profile Website Using Content Management Site Wordpress

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Abstract  
ISI Padang Panjang product design study program still has many obstacles, one of which is that the community, prospective students, and lecturers are still difficult to find real-time study program information and are still difficult to promote. Therefore, in order to keep up with technological developments, this study program is motivated to build a product design study program profile website by applying the design thinking method using CMS (Content Management Site) WordPress. The design thinking method is appropriate in this research because it is considered effective in overcoming challenges or problems and creating solutions based on user needs. Through the five stages of design thinking, namely, empathize, define, ideate, prototype, and testing, it can provide convenience for researchers in searching for data, analyzing and identifying a problem, validating the idea of building a product design study program website to make it easier for users to access information on study programs, lectures, lecturers, activities and products produced by students. This can be seen from user feedback conducted at the testing stage regarding the appearance of the website with good results by the wishes and needs of the Product Design study program.

INTRODUCTION

The rapid advancement of technology has brought numerous benefits across various aspects of life. Over time, there has been an extraordinary and astounding increase in human innovation, including technological advancements through various IT-based media (Khairunnisa et al., 2022). The conveniences provided by technology directly impact the activities of an institution. The implementation of technology can meet the needs of an institution quickly, accurately, and precisely.

ISI Padang Panjang, as an educational institution, also aims to introduce information about campus activities in a digital format. Hence, the product design study program is driven to build a profile website to provide information and serve as a promotional platform for stakeholders. Each piece of information displayed on the website should be presented clearly and complement one another to ensure easy understanding (Muntoha et al., 2015).

A website, according to Susilowati, (2019), is a collection of interconnected web
pages on a specific topic, usually hosted on a web server accessible through the internet or local area network (LAN). The website will be created using the design thinking method. The design thinking method is effective in overcoming problems through innovation. The design thinking method is capable of solving problems by designing solutions based on user needs. The design thinking method is creative because developers can be creative with their ideas. In addition, they can practically understand user needs. Design thinking, as defined by Kelley & Brown (2018), is a human-centered approach to innovation that draws from the designer's toolkit to integrate human needs, technological possibilities, and business success.

WordPress, on the other hand, is a Content Management System (CMS) that serves as a contemporary development platform. It offers quality open-source services and facilitates easy website modification to suit specific needs. Constructing this profile website will assist the product design study program at ISI Padang Panjang in enhancing the effectiveness and efficiency of information dissemination and promotion. Thus, it can achieve the goal of attracting new students and enhancing the program's image in the community through the management of this website-based information resource.

Previous research has discussed the design of study program profile websites using the WordPress content management system (Khaliq et al., 2023) [1]. Previous research on the design of a WordPress-based taxation study program profile web (case study: panca budi development University Medan) (Erika, 2023) [2] Implementation of rapid application development methods on profile websites (a case study of server administration and computer network study programs) (M. Nur Fuad & M. Mujiono, 2022) [3]. In building this profile website, the design thinking method is applied. The difference between this research with the previous one is that the author directly uses the design thinking method in building the study program profile website while the previous one uses other methods. And the author directly puts himself in the situation of the product design study program so that in making the website design in this study provides the right solution.

### METHOD

The research method employed in this study is the design thinking method. Design thinking is a human-centered approach to innovation that integrates human needs as users, technological possibilities, and the requirements for business success (Lazuardi & Sukoco, 2019). The Design Thinking method is used to solve problems creatively, actively involving users in the thinking process and making the user's point of view the main guide in every action or activity carried out to solve the problem. Design thinking methods are used to find highly effective and efficient solutions to complex problems. The approach applied is comprehensive thinking in order to achieve the desired solution. The stages of the design thinking method are as follows:

a. Empathize

Conducting observations and interviews with users is a research method employed in this study. Observations are made by observing how users interact with their environment to understand what users need. Interviews are conducted to identify user needs and desires (Pressman, 2019).

The observations aim to see how the projected work will be, potential risks that may occur, resources needed, output to be achieved, work schedule plans to be implemented, and tracking the application development process (Khairunnisa et al., 2020)

The empathize stage is carried out using surveys, observations, interviews, and positioning yourself as a user. This stage is to find out the wishes of the study program according to the needs of making a profile website design, including what information and features you want to display on the website. It starts with approaching the head of the study program, study program secretary, lecturers, and students to get an empathetic understanding of the problem to be solved and better understand the needs of stakeholders.

b. Define

The defined process is conducted after identifying specific problems based on the needs and desires of the users, derived from observations during the empathize stage. The observations' results are analyzed to
understand the issues faced by the users (Sari et al., 2020). Once the desires and needs of the users regarding the website to be developed are known, the defined process is carried out by creating a list of website desires and requirements and determining its objectives. The list of user needs is compiled to generate concepts that lead to designing a website that aligns with these requirements.

c. Ideate
Generating ideas to provide solutions to the problems is accomplished by engaging in a brainstorming process with relevant stakeholders. The ideas obtained will yield solutions to the challenges faced by the users (Wibowo & Setiaji, 2020). At this stage, ideas were collected as solutions to the problems that had been identified and determined in the previous stage (brainstorming). There were 4 team members. All team members exchanged opinions and gave each other ideas so as to create effective and creative solutions. Ideas are poured in the form of images and basic sketches of the best idea will be the right solution so that it is used as an implementation in the form of a prototype.

d. Prototype
The process involves creating a website layout design, which will then be implemented to generate a prototype or a testable product (Haryuda et al., 2021). This stage creates an interface design for the website profile of the ISI Padang Panjang product design study program to overcome the problems faced. The design will be a beta version or prototype that will later be tested on users to get feedback to revise the website so that it is by users' wishes and needs.

e. Test
This stage involves direct field testing. The testing phase aims to gather feedback from users to improve the created prototype (Haryuda et al., 2021). The implementation of this test is carried out with the chairman and secretary of the study program, lecturers, employees and students whether the website is appropriate or not. In this stage can provide input on whether there are features that need to be added or not. So that with this test it can find out the needs of stakeholders, how a person interacts with the website created, and what is the level of difficulty in accessing the website. The stages of the design thinking method can be seen in Figure 1.

![Design Thinking: A 5 Stage Process](image)

Figure 1. The Stages of Design Thinking

**RESULT AND DISCUSSION**

The results of implementing the product design study program profile website using WordPress in the development process will be outlined based on the system development stages using the design thinking method as follows:

a. Emphasize
In the first stage, the author conducted interviews and observations with the head of the study program, lecturers, employees, and product design students so that initial information from users was obtained, which would be the basis for making the website. The problems that can be found are in Table 1.
b. Define
At this stage, problems are categorized, which is useful to facilitate researchers in finding effective solutions to existing problems. Problem categories such as Table 2.

c. Ideate
The ideas generated based on the core issue revolved around creating a profile website for the Product Design study program that facilitates users in accessing information about the study program. The target users include the community, students, staff, and faculty. Thus, the website was designed to be simple and user-friendly.

In this stage, there are several solutions as shown in Table 3.

<table>
<thead>
<tr>
<th>Table 1. The Problems</th>
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<tbody>
<tr>
<td>There needs to be a recap of academic information for the Product Design study program.</td>
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<tr>
<td>Information delivery still uses WhatsApp.</td>
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<tr>
<td>The information storage system is still separated.</td>
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<tr>
<td>Inaccurate information when students need academic information</td>
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<tr>
<td>The existence of a pandemic requires that existing information be channeled properly.</td>
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<tr>
<td>It still needs to be easier for the public to find study program information.</td>
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<th>Table 2. Problems Categories</th>
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d. Prototype
Making this prototype with a Digital Prototype as a reference for the design process, website simulation, and website trial support.

1. Home
On the Home menu of this product design profile website, it provides information on recent activity photos, links to the information system related to the program, news about program activities, program leadership, and contact us. Home page layout can be seen in Figure 2.

2. Profile
The profile menu on this website provides information about the vision and mission of the study program, organizational structure, graduate profiles, and faculty profiles. Thus, anyone accessing this website will be able to view the profile of the Product Design study program at ISI Padang Panjang. Profile display can be seen in Figure 3.
3. Academic
The academic menu on this website provides information about the curriculum, academic calendar, class schedules, and a list of students in the Product Design study program at ISI Padang Panjang. Akademik display can be seen in Figure 4.

4. Activities
The activities menu contains information about the Product Design study program and the collaborations conducted by the Product Design study program at ISI Padang Panjang. Activities display can be seen in Figure 5.

Figure 4. Academic Display

Figure 5. Activities Display
5. Dashboard Page  
This page is used by the admin to manage the profile website of the Product Design study program at ISI Padang Panjang. Dashboard page display can be seen in Figure 6.

6. Menu Management Page  
Through menu management, the administrators of the Product Design study program profile website can add the required menus to the website. Menu management page display can be seen in Figure 7.

7. Activities Management Page  
Through the activities management page, this website can be used to manage all the activities within the Product Design study program at ISI Padang Panjang. The activities management page display can be seen in Figure 8.
e. Testing
The implementation of this test was carried out with the chairman and secretary of the study program, lecturers, employees, and students of the ISI Padang Panjang product design study program. With this test, some input from stakeholders was obtained, such as the addition of a collaboration sub-menu, the addition of activities that have been carried out by the study program so far, and the addition of what students have produced products. With the suggestions and feedback from stakeholders, the website created is by the wishes and needs of the product design study program at ISI Padang Panjang. Thus, applying the design thinking method is an advantage because it can solve problems from stakeholders, and stakeholders can also provide proposed solutions. In making improvements, you must understand and put yourself in a stakeholder situation and not be separated from discussion activities so that the final website results can help solve the problems faced through the design of the website profile of the ISI Padang Panjang product design study program.

CONCLUSION
With the application of the Design Thinking method, the existing problems were found, so a website was built that could be used as a medium for delivering information and website-based promotional media in the ISI Padang Panjang product design study program. Based on the results of the analysis and testing carried out, the website that was built is ready to be used and implemented widely so that it can be accessed by anyone and anywhere as long as there is an internet network.

The website that was built as a medium of information and promotion in the ISI Padang Panjang product design study program can make the scope of access to information to be conveyed to stakeholders broad. This information media is effective and efficient in obtaining information on ISI Padang Panjang's product design study program because it saves time and costs for the community and does not need to visit the location of ISI Padang Panjang's product design study program. The public only needs to know the ISI Padang Panjang product design study program information that has been provided on the website.

Future researchers who will create a website can use the design thinking method because it can clearly see the problem and how to solve it so that the resulting website is in accordance with the wishes and needs of users.

REFERENCES


