WEB-BASED VILLAGE HEAD ELECTION APPLICATION UTILIZING DESIGN THINKING

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Abstrack: The village head candidate selection system is currently manual, requiring residents to wait for the General Election Committee to open the registration booth for village head candidates. Subsequently, residents who wish to cast their votes must go to the Polling Station, present their voter identification card as verification, and then enter the voting booth to cast their votes. After the voting process, the committee must recount the votes and compile the ballot papers. This manual process is deemed inefficient and not optimal, leading to the damage and invalidation of many ballot papers.The introduction of an e-voting system is expected to assist residents, especially those living abroad, in exercising their voting rights. This would enable them to cast their votes even if they are unable to return to their hometowns. The design of this system incorporates the Design Thinking methodology, encompassing the Empathize, Define, Ideate, Prototype, and Testing stages.

INTRODUCTION

Indonesia is one of the democratic countries that holds general elections every five years. The electoral process begins at the village level with the Village Head Election (Pilkades) and extends to the highest level with the Presidential Election. The election process involves a general vote, where voters cast their ballots, and the ballots are then placed into provided envelopes. This research process is time-consuming, making it ineffective and requiring substantial funds. According to Sarbaini (2018), elections are a battleground for filling political positions in the government, carried out through a selection process conducted by eligible citizens. In general, elections are a means for the people to determine their leaders or representatives in the government, representing a fundamental right for citizens to choose their representatives in governance. In addition to the above definition, Morrisan (2018) suggests that general elections are a method or tool to gauge the desires of the people regarding the direction and policies of the country. It can also be said that the implementation of elections is the realization of the democratic system in action.
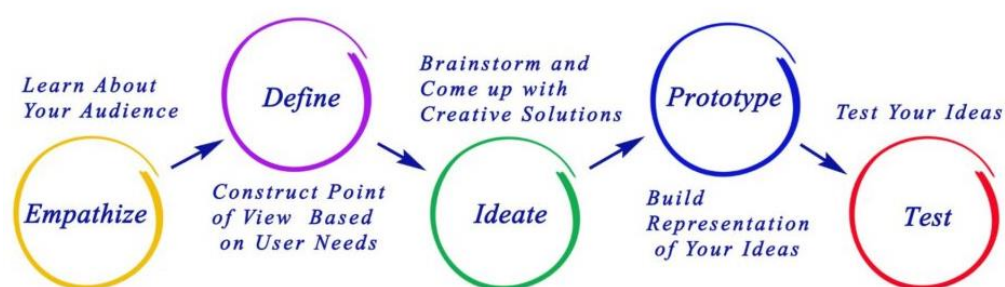
RESEARCH METHODS

Design Thinking

Design thinking is an iterative process in which we seek to understand users, challenge assumptions, and redefine problems to find alternative strategies and solutions that may not be immediately apparent at the initial understanding level. Simultaneously, design thinking provides a solution-oriented approach to problem-solving. It is a way of thinking and working that involves a series of simple and clear methods. According to Kelley & Brown (Lazuardi & Sukoco, 2019), Design Thinking is a human-centered innovation method that utilizes design tools to integrate the needs of people, technical possibilities, and requirements for business success. Design thinking has the capability to provide solutions for complex problems. Design teams create a collaborative atmosphere that often leads to breakthroughs in finding solutions for various challenges Resolving existing problems: When the design team brings together all stakeholders from various companies, they often can secure commitments from different divisions of the company to explore new ideas until they become a solution. It is important to note that design thinking is not the only successful method for fostering collaboration and addressing all issues.

Gambar 1. Design Thinking Process

1. Empathy (Empathize): In this stage, the focus is on deeply understanding users or consumers. The design team strives to feel and comprehend the perspectives, needs, and experiences of users by conducting observations, interviews, or user research.
2. Definition (Define): After understanding the users, the team formulates their understanding into a clear and focused problem definition. This stage involves articulating statements of challenges or problems that need to be solved.

3. Ideation (Ideate): This is a creative stage where the team aims to generate as many solution ideas as possible without judgment or criticism. Methods such as brainstorming are often used to stimulate creative and innovative thinking.

4. Prototyping (Prototype): The most promising ideas from the ideation stage are further developed into prototypes. These prototypes can take the form of physical models, visual representations, or even simulations that allow for testing and quick feedback.

5. Testing (Test): Prototypes are tested with users or stakeholders to gather feedback. The results of these tests may lead to revisions of the prototype or can serve as the basis for initiating the next steps in the design process.

RESULTS AND DISCUSSION

Research stages

1. Empathize:

In the first stage, interviews and observations were conducted with a sample of the Village Chief's office staff directly involving three individuals, namely the Village Chief, the Secretary of the Village Chief, and the village operator at the Sei Sentang Village office. These observations were carried out at the Village Chief's office to understand the existing issues related to the village head election process. Interviews were conducted to gain insights into the challenges faced by the Village Chief's office in conducting village head elections. Several issues were identified during the research as follows:

   1. Suspected frequent occurrences of fraud in determining the validity of ballots for one of the Village Head candidates.

   2. Careless and hurried ballot reading, leading to witnesses and the community less attentively observing the markings on the ballots, whether they are valid or not.

   3. The process of selecting the Village Head takes a considerable amount of time.

   4. The election of the Village Head also involves significant expenses.

2. Define

In the second stage, the author identifies the most crucial issue in the Sei

Sentang Village community, which is the frequent occurrence of fraud in the village head election process. This is attributed to the dissatisfaction of the community in determining the elected Village Head. Based on the results of interviews during the empathy stage, the community in Sei Sentang Village, which conducts manual village head elections, expressed dissatisfaction with the election outcomes. After the observation process, it can be concluded that there is still a sense of dissatisfaction among the community when using manual paper-based voting for the village head election. The Village Operator, as the organizer of the village head election, often faces difficulties in conducting the election, leading to a relatively slow process in determining the candidate for the Village Head.

3. Idea:

Referring to the previous stage, which is Define, the ideas that will be generated are based on the core issue, namely the web-based village head election application. One of the primary concepts is the Design and Development of a Web-Based Village Head Election Application.

4. Prototype:

From the process undertaken in the previous empathy stage, conclusions were drawn regarding various design flows for the Village Head Election Website Application at the Sei Sentang Village Chief's Office. These flows were then redesigned in the form of a website to become a Web-Based Village Head Election Application used as a reference in the Village Head Election in Sei Sentang Village. Below is the appearance of the Web-Based Village Head Election Application generated based on the Empathy Process.

Web Page Display

1. Page Login

Gambar 2. Page Login

The display above is the login page on the website. It can only be accessed by the Admin and the Village Head Election Officers. Before accessing other pages on the website, it is recommended to log in first to distinguish between the Admin, Officers, and Voters as they have different login credentials.

2. The display above is the Dashboard view of the Village Head Election Application

Gambar 3. The display above is the Dashboard view of the Village Head Election Application

The display above is the main view of the web-based Village Head Election Application, where there are several menus: Dashboard, Votes, Voters, Positions, Candidates, Vote Position Placement, Vote Title, and Admin Menu. These menus can only be accessed by Admin and Officers

3. The display of the main page of the Vote Menu

Gambar 4. The display of the main page of the Vote Menu

The display above is the main view of the voting menu for voters used to vote for the Village Head of Sei Sentang. Within this main page of the Vote menu, voters can cast their votes for their desired village head candidate. Voters can only use this page to vote, view their votes, and submit the voting results.

CONCLUSION

The "Web-Based Village Head Election Application Utilizing Design Thinking" encompasses the development of an online platform for the village head election process. Leveraging the principles of Design Thinking, the application aims to address various challenges identified through empathetic understanding, defining core issues, ideating innovative solutions, prototyping, and testing. The focus is on creating a user-friendly, efficient, and transparent system that facilitates the election process, ensuring accessibility for administrators, election officers, and voters. This approach integrates human-centered design principles to enhance the overall election experience and outcomes.

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