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Evaluating User Experience of the IPB Help Center Website Using the Usability Testing Method

Helena Dewi Hapsari[1], Ihsan Lana Valenza[2], Ari Dian Prastyo[3], Amata Fami[4], Bontisesari Wahyoedi[5]

[1,2,3,4,5]Software Engineering Technology Department, IPB University, Bogor, Indonesia
Email: [1]helenahapsari@apps.ipb.ac.id, [2]ihsanlanavalenza@apps.ipb.ac.id,
[3]aridprastyo@apps.ipb.ac.id, [4]amatafami@apps.ipb.ac.id, [5]bontisesari@gmail.com

Abstract

The IPB Help Center Website is an essential source for IPB University students to get help in solving technical problems. Research was conducted to evaluate the user experience on the IPB Help Center Website through usability testing methods. This research involved 50 IPB University student respondents who used the IPB Help Center website and filled out a survey through Google Forms. The results showed that the overall level of usability was satisfactory, with high ratings for five usability indicators, including learnability, efficiency, memorability, errors, and satisfaction. The average scores of learnability, efficiency, memorability, errors, and satisfaction indicators are 3.88, 3.95, 3.88, 4.40, and 3.85, respectively. This shows that the IPB Help Center Website has been effective in helping users solve technical problems. This research provides an evaluation to improve the user experience and effectiveness of the IPB Help Center website as a valuable resource for IPB University students. Future research will explore the correlation between various usability indicators to gain further insights.

Keywords: Help Center, User Experience, Usability Testing

1. INTRODUCTION

Evaluation is a method or step to understand or assess something in a particular situation by predetermined methods and rules. [1]. Evaluation is an interpretation or interpretation based on quantitative data through a measurement process [2]. Evaluation can refer to the assessment of various aspects, such as functionality, design, performance, security, and user experience of a website.

Website is a collection of information generally accessed online [3]. A website is a facility that links documents in a local area or from a distance [4]. Websites have an essential role in providing access to information and services and as a help center. One example of a website that functions as a help center is the IPB Help Center Website.

IPB University provides the IPB Help Center website to provide assistance, guidance, and information to students, staff, and the community about the academic environment and campus services. The IPB Help Center website helps users quickly access information related to academic procedures, campus services, and technical assistance. The case study found that the IPB Help Center Website requires an evaluation of the user experience.

User experience refers to the way users interact with software. [5]. User experience emphasizes a thorough understanding of users, which includes their needs, abilities, and limitations. [6]. Improving user experience aims to provide accessible, intuitive, and efficient access to information and services students, staff, and related communities need. Measurement of optimal user experience focuses on indicators of learnability, efficiency, memorability, errors, and satisfaction through usability testing.

Usability testing is an evaluation method by testing products directly by involving users to evaluate their usage experience [7]. The data collected during usability testing can be quantitative metrics, such as user satisfaction levels. The usability testing results are used to identify areas that need improvement or optimization in product design to improve ease of use, efficiency, and overall user satisfaction.

The usability of help center websites in today's technology-driven era makes the user experience of help center websites such as the IPB Help Center Website critical and needs to be evaluated and considered. Some previous studies that discussed user experience with usability testing mostly used case studies of LMS websites or systems that are often used daily. However, this research uses a case study of the IPB Help Center website, which students only use when technical problems occur. User experience is the main focus of this research, and measurements are taken using the usability testing method.

Previous research has discussed the evaluation of online KRS using usability testing methods conducted with additional methods of in-depth interviews [8]. However, in this study, the method focused on the results of questionnaires from users of the IPB Help Center website. This allows a more thorough evaluation of the 5 usability indicators, learnability, efficiency, memorability, errors, and satisfaction.

The research aims to gain a deeper understanding of the user experience on the IPB Help Center website. A more detailed understanding of how users interact with the website can serve as an evaluation for areas that need to be improved or enhanced to increase user satisfaction, efficiency of use, and effectiveness of the services provided.

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2. METHODS

This research uses a usability testing method. The steps include distributing questionnaires to IPB University students as IPB Help Center website users using a Likert scale. The questionnaire was designed to collect data on the experience and perception of users, namely IPB University students, towards the IPB Help Center website as a help center website in usability indicators, learnability, efficiency, memorability, errors, and satisfaction. The usability testing results are discussed systematically through specific steps to solve the problems in the research. The research stage is illustrated in Figure 1 as follows.

2.1. Problem Identification

This stage is the stage of determining the problems that will be the object of research. The problems that have been identified are then used to find alternative solutions to these problems. Identifying problems can help to understand the scope and steps of problem-solving and make research more focused [9]. The main problem found in this research is users' dissatisfaction with the IPB Help Center website and the need to evaluate user experience on the IPB Help Center website, which is a helpdesk website. Although the IPB Help Center serves as the primary technical assistance center for IPB University students, there has yet to be an in-depth review of the usability aspect.

2.2. Respondents

A combination of purposive sampling and power analysis was used in this research. Purposive sampling was used to ensure that the selected respondents had special characteristics that were relevant to the research objectives, such as previous experience using the IPB Help Center Website. Power analysis was performed to calculate the minimum sample size required to detect a statistically significant effect, taking into account the expected effect size and desired statistical power.

In this research, respondents consisted of 50 IPB University students who used the IPB Help Center Website and filled out the survey via Google Forms. Respondents provided valuable insight into user usability and satisfaction with the IPB Help Center Website. Data was collected through a survey designed to comprehensively evaluate respondents' experiences and perceptions.

2.3. Data Collection

The data collection process is a crucial step to ensure the accuracy of the analysis. The data used a questionnaire survey from February 28, 2024, to March 12, 2024.

The survey was conducted through Google Forms and was distributed to IPB University students who were users of the IPB Help Center website.

Research data were collected through surveys. The survey method aims to collect data from variables, units, or individuals simultaneously at a particular time [11]. The survey instrument was developed to collect quantitative data regarding user satisfaction, ease of use, and perceived effectiveness of the IPB Help Center website. The survey questions were designed to capture objective metrics (e.g., problem resolution time) and subjective perceptions (e.g., Likert scale ratings). A Likert scale measures a person or group's assessment, opinion, or view of a phenomenon [12]. Quantitative analysis is done by giving weight or score to each answer. The questionnaire results are measured based on a Likert scale of 1 to 5. The scale is Very Unsuitable (VU), Unsuitable (U), Quite Suitable (QS), Suitable (S), and Very Suitable (VS). The respective scores are shown in Table 1.

Table 1. Rating Scale

Answer Options	Code	Value
Answer Options	VU	1
Unsuitable	U	2
Quite Suitable	QS	3
Suitable	S	4
Very Suitable	VS	5

2.4. Usability Testing

Usability testing is a way to evaluate and test the user experience (UX) of an application or system created for users. This approach is usually taken by UX developers who involve specific users to test how a process interacts with an application or system to measure usability or ease [13].

Usability testing belongs to the direct testing of users to evaluate certain products or services [14]. Usability testing aims to identify usability problems like ease and efficiency and determine user satisfaction with the product or service. Usability testing can help gather direct feedback from real users. Usability Testing is the right way to find out real user experience by looking at the processes that users carry out when they use an application [15].

2.4.1 Testing Preparation

The test preparation stage is performed for users or participants before usability testing. Test preparation is done to prepare everything needed to do the analysis properly.

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2.4.2 Questionnaire

The questionnaires were distributed to users by paying attention to several assessment variables, which were then processed, and research conclusions were produced. Indicators and questions are presented in Table 2.

Table 2. Questionnaire Statement Items

Indicator	Code	Question
Learnability (A)	A1	I easily understand the features of the IPB Help Center Website.
	A2	I find that the IPB Help Center Website has a good layout and is easy to understand.
	A3	I am confident and easy to use the IPB Help Center Website without help from others.
Efficiency (B)	B1	I can easily find the features I need on the IPB Help Center Website.
	B2	I can easily create a new ticket to report a problem.
Memorability (C)	C1	I find it easy to find solutions when using the IPB Help Center Website.
	C2	I can remember the appearance and functions of the IPB Help Center Website.
Errors (D)	D1	I rarely experience technical errors or glitches when using the IPB Help Center Website.
Satisfaction (E)	E1	The features in the IPB Help Center Website function well and according to user expectations.
	E2	I am satisfied with my interactions with various interface elements in the IPB Help Center Website.

3. RESULTS AND DISCUSSION

The questionnaire results were from 50 respondents; as many as 76% of respondents, or 38, had used the IPB Help Center website. The main aspects of the assessment are learnability (A), efficiency (B), memorability (C), errors (D), and satisfaction (E). The data that has been collected is then processed by calculating the average of each aspect.

3.1 Learnability

Learnability refers to the user's ability to use the application for the first time. Ideally, an application should be easy to learn, allowing users to quickly grasp its functionalities and complete tasks efficiently.

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Table 3. Average of Learnability Aspects

	Learnability				
	VS	**S**	**QS**	**U**	**VU**
A1	9	19	9	0	1
A2	11	13	13	1	0
A3	7	20	9	2	0
Total	**27**	**52**	**31**	**3**	**1**

a) There were 27 responses from respondents who chose a score of 5.
b) There are 52 answers from respondents who choose value 4.
c) There are 31 answers from respondents who choose value 3.
d) There are 3 answers from respondents who choose value 2.
e) There is 1 answer from respondents who choose value 1.

Table 3 shown the result for learnability aspect analysis. The highest answer is the Suitable (S) category, with 52 answers, and the least is the Very Unsuitable (VU) category, which is 1 answer. The majority of users perceive IPB Help Center Website as learnable, with most responses falling into the Suitable category. However, the presence of some lower scores suggests that there is room for improvement to enhance learning capabilities for all users.

3.2 Efficiency

Efficiency is the time the researcher gives the user to complete the application's commands. Time measurement is applied to a new user. Such users will complete a specific task while the system is measured within a specific period.

Table 4. Average of Efficiency Aspects

	Efficiency				
	VS	**S**	**QS**	**U**	**VU**
B1	9	17	11	1	0
B2	14	13	9	1	1
Total	**23**	**30**	**20**	**2**	**1**

a) There were 23 answers from respondents who chose a score of 5.
b) There are 30 answers from respondents who choose value 4.
c) There are 20 answers from respondents who choose value 3.
d) There are 2 answers from respondents who choose value 2.
e) There is 1 answer from respondents who choose value 1.

Table 4 shown the result for efficiency aspect analysis. The highest answer is the Suitable (S) category, with 30 answers, and the least is the Very Unsuitable (VU) category, which is 1 answer. The majority of users found the IPB Help Center

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Website to be efficient, with most responses falling into the Suitable category. However, the presence of some lower scores indicates that there is still room for improvement to increase website efficiency for all users.

3.3 Memorability

Memorability refers to the user's ability to retain their knowledge of the product or service after some time. This ability to remember is often achieved through the consistency of fixed menu placement.

Table 6. Average of Memorability Aspects

	Memorability				
	VS	**S**	**QS**	**U**	**VU**
C1	7	23	7	0	1
C2	11	11	15	1	0
Total	**18**	**34**	**22**	**1**	**1**

a) There were 18 answers from respondents who chose a score of 5.
b) There are 34 answers from respondents who chose value 4.
c) There are 22 answers from respondents who choose value 3.
d) There is 1 answer from respondents who choose value 2.
e) There is 1 answer from respondents who choose value 1.

Table 6 shown the result for memorability aspect analysis. The most answers are in the Suitable (S) category, namely 34 answers, and the least is in the category of Unsuitable (U) and Very Unsuitable (VU), namely 1 answer. The majority of users rated the IPB Help Center Website as easy to remember, with most responses falling into the Suitable category. However, the existence of some lower scores indicates that there is still room for improvement to increase the website's memorability for all users.

3.4 Errors

Errors and security indicate the number of errors and mistakes that users make. User errors include mismatches between the user's thoughts and what the system presents.

Table 7. Average of Errors Aspects

	Errors				
	VS	**S**	**QS**	**U**	**VU**
D1	19	16	2	1	0
Total	**19**	**16**	**2**	**1**	**0**

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a) There were 19 answers from respondents who chose a score of 5.
b) There are 16 answers from respondents who choose value 4.
c) There are 2 answers from respondents who choose value 3.
d) There is 1 answer from respondents who choose value 2.
e) There are 0 answers from respondents who choose value 1.

Table 7 shown the result for errors aspect analysis. The most answers are in the Very Suitable (VS) category, which has 19 answers, and the least are in the Very Unsuitable (VU) category, which has 0 answer. The majority of users assess that the IPB Help Center Website rarely experiences errors, with most responses falling into the Very Suitable category. However, the existence of several lower scores indicates that there is still room for improvement to reduce errors on the website.

3.5 Satisfaction

Satisfaction is the degree of freedom from inconvenience and positive user actions towards using a product or service. This is a subjective measure of the user's use of the system.

Table 8. Average of Satisfaction Aspects

	Satisfaction				
	VS	**S**	**QS**	**U**	**VS**
E1	9	17	10	1	1
E2	11	13	13	0	1
Total	**20**	**30**	**23**	**1**	**2**

a) There were 20 answers from respondents who chose a score of 5.
b) There are 30 answers from respondents who choose value 4.
c) There are 23 answers from respondents who choose value 3.
d) There is 1 answer from respondents who choose value 2.
e) There are 2 answers from respondents who choose value 1.

Table 8 shown the result for satisfaction aspect analysis. The highest answer is the Suitable (S) category, which has 3, and the least is the Unsuitable (U) category, which has 1 answer. The majority of users rated the IPB Help Center Website as satisfactory, with most responses falling into the Suitable category. However, the existence of several lower scores indicates that there is still room for improvement to increase the level of user satisfaction with the IPB Help Center Website.

3.6 Data Analysis

Data analysis is carried out after all data is collected. Data analysis is organizing the results and presenting them in findings to others [16]. Data analysis using the

Likert scale principle aims to determine a person's position on a continuum of attitudes towards an object, ranging from negative to positive [17], and measuring the perspective of IPB Help Center website users using the Mean method. Mean is the sum of all datums divided by the number of datums [18]. The following formula is used to calculate the interval length.

$$A = \frac{(Bn - B1)}{c} \quad (1)$$

Description:
A : Estimated number of classes
c : Number of classes
Bn : Observation value
B1 : Smallest observation value

The results of the interval length calculation are as follows:

$$I = \frac{(5 - 1)}{5} \quad (2)$$

$$I = 0{,}8$$

The length of the interval class is 0.8. The assessment distance determines the respondent's assessment based on the questions asked. The interval class assessment is presented in Table 9 below.

Table 9. Assessment Interval

Quadrant	Interval Class	Assessment Criteria
V	4.21 - 5.00	Very Good
IV	3.41 - 4.20	Good
III	2.61 - 3.40	Fair
II	1.81 - 2.60	Less
I	1.00 - 1.80	Very Less

The results of the average calculation of 5 aspects of usability, which include aspects of learnability, efficiency, memorability, errors, and satisfaction, and the following values were obtained.

Table 10. Average Usability Aspect

No	Aspect	Average	Categori
1	Learnability	3.88	Good

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No	Aspect	Average	Categori
2	Efficiency	3.95	Good
3	Memorability	3.88	Good
4	Errors	4.40	Very Good
5	Satisfaction	3.85	Good
	Mean	**4.00**	**Good**

The calculations in Table 10 produce the following data visualization.

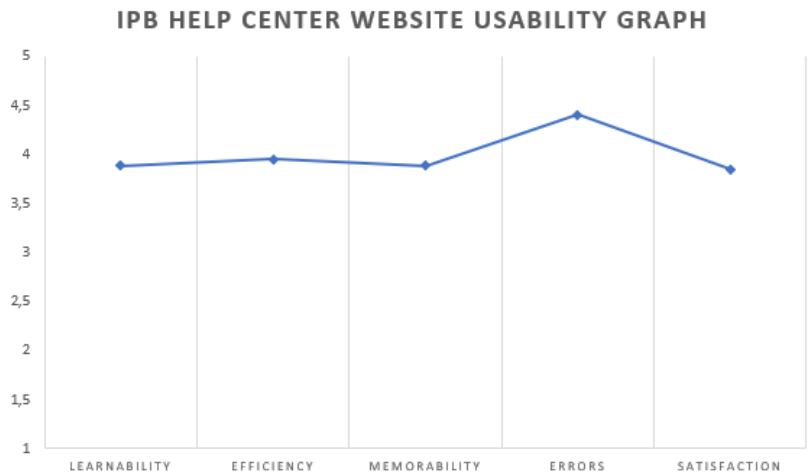

Figure 1. Usability Graph of IPB Help Center Website

4. CONCLUSION

The results showed that the level of usability of the IPB Help Center website based on overall user experience produced satisfactory results. Five indicators are used to assess or evaluate the website: learnability, memorability, efficiency, errors, and satisfaction. The total sample in this study amounted to 50 samples, with 76% of the samples having used the IPB Help Center website. Most respondents scored well on learnability, memorability, efficiency, errors, and satisfaction on the IPB Help Center website. This means that the IPB Help Center Website successfully provides technical assistance to users to solve problems or technical obstacles.

The evaluation results state that of the five indicators, the highest value is the errors indicator of 4.40, meaning that users rarely find errors using the IPB Help Center website. The lowest value is the satisfaction indicator of 3.85, which means

the satisfaction aspect is similar to the other four aspects. Even so, with a value of 3.85, the satisfaction aspect is already included in the excellent category. This research is expected to be reviewed to improve user experience and make the IPB Help Center website more effective as a helpdesk website for IPB University students. Future research is expected to combine various indicators to find a correlation between influential indicators.

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