
Analysis of End-User Satisfaction with the E-Learning System as a Learning Support Tool Using the EUCS Method at the Faculty of Tarbiyah and Teacher Training, UIN Raden Fatah Palembang

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Abstract

The implementation of e-learning began in 2019 using a blended learning approach, and in 2020, the system was updated with new features, including virtual meeting capabilities. To ensure optimal service delivery, universities must maintain system performance by providing satisfaction guarantees for users, assuming that system stability has been achieved. However, there has been no systematic measurement of user satisfaction with the current e-learning system. This study involved 375 active students from the Faculty of Tarbiyah and Teacher Training to measure user satisfaction levels using the End-User Computing Satisfaction (EUCS) method, which includes five variables: content, accuracy, format, ease of use, and timeliness. The results revealed that the hypotheses for content, accuracy, ease of use, and timeliness were accepted, whereas the hypothesis for format was rejected.

Keywords

E-learning; EUCS; Faculty of Tarbiyah and Teacher Training; UIN Raden Fatah Palembang; User Satisfaction

Article History

Received 30 March 2025

Accepted 01 June 2025

How to Cite

Supriadi & Seprina, I., (2025). Analysis of End-User Satisfaction with the E-Learning System as a Learning Support Tool Using the EUCS Method at the Faculty of Tarbiyah and Teacher Training, UIN Raden Fatah Palembang, (JIKSI), 6(2), [59-63].

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Introduction

Information Technology (IT) and Information Systems (IS) have become integral components of modern society, significantly influencing human behavior and driving transformation across various fields, particularly in education. The COVID-19 pandemic, which emerged in early 2020, compelled educational institutions to rely heavily on IT for online learning and administrative processes.

Before the pandemic, higher education institutions had already begun implementing online learning systems known as e-learning, a form of distance education utilizing internet-based technology to facilitate the teaching and learning process (Wana & Abdillah, 2019). E-learning enables students and lecturers to communicate and exchange learning materials efficiently without face-to-face interaction.

At Universitas Islam Negeri (UIN) Raden Fatah Palembang formerly known as Institut Agama Islam Negeri (IAIN) Raden Fatah Palembang the e-learning system was first introduced in 2019 using a blended learning model. In 2020, the system underwent further development with the addition of virtual meeting features, enhancing its interactivity and accessibility.

UIN Raden Fatah Palembang, officially established on November 13, 1964, under the Decree of the Minister of Religious Affairs No. 7 of 1964, currently consists of nine faculties: Sharia and Law, Tarbiyah and Teacher Training, Ushuluddin and Islamic Thought, Adab and Humanities, Da'wah and Communication, Islamic Economics and Business, Social and Political Sciences, Science and Technology, and Psychology (Thohari, 2016).

To maintain the quality of academic services, universities must assess user satisfaction with technological systems. The End-User Computing Satisfaction (EUCS) model, developed by Doll and Torkzadeh, is one of the most widely used methods for evaluating user satisfaction. It examines five dimensions: content, accuracy, format, ease of use, and timeliness (Darwi & Efrizon, 2019). In this study, the EUCS model was applied to measure user satisfaction with the e-learning system used by students of the Faculty of Tarbiyah and Teacher Training.

The results of this research are expected to help identify factors that influence student satisfaction and provide insights for improving the e-learning system. Respondents were drawn from ten study programs within the faculty: Islamic Education (PAI), English Education (PBI), Arabic Education (PBA), Islamic Elementary School Teacher Education (PGMI), Mathematics Education, Biology Education, Islamic Education Management (MPI), Chemistry Education, Physics Education, and Early Childhood Islamic Education (PIAUD).

A total of 5,911 active students formed the study population, with 375 students selected as respondents. The data were collected through questionnaires based on the EUCS model (Hidayah & Taufan, 2020) and analyzed using SPSS software with multiple regression, validity, reliability, and hypothesis testing.

Methodology

2.1 Research Method

This research followed a quantitative approach, applying statistical analysis to examine relationships between variables. The research framework is illustrated in Figure 1 (Research Flow), which outlines the process from problem identification to hypothesis testing.

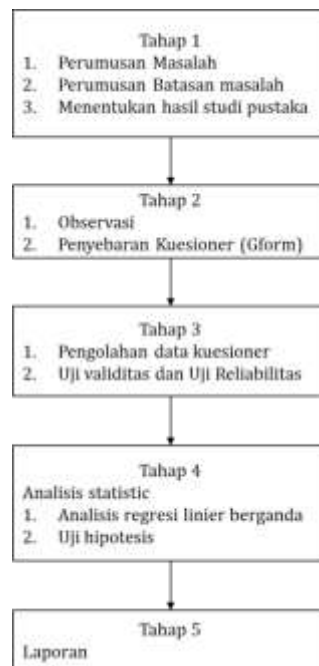


Figure 2.1 Research Flow

2.2 Data Collection Methods

Four methods were employed for data collection:

1. Observation: Conducted at the Faculty of Tarbiyah and Teacher Training to understand system use and collect supporting data.
2. Interviews: Conducted with administrative staff to obtain information about student populations and e-learning usage.
3. Questionnaires: Distributed to students based on the EUCS dimensions (content, accuracy, format, ease of use, and timeliness).
4. Literature Review: Relevant previous studies were reviewed to support theoretical development.

2.3 Hypothesis Formulation

Based on the research framework, the following hypotheses were proposed:

H₀: The variables content, accuracy, format, ease of use, and timeliness collectively have no significant effect on user satisfaction.

H₁: The variables content, accuracy, format, ease of use, and timeliness collectively have a significant effect on user satisfaction.

Results and Discussion

The total population of active students in the Faculty of Tarbiyah and Teacher Training was 5,911 (data obtained from the Pangkalan Data Pendidikan Tinggi Higher Education Database). The sample size was determined using Slovin's formula at a 5% margin of error. Thus, 375 respondents were selected proportionally from all ten study programs.

Research Variables, The study consisted of five independent variables Content (X₁), Accuracy (X₂), Format (X₃), Ease of Use (X₄), and Timeliness (X₅) and one dependent variable, User Satisfaction (Y). Operational definitions of these variables are shown in Table 1,

including indicators and statement items, each measured on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Respondent Characteristics, Gender: 94 males (25.07%) and 280 females (74.67%). Year of Admission: 36% from 2018, 30% from 2019, and 34% from 2020. Study Program: The highest proportion of respondents came from the Islamic Education program (51%), followed by English Education (9%) and Arabic Education (6%).

Validity was tested using Pearson's correlation with 375 respondents ($r_{table} = 0.101$). All 14 items yielded correlation coefficients exceeding this value, indicating that all items were valid measures. Reliability testing using Cronbach's Alpha produced values above 0.60 for all six variables, confirming that the instruments were reliable indicators.

The F-test assessed whether the independent variables jointly influenced user satisfaction. Results showed $F = 259.291 > F_{table} = 2.2381$ and $p = 0.000 < 0.1$, indicating a significant collective effect of all independent variables on user satisfaction.

t-Test Results The partial test results were as follows:

1. Content (X_1): $t = 20.195 > 1.966$, $p = 0.000 \rightarrow$ significant effect.
2. Accuracy (X_2): $t = -8.742 < 1.966$, $p = 0.000 \rightarrow$ no significant effect.
3. Format (X_3): $t = 0.860 < 1.966$, $p = 0.390 \rightarrow$ no significant effect.
4. Ease of Use (X_4): $t = 4.472 > 1.966$, $p = 0.000 \rightarrow$ significant effect.
5. Timeliness (X_5): $t = 4.915 > 1.966$, $p = 0.000 \rightarrow$ significant effect.

Discussion

The statistical analysis demonstrated that the variables content, ease of use, and timeliness significantly influence user satisfaction, while accuracy and format do not. These results align with previous findings that emphasize the importance of content relevance, usability, and prompt information delivery in determining e-learning user satisfaction (Darwi & Efrizon, 2019).

The significant influence of content indicates that the information provided by the e-learning system meets students' needs for assignments, forums, and virtual classes. Ease of use was also a crucial factor, suggesting that a user-friendly interface improves student interaction and engagement.

Conversely, accuracy and format did not show significant effects. This outcome suggests that users may prioritize accessibility and responsiveness over aesthetic design or minor inaccuracies, especially during remote learning conditions.

Overall, these findings affirm that the EUCS model effectively captures the dimensions influencing e-learning satisfaction among university students and can guide improvements in system design and implementation.

Conclusion and Recommendations

Based on data analysis and hypothesis testing, the following conclusions are drawn:

1. The variables content, ease of use, and timeliness have significant positive effects on user satisfaction.
2. The variables accuracy and format do not have significant effects on user satisfaction.

3. Collectively, all five independent variables significantly influence user satisfaction with the e-learning system.
4. The EUCS model is an effective framework for evaluating e-learning system satisfaction in higher education environments.

Disclosure Statement

The authors declare no potential conflicts of interest with respect to the research, authorship, or publication of this article.

Acknowledgments

The authors express sincere gratitude to the Faculty of Tarbiyah and Teacher Training, UIN Raden Fatah Palembang, and the Faculty of Computer Science, Universitas Bina Darma, for their support, cooperation, and access to the data used in this research.

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