



Enhancing Website Usability by Utilizing Heuristic Evaluation and User Feedback for Better User Experience

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Abstract—This research focuses on improving the usability of the Portal KUKERTA website used by Lembaga Penelitian dan Pengabdian pada Masyarakat Universitas Riau (LPPM UNRI) for the Kuliah Kerja Nyata (KKN) program. Based on direct observations of the Portal KUKERTA website, several usability issues related to the system were identified. Combining heuristic evaluation and user feedback, the study aims to enhance the user experience and ensure a user-friendly interface. Analysis of feedback from 98 users revealed the highest severity ratings in Flexibility and Efficiency of Use, Error Prevention, and User Control and Freedom. Recommendations were developed to address these issues and improve the user experience. The integration of heuristic evaluation and user feedback provides valuable insights for enhancing the usability of the Portal KUKERTA website, serving the needs of students and lecturers. Additionally, the research results showed scores for various usability principles, including visibility of system status (1.838), match between system and real world (2.264), user control and freedom (3.786), consistency and standards (2.325), error prevention (4.062), recognition rather than recall (2.250), flexibility and efficiency of use (4.075), aesthetic and minimalist design (2.713), and help users recognize, diagnose, and recover from errors (2.843). These findings further guide the improvement of specific areas to enhance the overall usability of the Portal KUKERTA website.

Keyword: Usability; Heuristic; Evaluation; KKN; Website

1. INTRODUCTION

KKN is one form of community service that involves interdisciplinary and industry-specific work for students in specific times and locations. This activity is held once a year for students who have completed the required number of University Credit Unit. Based on the results of interviews conducted with the staff of the General Affairs Department at LPPM UNRI, who have coordinated with the Portal KUKERTA website development team, the number of participants in the KKN program can reach approximately 4,000 students per year.

To facilitate the operation of KKN, a website is required to distribute information to the students that satisfy the information management needs in the implementation of KKN activities requires excellent documentation of information and careful attention to several necessary processes, including the management of KKN registration information, grouping of KKN participants, scheduling and location allocation for KKN, and the evaluation process. To effectively address these requirements, a robust information management system is essential to ensure the smooth and efficient execution of KKN activities.

The Portal KUKERTA website system has been in use for approximately 8 years. The Portal KUKERTA page provides features such as updating student profiles, reviewing KKN results, selecting locations, and documentation. The Portal KUKERTA website system can be accessed through the address <https://kukerta.unri.ac.id/>. Based on direct observations of the Portal KUKERTA website, several usability issues related to the system were identified. The first problem is the non-functionality of the "Panduan" (Guide) menu, which includes the KUKERTA scheme and DPL requirements. Additionally, the Helpdesk function, which can be found in the "Pengumuman" (Announcement) and "Home" menus, is also non-functional. Furthermore, the "Home" button in the "Kanal Bantuan" (Help Channel) menu is not functioning. These issues make it difficult for users to understand the available features due to the inconsistent nature of the system [1]. A system should ensure that users do not encounter difficulties in using it [2]. User dissatisfaction can significantly impact the accessibility of the website, leading to delays in their KKN activities [3]. Evaluating the quality of a website system can be done by directly gathering user feedback, by using user experience to assess the user interface and appearance [4]. Hence, it becomes essential to evaluate the usability of Portal KUKERTA website.

Usability is a method of testing and evaluating software applications that focuses on five key aspects: learnability, efficiency, memorability, errors, and satisfaction [5]. Usability is an essential aspect that determines the quality of a user interface in terms of its ease of use. Heuristic evaluation, a method based on expert evaluation to identify usability issues in user interface design [6]. The primary aim of heuristic evaluation is to effectively enhance interface design. Evaluators assess the interface based on predefined heuristic principles and identify any instances where these principles are violated. In such cases, evaluators determine the severity of the problems and offer recommendations for their resolution [7], [8].

Multitude of previous studies have delved into this subject matter. First, it was conducted in 2022 by Vica Akhira Fitra Moersahit and Andhika Giri Persada [9], who conducted usability evaluation on 28 provincial government sites in Indonesia using Heuristic Evaluation. Based on the findings of this study, it can be inferred

that nearly all 28 provincial government sites don't have any critical usability issues, where the subject with the highest score is 1.08 (Severity rating ratio 0-4). Second, it was conducted in 2021 by A. Momenipour, S. Rojas-Murillo, B. Murphy, P. Pennathur, and A. Pennathur [10], who conducted usability evaluation on COVID-19 dedicated state public health websites in United States of America using Heuristic Evaluation. Based on the findings of this study, the websites fared well on usability, but many websites were used as an information and data repository. Third, it was conducted in 2018 by Annisa Hardianty Nasution[11]. who evaluated the usability of the HKBP Nommensen University library website using the heuristic method. Based on the findings of this study, calculations on the 10 heuristic principle, it was determined that the average value for each point is 83%. This finding indicates that the usability of the library website has achieved a commendable level of performance and success. Furthermore, research conducted in 2019 by Mumtaz Haya Waralalo [12] examined the user interface and user experience of AIS UIN Jakarta. The study employed heuristic evaluation and Webuse methods, adhering to the ISO 13407 standards. The findings of this study revealed that the appearance of AIS UIN Jakarta is considered ordinary and lacks attractiveness, resulting in a total interface and usability score of 46.33%. Based on these results, recommendations are proposed for AIS UIN Jakarta to utilize the same methods and standards in order to improve their interface and usability. One notable distinction between this research and the previous studies is instead of using external usability evaluator experts, this research involves applying heuristic evaluation principles directly with the users of the website itself [13]. This approach provides a unique opportunity to evaluate the usability of the system based on recognized heuristics, while also considering the perspectives and experiences of the actual users. By integrating heuristic evaluation with user feedback, this research aims to provide a comprehensive understanding of the system's usability, identify specific areas for improvement, and offer recommendations for optimizing the user experience. This emphasis on heuristic evaluation within a real-world user environment sets this research apart from the previous studies, as it combines established evaluation principles with user-centric insights to enhance the overall usability of the system[14].

2. RESEARCH METHODOLOGY

2.1 Research Stages

In this study, the chosen approach for assessing user experience usability is heuristic evaluation. Heuristic evaluation is a method used to identify usability problems in computer software by considering 10 heuristic principle, with the aim of making necessary improvements [15]. The research adopts a quantitative approach, utilizing a questionnaire as the primary data collection instrument, involving a sample size of 98 students. The research methodology is illustrated in Figure 1, showcasing the sequence of steps undertaken in the study.

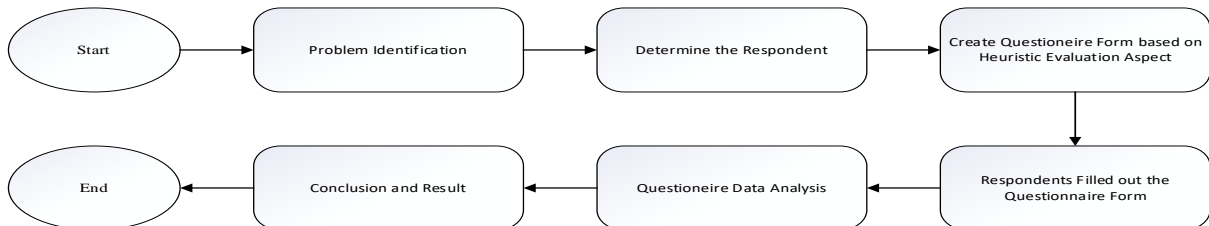


Figure 1. Research Methodology.

Based on Figure 1, the steps involved in this research can be described as follows:

a. Problem Identification

The problem of this research is how the usability of the Portal KUKERTA website can be evaluated using the heuristic evaluation method to determine the user comfort and usability level of the website, and provide recommendations for further system development. Among various methods for evaluating usability such as Think Aloud Evaluation (TA), Cognitive Walkthrough (CW), and Heuristic Evaluation (HE), Heuristic Evaluation stands out as the method that yields the highest number of identified usability problems when compared to the other methods [6] [16].

b. Determining Respondent and Designing the Questionnaire Form

The respondents used in this research are active students who participated in KKN Program in 2020 at the Universitas Riau. The total number of active students is 4,764. The sampling technique that can be used is the Slovin formula (1) [17] with a tolerance error limit of 0.1 or 10%. which resulted in a population size that will be used as a sample of approximately 97.94, rounded up to 98 respondents with non-probability purposive sampling as sampling method [18].

$$n = \frac{N}{1+Ne^2} \tag{1}$$

Applying heuristic evaluation principles to assess a list of statements provides a structured and comprehensive approach for evaluating system usability [19]. This method ensures that different aspects of



usability are considered, allowing for the identification of specific areas that need improvement. It offers valuable insights that can be used to enhance the user experience and make informed recommendations for optimization. By using this systematic and structured approach, researchers can thoroughly evaluate the system's usability and gain valuable insights for improvement [20]. Jakob Nielsen's ten heuristics principles can be seen on Table 1.

Table 1. Jakob Nielsen's ten heuristics principles

| Code | Principle | Description |
|------|---|---|
| H1 | Visibility of system status | A system should always inform users about what is happening through timely feedback. |
| H2 | Match between system and real world | The system should be designed using language that is easily understood by users, using familiar language, expressions, and concepts. |
| H3 | User control and freedom | Users should have control and freedom to navigate the system easily. For example, providing an "exit" option to allow users to exit the system when they make a mistake, and to avoid increasing system complexity. |
| H4 | Consistency and Standards | The system should maintain consistency in terms of sentence structure, font types, and other elements. Avoid using different sentence structures, fonts, and other situations that create an impression of inconsistency in the system. |
| H5 | Error Prevention | This evaluation focuses on preventing users from making errors. Designing features that prevent user errors is crucial for a system. |
| H6 | Recognition rather than recall | This evaluation is related to the user's cognitive load. Minimize the need for users to remember information in the system. Users should not have to rely on memory to perform system tasks. |
| H7 | Flexibility and efficiency of use | The speed and accuracy of using the system are important, especially for new users. |
| H8 | Aesthetic and minimalist design | Pay attention to four principles of visual design: contrast, repetition, alignment, and simplicity. |
| H9 | Help users recognize, diagnose, and recover from errors | Error messages should be presented in clear and standardized language to help users understand and recover from errors. |
| H10 | Help and documentation | Help section or action in the system can assist users when they encounter problems or difficulties. |

A set of 22 questionnaire statements was formulated to align with the 10 Principles of Heuristic Evaluation, represented by codes H1 to H10, aiming to assess the usability of the KUKERTA website portal. These statements covered various principles such as informative system status (H1), user-friendly language (H2), user control and freedom (H3), consistency and standards (H4), error prevention (H5), aesthetic and minimalist design (H6), fast system response (H7), responsive design (H8), help in error recognition and recovery (H9), and availability of help and documentation (H10). Each statement, represented by codes P1 to P22, evaluated specific elements within the system. This comprehensive approach provided a systematic analysis of the usability of the KUKERTA website portal, facilitating a thorough evaluation and identification of areas for improvement. And 22 questionnaire statements used on this research which can be seen on Table 2.

Table 2. List of statements

| Aspect | Code | Questions |
|--------|------|--|
| H1 | P1 | The system clearly informs the user about their current location within the menu (e.g., if on the login page, the user should input their username and password). |
| | P2 | When I submit a report, the system provides a notification indicating that the report has been successfully submitted. |
| | P3 | If the system fails to process the report submission, it provides a notification indicating that the report submission has failed. |
| H2 | P4 | The KUKERTA website portal uses user-friendly language that is familiar to the users. |
| | P5 | The menu titles use consistent grammar and language style. |
| | P6 | The system uses terms that are easily understandable. |
| H3 | P7 | The KUKERTA website portal provides a cancellation option, such as an "exit" or "cancel" button, to allow users to exit a menu without needing to log in again to access the system. |
| | P8 | All links within the system are active and clickable. |
| H4 | P9 | The KUKERTA website portal maintains consistency in language usage (using only one language). |
| | P10 | Each page of the KUKERTA website portal has a descriptive page title that reflects its content. |



| | | |
|-----|-----|--|
| H5 | P11 | The menu titles correspond to the breadcrumb navigation. |
| | P12 | When I save KUKERTA activities for submission in the report upload section, but the system fails to save the report data, the system provides a notification indicating the failure (e.g., "Failed to save the report"). |
| H6 | P13 | The KUKERTA website portal implements active menu states to differentiate between active and inactive menus. |
| | P14 | There is a visual distinction between buttons and highlighted text to avoid confusion for the users. |
| H7 | P15 | The login process to the system is fast. |
| | P16 | The KUKERTA website portal does not encounter errors during peak hours (e.g., when registering for courses or printing examination cards). |
| H8 | P17 | The display of the KUKERTA website portal is responsive, allowing users to access the system without needing to rotate their smartphones to landscape mode. |
| | P18 | The table design within the system is neat and does not cause confusion. |
| H9 | P19 | The KUKERTA website portal provides clear error messages when users make mistakes in executing system commands (e.g., entering an incorrect username or password). |
| | P20 | The KUKERTA website portal facilitates user recognition, diagnosis, and recovery from errors. |
| H10 | P21 | The KUKERTA website portal offers a help menu. |
| | P22 | The help menu within the KUKERTA website portal assists me when encountering errors while using the system. |

c. Respondents Filled out the Questionnaire Form

Respondents are expected to respond to each statement using a 5-point response scale, which includes: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree, according to a 5-point Likert scale that will reflect the severity rating of each statement unit [21].

Table 3. Severity Rating

| Score | Response | Description |
|-------|-------------------|--|
| 1 | Strongly agree | No issues or flaws were identified. |
| 2 | Agree | The identified issues have minimal impact on users. |
| 3 | Neutral | There are potential issues that may cause inconvenience or annoyance to users. |
| 4 | Disagree | There is an issue that can significantly hinder application users. |
| 5 | Strongly Disagree | There is a critical issue that requires immediate attention and resolution. |

d. Questionnaire Data Analysis

Once the questionnaire forms are collected, the data is subjected to a comprehensive analysis to assess the usability of the system. This analysis involves conducting a data validity test, data reliability test, and usability test. The data validity test ensures the accuracy and relevance of the collected responses in measuring the intended variables related to usability, while the data reliability test evaluates the consistency and stability of the data. These tests serve as a crucial foundation for the subsequent usability test, which examines the actual usability of the system based on the questionnaire responses. The detailed results and discussions of these analyses will be explored further in Section 3.

e. Conclusion and Results

The final step involves drawing conclusions from the data analysis and presenting the results. This could include summarizing the findings, identifying key usability issues, and providing recommendations for improvement based on the results obtained from the usability testing.

3. RESULT AND DISCUSSION

3.1 Data Analysis

During the data collection phase, a total of 98 respondent who had completed their KKN program and used Portal KUKERTA website were involved. The gender distribution among the respondent was 23% male and 77% female. Respondent from various departments were represented in the data, with the following department percentages: Management 20.41%, Law 17.35%, Counseling Guidance 15.31%, Agribusiness 13.27%, Accounting 12.24%, Business Administration 9.18%, Biology 8.16%, and Medicine 4.08% the results obtained from the data collection are presented in Table 4.

Table 4. Data Collection



| Statemen t | R 1 | R 2 | R 3 | R 4 | R 5 | R 6 | R 7 | R 8 | R 9 | R1 0 | R1 1 | R1 2 | R1 3 | R1 4 | R1 5 | R1 6 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| P1 | 2 | 1 | 1 | 5 | 4 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 4 | 1 | 1 | 2 |
| P2 | 1 | 1 | 4 | 2 | 5 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 4 | 1 | 1 | 1 |
| P3 | 2 | 1 | 2 | 4 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 1 |
| P4 | 2 | 2 | 1 | 4 | 5 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 4 | 2 | 2 | 2 |
| P5 | 2 | 2 | 4 | 5 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 4 | 2 | 2 | 1 | 2 |
| P6 | 1 | 2 | 1 | 4 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
| P7 | 5 | 5 | 5 | 1 | 4 | 2 | 4 | 4 | 4 | 4 | 2 | 5 | 4 | 4 | 5 | 1 |
| P8 | 2 | 4 | 2 | 2 | 5 | 1 | 4 | 4 | 4 | 4 | 4 | 1 | 4 | 2 | 2 | 1 |
| P9 | 1 | 2 | 1 | 4 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| P10 | 2 | 2 | 4 | 4 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 5 | 1 | 2 | 1 | 2 |
| P11 | 2 | 2 | 1 | 5 | 4 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 4 | 1 | 2 | 2 |
| P12 | 4 | 5 | 5 | 5 | 1 | 2 | 5 | 4 | 5 | 4 | 5 | 4 | 2 | 5 | 5 | 5 |
| P13 | 2 | 2 | 4 | 5 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 4 | 2 | 1 | 2 |
| P14 | 1 | 1 | 4 | 4 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 1 | 1 | 2 |
| P15 | 4 | 5 | 5 | 5 | 2 | 1 | 5 | 5 | 5 | 4 | 2 | 5 | 4 | 5 | 2 | 5 |
| P16 | 5 | 5 | 5 | 5 | 4 | 2 | 5 | 5 | 5 | 5 | 4 | 2 | 5 | 5 | 2 | 4 |
| P17 | 2 | 2 | 5 | 2 | 1 | 4 | 2 | 1 | 2 | 2 | 1 | 4 | 1 | 2 | 2 | 2 |
| P18 | 2 | 2 | 4 | 4 | 5 | 1 | 2 | 1 | 2 | 4 | 2 | 4 | 1 | 2 | 4 | 2 |
| P19 | 2 | 4 | 2 | 2 | 5 | 1 | 4 | 4 | 4 | 4 | 4 | 1 | 4 | 2 | 2 | 1 |
| P20 | 4 | 5 | 5 | 4 | 2 | 1 | 5 | 5 | 5 | 4 | 2 | 5 | 4 | 5 | 2 | 5 |
| P21 | 1 | 1 | 2 | 4 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 4 | 1 |
| P22 | 4 | 4 | 1 | 4 | 5 | 2 | 4 | 4 | 2 | 4 | 4 | 4 | 2 | 5 | 4 | 4 |

Table Description:

R1 – R16: Respondent of the questionnaire.

P1 – P22: List of the Statement

Preceding the computation of severity ratings for each usability principle, preliminary validity and reliability tests are performed.

3.1.1 Validity Test

The validity test involves comparing the calculated r-value with the r-table value [22]. The r-value is obtained by correlating the item scores with the total item score using the SPSS software's bivariate analysis menu[23]. The r-table value is determined from the r table product, considering 96 degrees of freedom for 98 respondents and a significance level of 0.1. The obtained r-table value is 0.1671 [24]. The results of the validity test are presented in Table 5.

Table 5. Validity Test

| Statement | r-value | r-Table | Description |
|-----------|---------|---------|-------------|
| P1 | 0.4286 | 0.1671 | Valid |
| P2 | 0.2039 | 0.1671 | Valid |
| P3 | 0.3467 | 0.1671 | Valid |
| P4 | 0.2829 | 0.1671 | Valid |
| P5 | 0.3997 | 0.1671 | Valid |
| P6 | 0.4992 | 0.1671 | Valid |
| P7 | 0.3336 | 0.1671 | Valid |
| P8 | 0.3925 | 0.1671 | Valid |
| P9 | 0.3615 | 0.1671 | Valid |
| P10 | 0.3573 | 0.1671 | Valid |
| P11 | 0.3797 | 0.1671 | Valid |
| P12 | 0.2238 | 0.1671 | Valid |
| P13 | 0.4148 | 0.1671 | Valid |
| P14 | 0.4422 | 0.1671 | Valid |
| P15 | 0.4304 | 0.1671 | Valid |
| P16 | 0.2119 | 0.1671 | Valid |
| P17 | 0.3470 | 0.1671 | Valid |
| P18 | 0.3704 | 0.1671 | Valid |
| P19 | 0.2338 | 0.1671 | Valid |
| P20 | 0.1973 | 0.1671 | Valid |
| P21 | 0.2250 | 0.1671 | Valid |



P22 0.2132 0.1671 Valid

After analyzing the provided data, it was found that all variables had higher r-value scores compared to the r-table. This suggests that all the variables are considered valid and can be utilized for the subsequent preliminary reliability test.

3.1.2 Reliability Test

The reliability test in this study utilizes the Cronbach's Alpha method [25]. The Cronbach's Alpha value is calculated using the SPSS software, specifically through the scale menu and then reliability analysis. Reliability testing is conducted to assess the reliability and consistency of a testing instrument when used repeatedly, aiming to determine the level of trustworthiness and consistency of the instrument's results [26]. The decision on reliability determination is based on the Cronbach's Alpha value. If the Cronbach's Alpha value is greater than 0.600, it is considered reliable. And if it less than 0.600, it is considered unreliable [27]. The obtained results of the reliability test are processed using SPSS and are presented in Table 6.

Table 6. Reliability Test

Table with 2 columns: Cronbach's Alpha (0.610), N of Items (22)

Upon analyzing the aforementioned data, it was determined that the Cronbach's Alpha value of the data is 0.610. Therefore, it can be inferred that the questionnaire data is considered reliable.

3.2 Usability Testing

Once all variables in the questionnaire data have been validated and proven reliable, the usability testing can be performed on the variables that have successfully passed both the validity and reliability tests. This involves calculating the mean of the questionnaire responses, which have been transformed into the Likert scale, and distributing them in accordance with the respective heuristic principles of each variable [28]. The outcomes of the usability test can be observed in Table 7.

Table 7. Usability Testing with Severity Rating

Table with 3 columns: Code, Statement, Score. Contains 15 rows of usability test results.



| Code | Statement | Score |
|------|--|-----------|
| P16 | The KUKERTA website portal does not encounter errors during peak hours (e.g., when registering for courses or printing examination cards). | 4.00 7 |
| P17 | The display of the KUKERTA website portal is responsive, allowing users to access the system without needing to rotate their smartphones to landscape mode. | 2.42 7 |
| P18 | The table design within the system is neat and does not cause confusion. | 3.00 0 |
| P19 | The KUKERTA website portal provides clear error messages when users make mistakes in executing system commands (e.g., entering an incorrect username or password). | 2.67 3 |
| P20 | The KUKERTA website portal facilitates user recognition, diagnosis, and recovery from errors. | 3.01 3 |
| P21 | The KUKERTA website portal offers a help menu. | 1.88 4 |
| P22 | The help menu within the KUKERTA website portal assists me when encountering errors while using the system. | 3.35 5 |

The findings of the usability testing on the Portal KUKERTA website reveal the presence of 8 variables which can be identified as P7, P8, P12, P15, P16, P18, P20, P22 that received severity rating scores exceeding 3. This indicates the existence of potential issues that could inconvenience or frustrate users. And scores higher than 4 which indicates a problem that significantly impeding user interaction with the application [29].

By examining the outcomes of the usability testing, the severity ratings for each heuristic evaluation principle can be deduced by averaging the scores of the variables associated with each respective principle. The following are the results of the usability test for each heuristic evaluation principle:

- a. Visibility of system status: 1.838
- b. Match between system and real world: 2.264
- c. User control and freedom: 3.786
- d. Consistency and Standards: 2.325
- e. Error Prevention: 4.062
- f. Recognition rather than recall: 2.250
- g. Flexibility and efficiency of use: 4.075
- h. Aesthetic and minimalist design: 2.713
- i. Help users recognize, diagnose, and recover from errors: 2.843
- j. Help and documentation: 2.619

3.3 Result and Recommendation

Upon analyzing the usability values of each variable it can be identified that there are 8 looming usability problem within the Portal KUKERTA website. And based on severity issue of each Heuristic Evaluation principle, evaluators have identified certain principle that can be tolerated. A higher severity rating implies a greater need for improvement. The principle of Flexibility and Efficiency of Use stands out with the highest severity rating of 4.075. The following results depict the comprehensive data processing of the user experience analysis questionnaire conducted for the Portal KUKERTA website. Within the various questions pertaining to each heuristic evaluation principle, the following principles exhibit the most significant severity rating values:

- a) Flexibility and Efficiency of Use have the highest severity rating value of 4.075. In this aspect, evaluators think that several essential features lack efficiency and accessibility, with numerous users have expressed their concerns regarding the limited access available during KRS enrollment, KKN program registration, and KKN location allocation. The following are several recommendations that can be implemented [30]:
 - 1. Improve Access Availability: Address user concerns by enhancing the availability of website access during critical periods such as KRS enrollment, KKN program registration, and KKN location allocation. This can be achieved through optimizing server capacity, enhancing website performance, and implementing strategies to handle high user traffic effectively.
 - 2. Streamline Processes: Simplify and streamline the processes involved in KRS enrollment, KKN program registration, and KKN location allocation to make them more efficient and user-friendly. Identify and eliminate any unnecessary steps or bottlenecks that may cause frustration or confusion among users.
- b) Error Prevention have the second highest severity rating value of 4.062. Failure to provide any notification when a user is unable to upload mandatory data on a website can result in user confusion and frustration. Without receiving any indication of the unsuccessful upload, users may remain unaware of the issue, leading to incomplete or inaccurate data submissions. This can cause users to waste time and effort attempting multiple uploads without realizing the problem. The absence of notifications not only hampers the user experience but also compromises the website's functionality and the accuracy of the data collected. Recommendations that can be implemented:



1. Implement a clear and informative notification system for unsuccessful data uploads. By providing immediate feedback to users when their upload fails, such as displaying an error message or notification, users will be aware of the issue and can take appropriate actions to rectify it [31].
- c) User Control and Freedom have the third highest severity rating value of 3.786. The absence of a cancel or go back option and the presence of links leading to empty pages, as identified by evaluators during the initial direct observation, can significantly impact the user experience. This limitation hinders users' navigation and decision-making abilities within the website, leading to feelings of frustration, confusion, and constraint. Users may find it challenging to retrace their steps or escape unintended paths, compromising their sense of control and freedom. This ultimately hampers their ability to find desired information or complete tasks, resulting in an overall negative user experience. Recommendations that can be implemented:
 1. Implementing a cancel or go back option that allows users to easily navigate back to previous menus or steps. Additionally, it is crucial to ensure that all links within the website lead to meaningful and relevant content, avoiding any empty or dead-end pages. By providing users with clear navigation options and eliminating any broken or uninformative links, the user experience can be improved, allowing users to navigate the website smoothly and accomplish their tasks effectively.

4. CONCLUSION

This research aimed to enhance the usability of the Portal KUKERTA website, which is utilized by Lembaga Penelitian dan Pengabdian pada Masyarakat Universitas Riau (LPPM UNRI) for the Kuliah Kerja Nyata (KKN) program. By employing a combination of heuristic evaluation and user feedback, the study sought to improve the overall user experience and ensure the website's interface is user-friendly. The feedback of 98 users was collected and analyzed to identify various usability issues. The severity ratings revealed 7 usability issues have been found and that the principles of Flexibility and Efficiency of Use (score: 4.075, indicating a significant hindrance to users), Error Prevention (score: 4.062, implying potential inconvenience to users), and User Control and Freedom (score: 3.786, suggesting inconvenience or annoyance to users) required the most attention. Other principles, such as Visibility of system status (score: 1.838), Match between system and real world (score: 2.264), Consistency and Standards (score: 2.325), Recognition rather than recall (score: 2.250), Aesthetic and minimalist design (score: 2.713), Help users recognize, diagnose, and recover from errors (score: 2.843), and Help and documentation (score: 2.619) were identified with minimal impact or potential inconvenience to users. Recommendations were proposed to address these issues and improve the overall user experience. By integrating heuristic evaluation with user feedback, the evaluator hopes this research provides valuable insights for enhancing the usability of the Portal KUKERTA website, ultimately aiming to create a more user-centric platform that effectively caters to the needs of both students and lecturers participating in the KKN program under LPPM UNRI."

EXPRESSION OF GRATITUDE

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