

THE INFLUENCE OF ACADEMIC SERVICE QUALITY ON STUDENT SATISFACTION IN DISTANCE EDUCATION AT UNIVERSITAS TERBUKA

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Abstract

This study aims to evaluate the effect of academic service quality (X1) and e-learning material quality (X2) on student satisfaction at Universitas Terbuka. Using a quantitative approach with multiple linear regression analysis, data was collected from 78 respondents through a Likert scale questionnaire. The results show that both independent variables significantly affect student satisfaction, albeit with a negative relationship. The R^2 value of 42.9% indicates the contribution of the independent variables to student satisfaction, while the remaining 57.1% is influenced by other factors not included in the model. This study recommends strengthening academic interactions and improving the relevance of e-learning materials to meet student expectations.

Keywords: academic services, student satisfaction, e-learning, and distance education.

Introduction

Universitas Terbuka (UT) is a higher education institution established in 1984 with the aim of providing access to higher education to people across Indonesia, particularly for those who are limited in attending face-to-face education. The quality of academic services is a key factor in ensuring that students have an optimal learning experience, especially at Universitas Terbuka, which offers distance education. Academic services are an essential component that includes administration, guidance, and learning. In the context of Universitas Terbuka, as a distance education institution, the quality of these services is a major determinant of the student learning experience. Challenges such as the digital divide in access to technology remain a barrier. According to the UNESCO Global Education Monitoring Report (2023), students from the wealthiest households are nearly eight times more likely to have internet access than students from the poorest households. This inequality can affect the student learning experience, particularly in utilizing technology-based services such as e-learning and the Academic Information System (SIA). Platforms like e-learning and SIA are designed to support students but often face challenges such as system stability and limited interaction with tutors. Therefore, research is needed to evaluate these service aspects in order to improve student satisfaction. (Kristiyan & Bachtiar, 2020).

However, academic services at Universitas Terbuka still face challenges, such as the stability of the e-learning platform, the updating of information on the SIA, and the lack of interaction between mentors on the e-learning platform. Common obstacles include the usability of the discussion platform, which is often affected by the website's stability and user experience. Another issue is that updates on the SIA UT system are sometimes slow, causing difficulties for students in obtaining information. Additionally, the collaboration between students and lecturers in academic mentoring is still perceived as limited. Efforts are needed to develop the quality of academic services as a support for distance learning. As a distance education institution, Universitas Terbuka should pay attention to these aspects in order to prevent student dissatisfaction, which could negatively affect overall academic satisfaction.

Sujianto, Mujiono, Suardika, and Indriana (2023) studied the impact of the quality of academic administration services on student satisfaction. The method used was data analysis techniques, specifically multiple linear regression analysis. The results showed that both hypotheses were accepted, meaning that there is a significant influence, both partially and simultaneously, between the quality of academic administration services and student satisfaction, with responsiveness being the dominant factor affecting student satisfaction. In a related book, the flexibility of UT services as a "freedom campus" is discussed, highlighting that between 2020 and 2030, Indonesia is expected to experience a demographic bonus, where the productive age population will outnumber the younger and elderly populations (Widokarti et al., 2021).

Considering the fundamental role of academic service quality in student satisfaction, this study aims to evaluate the impact of academic service quality at Universitas Terbuka on student satisfaction. Furthermore, this research is expected to contribute to the development of the distance education system.

The study will explore several factors and provide recommendations for institutional leaders to help develop and improve services that support student success. The factors that most influence satisfaction levels from various aspects implemented at Universitas Terbuka will be examined. The results of this research can serve as a foundation for Universitas Terbuka to design efficient service development strategies that meet student needs. Therefore, this research will contribute to creating a better academic environment in the future.

Methods

This study uses a quantitative approach with a survey method to collect data from respondents. Multiple linear regression analysis is used to test the influence of independent variables, namely academic service quality and e-learning materials, on the dependent variable, student satisfaction. The population in this study consists of active students at Universitas Terbuka who are enrolled in distance education programs. The sample was selected using purposive sampling, with the criteria being students who have used academic services and the e-learning platform at Universitas Terbuka. A total of 78 respondents were selected, which meets the minimum sample size required for regression analysis. Additionally, the method chosen was purposive sampling. Purposive sampling was applied in this study because this technique allows the researcher to select samples based on specific criteria, such as students with direct experience with academic services at Universitas Terbuka. This method also enables the researcher to focus on respondents who have direct experience with the academic services being evaluated. Data analysis was conducted using multiple linear regression after the classical assumption tests were met.

The variables in this study include one dependent variable, which is student satisfaction, and two independent variables: the quality of academic services (which includes e-learning and SIA UT) and the quality of administrative services. The research instrument is a questionnaire with a 1-5 Likert scale to measure the quality of academic services, e-learning materials, and student satisfaction. Validity testing was conducted using Pearson's correlation, with a significance value greater than 0.05, while reliability was tested using Cronbach's Alpha, resulting in a value of 0.82, indicating high reliability.

The Likert scale was used to assess students' perceptions of the services provided, allowing the researcher to collect more consolidated data and facilitate the analysis process. Each score selected by the respondents will reflect their level of satisfaction with the service. Some key aspects of applying the Likert scale include the Easily Reviewing Subjective Variables. The Likert scale is very useful for measuring impressions, perceptions, and views that are personal and difficult to measure directly. In this study, the scale gives the researcher an opportunity to obtain more accurate data regarding student satisfaction with academic services and e-learning materials, which are subjective and based on students' direct experiences.

Identifying Specific Patterns or Trends. The Likert scale makes it easier for researchers to examine patterns that may exist in students' responses. By using this scale, researchers can determine whether there are particular trends in student satisfaction with the services they receive and whether differing views are influenced by specific aspects. Efficiency in Data Collection. The Likert scale allows researchers to collect large amounts of data efficiently and within a short time frame. This is especially useful when the study involves a large number of respondents, such as at Universitas Terbuka, as it simplifies data collection without requiring lengthy steps like interviews.

The data analysis process is carried out in stages. The research instrument is first tested for validity and reliability to ensure that the data obtained is suitable for analysis. Validity is tested by ensuring that each statement in the questionnaire accurately reflects the intended dimensions. Data is analyzed using SPSS software. The analysis stages include validity and reliability tests, classical assumption tests (normality, multicollinearity, and heteroscedasticity), and multiple linear regression analysis. ANOVA is used to test the significance of the regression model, while the coefficient of determination (R^2) is used to measure the contribution of the independent variables to the dependent variable.

Result and Discussion

Tabel 1. Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.655 ^a	.429	.413	.894

The results of
of the variation i

a. Predictors: (Constant), X2, X1

approximately 42.9%
les (X1 and X2).

This indicates that the regression model used is quite effective in describing the relationship between these variables. Additionally, the Adjusted R^2 value of 0.413 shows that even though more than one independent variable is used, the model remains effective in explaining variation in the data, with 41.3% of the variation in the dependent variable being predictable by academic service quality and e-learning materials. While this value is statistically significant, the remaining 57.1% suggests that there are other factors affecting student satisfaction, which need to be considered for further research development. This indicates that, despite the model explaining much of the data variability, other factors influencing student satisfaction remain unidentified in this study.

The Std. Error of the Estimate of 0.894 indicates a relatively small prediction error, suggesting that the model is quite accurate in predicting the dependent variable. This also shows that the relationship between service quality and student satisfaction is strong, although there are other variables not explained in this model. The model's predictions still align with the observed data and are effective in illustrating the relationship between these variables. This suggests that the model used in this study is quite good, even though there are other factors that may contribute to student satisfaction that have not been explored. Therefore, although the model provides a good explanation of the effect of academic service quality and e-learning materials on student satisfaction, other factors such as student interaction with faculty or academic administration policies may need to be considered in future research.

Tabel 2 ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44.332	2	22.166	27.756	<.001 ^b
	Residual	59.097	74	.799		
	Total	103.429	76			

a. Dependent Variable: Seberapa puas Anda dengan kualitas materi yang terdapat di e-learning?

b. Predictors: (Constant), X2, X1

Based on the results of the ANOVA test, the applied regression model proves that the relationship between the independent variables (academic service quality and e-learning materials) and the dependent variable (student satisfaction) is significant. This can be seen from the Sig. value of less than 0.001 (<0.001), which indicates that there is a significant correlation between the independent variables (X1 and X2) and the dependent variable. (kepuasan terhadap kualitas materi yang terdapat di e-learning). Therefore, this regression model can be utilized to effectively explain the influence of independent variables on the dependent variable.

Here are further details from the ANOVA table shown the Sum of Squares Regression (44.332). This value explains that the amount of variation that can be explained by the regression model is higher, meaning the higher this value, the greater the variation that can be explained by the model regarding the dependent variable (student satisfaction). This indicates that the regression model used has a good ability to explain the influence of independent variables on student satisfaction.

Sum of Squares Residual (59.097). This value explains the variation that cannot be explained by the regression model, which is 59.097. This variation reflects the error or deviation between the predicted values and the actual values of the dependent variable. This figure also provides an indication of how accurately the regression model predicts student satisfaction.

F (27.756): The F value shows the comparison between the variation explained by the model and the variation that cannot be explained. The higher the F value, the better the model explains the relationship between the independent and dependent variables. In this case, an F value of 27.756 indicates that the applied model is very effective in explaining the variation occurring in the dependent variable. (kepuasan mahasiswa) Sig. (<0.001):

This very small significance value (less than 0.001) emphasizes that this regression model is significant. This very small Significance (Sig.) value indicates that the ANOVA test results support the acceptance of the regression model. The conclusion is that the relationship between the independent and dependent variables can be statistically justified.

Tabel 3 Coefficients

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	6.421	.360	17.822	<.001
	X1	-.215	.073	-.297	.004
	X2	-.440	.098	-.454	<.001

a. Dependent Variable: Seberapa puas Anda dengan kualitas materi yang terdapat di e-learning?

The table above shows the regression coefficients that illustrate the influence of the independent variables (X1 and X2) on student satisfaction with the quality of materials available in e-learning. A more detailed explanation of the coefficients that The B value for the constant is 6.421, which means that if both independent variables (academic service quality and e-learning materials) have a value of zero, the predicted student satisfaction value will be 6.421. The t value of 17.822 and Sig. < 0.001 indicate that this constant is significantly related to the dependent variable.

The B value for X1 is -0.215, which indicates that each one-unit increase in academic service quality (X1) will reduce student satisfaction by approximately 0.215, assuming other variables remain constant. The t value for X1 is -2.934 with Sig. 0.004, indicating that academic service quality significantly affects student satisfaction, although the direction of the effect is negative. This means that the higher the quality of academic services, the lower the reported student satisfaction. This phenomenon could be caused by the discrepancy between the expectations and the reality perceived by students regarding the quality of the academic services provided. The coefficient for X2 is -0.440, indicating that a one-unit change in X2 will decrease satisfaction by approximately 0.440, assuming other variables remain constant. With a t-value of -4.481 and a significance level below 0.001, the effect of X2 on student satisfaction is also proven to be statistically significant.

The results of the linear regression analysis show that the quality of academic services (X1) and e-learning materials (X2) have a significant negative impact on student satisfaction (Sig. < 0.05). This finding suggests a mismatch between student expectations and the actual services provided. Further discussion reveals that students may have high expectations for academic services and e-learning materials; however, limitations such as minimal interaction or less interactive content may lead to dissatisfaction. A prior study by Suardika and Indriani (2023) highlighted the importance of responsiveness as a key factor in student satisfaction, which aligns with the findings of this research.

These findings contradict logical expectations, where improvements in service quality should enhance student satisfaction. Several possibilities may explain this phenomenon. First, students may have high expectations for academic services and e-learning materials, leading to disappointment when those expectations are not met. Second, academic services, such as interactions with lecturers or academic advisors, may be perceived as suboptimal. Additionally, e-learning materials might be considered less interactive or irrelevant to students' needs. Another possibility is bias or misinterpretation during the questionnaire process, where negative evaluations of other aspects influenced the regression analysis results. A positive perception of e-learning emphasizes its significant role in facilitating education through mechanisms like blended learning, which balances and synchronizes e-learning with face-to-face sessions (Much. Fuad Saifuddin).

Conclusions and Recommendations

This study concludes that the quality of academic services and e-learning materials significantly affect student satisfaction at Universitas Terbuka, despite the negative direction of the influence. This phenomenon highlights the need to align the services provided with student expectations. Key recommendations include enhancing interaction between students and advisors through the e-learning platform and developing content that is more relevant to students' learning needs. The regression model used in this study explains approximately 42.9% of the variability in student satisfaction ($R^2 = 0.429$). This R^2 value indicates that 42.9% of the variation in student satisfaction can be explained by the quality of academic services and e-learning materials. Although this figure is quite substantial, about 57.1% of the variability is still influenced by other factors not addressed in this model. This suggests that further research is needed to explore additional variables to gain a more comprehensive understanding of the factors affecting student satisfaction.

This study makes an important contribution to understanding the factors influencing student satisfaction at Universitas Terbuka, particularly in relation to the quality of academic services and e-learning materials. These findings can serve as a foundation for improving academic services and developing strategies to enhance students' learning experiences at Universitas Terbuka. The recommendations provided can help the university formulate more responsive policies to meet student needs. Despite offering valuable insights, this study has several limitations that need to be addressed. One limitation is the exclusion of other factors influencing student satisfaction, such as demographic factors or prior learning experiences. Future research could explore additional variables, such as face-to-face learning experiences, the use of other technologies, or students' socio-economic factors, to provide a more comprehensive understanding of what drives student satisfaction. Overall, the findings of this study provide deeper insights into the factors influencing student satisfaction with e-learning at Universitas Terbuka. They also offer recommendations to improve the quality of academic services and materials provided to enhance students' learning experiences.

Enhancing the Quality of Academic Services: Improve interaction between students and lecturers or advisors through the e-learning platform to enrich students' learning experiences. Developing More Relevant E-learning Materials: Provide e-learning materials that are more interactive, easy to understand, and aligned with students' needs to enhance overall satisfaction. Improving Platform Stability: Ensure the stability of the e-learning system and faster updates via SIA UT to reduce student frustration and improve learning convenience. This study contributes to understanding the factors influencing student satisfaction at Universitas Terbuka, especially concerning the quality of academic services and e-learning materials. The findings can serve as a basis for developing better educational strategies in the future, focusing on improving service quality to meet student expectations.

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