

User Satisfaction Analysis of the Academic Information System Muhammadiyah University of Ponorogo Using the End-User Computing Satisfaction Model

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ABSTRACT

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*EUCS, Academic Information
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This study analyzes the level of user satisfaction of the Academic Information System of Muhammadiyah University of Ponorogo. The purpose of this study is to determine the level of user satisfaction of the Academic Information System of Muhammadiyah University of Ponorogo. This study uses the End User Computing Satisfaction (EUCS) model. This model evaluates user satisfaction by emphasizing content, accuracy, format, ease of use, and timeliness. The type of research conducted is descriptive research with a research instrument in the form of a questionnaire. The objects in this study were students of Muhammadiyah University of Ponorogo with a total of 261 respondents and were taken randomly. Data analysis was carried out with a range of categories and levels through a Likert scale. The results of this study indicate that the overall level of user satisfaction has a mean value of 2.84 and is at level 3 which is included in the neutral category.

1. Introduction

Technological developments are currently experiencing rapid progress. One such rapidly developing technology is the internet. The number of internet users has increased significantly. Nearly all technological devices today have internet connectivity. The ease of accessing information via the internet has contributed to the increase in the number of users [1]. Internet technology has provided users with many conveniences for communicating and finding various information online [2].

One use of internet technology is through the existence of websites. Websites function as promotional, marketing, communication, educational, and information media [3]. This is then utilized by various government agencies, educational institutions, and companies to convey information.

One educational institution that utilizes a website is Muhammadiyah University of Ponorogo. The website is used to convey information about

academic activities to students. The website that provides this facility is called the Muhammadiyah University of Ponorogo Academic Information System.

Muhammadiyah University of Ponorogo has been using this information system since 2014, and it is managed by the Institute for Academic Information and Research (LPIK). The Muhammadiyah University of Ponorogo Academic Information System can be accessed by students via the internet. It displays academic information, including student biodata, tuition fees, course programming, current and past courses, class schedules, and course grades. After implementing the academic information system, its performance must be strengthened annually, as the number of students increases. The increasing number of students will affect the amount of data stored, which in turn impacts the quality of the information system. To maintain the quality of the information system, evaluation is necessary. User satisfaction is the initial foundation for system evaluation. [4]

This research will use the End User Computing Satisfaction (EUCS) user satisfaction evaluation model. EUCS is an evaluation model developed by Doll & Torkzadeh to measure the level of user satisfaction of an application system by comparing expectations with reality of an information system, with a greater emphasis on end-user satisfaction with technological aspects based on the dimensions of content, accuracy, format, timeliness, and ease of use of the system [5].

Based on the above background, to maintain the quality of the information system, a study was conducted to analyze user satisfaction of the Academic Information System at Muhammadiyah University of Ponorogo using the End-User Computing Satisfaction Model.

This study aims to determine the level of end-user satisfaction in using the Academic Information System at Muhammadiyah University of Ponorogo.

2. Literature Review

2.1 Internet

The Internet is a global network of interconnected networks, where the resulting network can reach many companies, governments, organizations, and private networks [6]. Another statement states that the Internet is a global communication forum that connects millions of computer networks via telephone lines [7].

2.2 Academic Information System at Muhammadiyah University of Ponorogo

The Academic Information System has been implemented at Muhammadiyah University of Ponorogo since 2014 and is managed by the Information and Communication Development Institute (LPIK) (source: simtik.umpo.ac.id). It is a data processing system related to, among other things, student data, course data, lecturer data, grade data, and class data. It also provides a data storage and document preparation system to assist human decision-making with the assistance of computer systems.

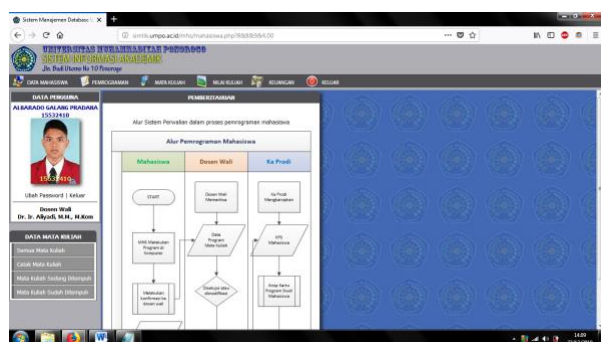


Figure 1. Appearance of the Academic Information System Website of Muhammadiyah University of Ponorogo

2.3 End-User Computing Satisfaction Model

The End-User Computing Satisfaction (EUCS) evaluation model was developed by Doll & Torkzadeh. Evaluations using this model emphasize end-user satisfaction with technological aspects by assessing content, accuracy, format, ease of use, and timeliness. This model has been extensively tested by other researchers to assess its reliability, and the results show no significant differences even when the instrument is translated into different languages.

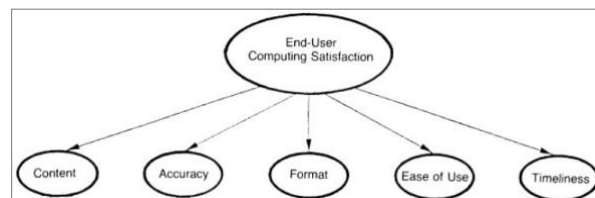


Figure 2. EUCS instrument by Doll & Torkzadeh

1. Content Dimension

The Content Dimension measures user satisfaction in terms of the content of a system.

2. Accuracy Dimension

The Accuracy Dimension measures user satisfaction in terms of data accuracy when the system receives input and processes it into information.

3. Format Dimension

The Format Dimension measures user satisfaction in terms of the appearance and aesthetics of the system interface, and the format of reports or information generated by the system.

4. Ease of Use Dimension

The Ease of Use Dimension measures user satisfaction in terms of the user-friendliness of the system.

5. Timeliness Dimension

The Timeliness Dimension measures user satisfaction in terms of the system's timeliness in presenting or providing the data and information needed by the user.

3. Method

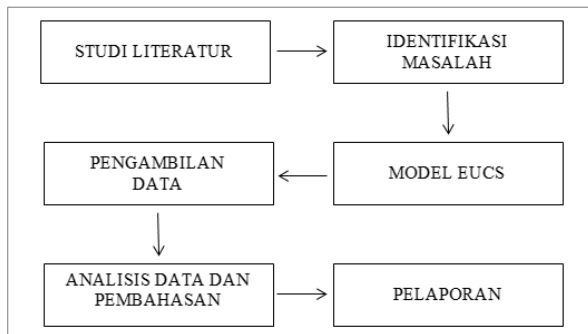


Figure 3. Research Flow Diagram

In this study, the research population was university students. The number of students at Muhammadiyah University of Ponorogo is 6,828 (Forlap Dikti). The sample size was taken by referring to the sample size distribution table from Sugiyono's (2015) book. With a 10% margin of error, a sample size of 261 students was obtained.

To obtain sample data, a questionnaire was distributed to 261 students. The questionnaire was closed-ended, with alternative answers provided, and each answer was scored from 1 to 4. Non-probability sampling, which included accidental sampling, was used for sampling. The questionnaire was created using Google Forms, and the link was distributed to respondents via social media platforms such as WhatsApp.

3.1 Data, Materials, or System Components

The questionnaire was distributed to respondents in January 2020. The respondents were 261 students of Muhammadiyah University of Ponorogo consisting of students from seven faculties at Muhammadiyah University of Ponorogo.

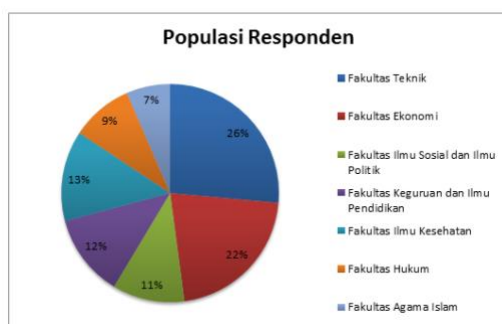


Figure 4. Respondent Population

The incoming data was then subjected to validity and reliability tests before further analysis. The

tests were conducted using IBM SPSS, and the results are as follows:

4. Results and Discussion

Table 1. Validity Test Results

Variable 1	Question ID	r-Count	r-Table	Information
Content	C1	0,531	0,3	Valid
	C2	0,330	0,3	Valid
	C3	0,591	0,3	Valid
	C4	0,420	0,3	Valid
Accuracy	A1	0,450	0,3	Valid
	A2	0,592	0,3	Valid
Format	F1	0,539	0,3	Valid
	F2	0,601	0,3	Valid
	F3	0,585	0,3	Valid
Easy of Use	E1	0,423	0,3	Valid
	E2	0,576	0,3	Valid
Timelines	T1	0,597	0,3	Valid
	T2	0,421	0,3	Valid

The r-Table value is found by looking at the r table with the minimum r requirement of 0.3.[8] Based on the table above, it can be seen that all items in this study have a Pearson product moment correlation value (r-Calculate) above its appropriateness (0.3). Thus, it can be concluded that the questionnaire in this study is valid.

Scale: ALL VARIABLES

Case Processing Summary

	N	%
Cases Valid	261	100,0
Excluded ^a	0	,0
Total	261	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,752	13

5. Conclusion

From the previous explanation, respondents' perceptions of the variables in the EUCS model were obtained. Therefore, it can be concluded that

the overall user satisfaction level of the Muhammadiyah University of Ponorogo Academic Information System averaged 2.84 (Level 3/Neutral). This means that, according to respondents' general perception, the Muhammadiyah University of Ponorogo Academic Information System website was considered insufficient. The content variable had an average value of 3.07 (Level 4/Satisfied), accuracy 2.65 (Level 3/Neutral), format 2.86 (Level 3/Neutral), ease of use 3.11 (Level 4/Satisfied), and timeliness 2.53 (Level 3/Neutral).

The dominant factor contributing to user satisfaction of the Muhammadiyah University of Ponorogo Academic Information System was the one with the highest average value, namely ease of use, which reached 3.11. Meanwhile, the variable that has the lowest average value is the timeliness variable, which only has an average value of 2.53.

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