



# Analysis of Student Satisfaction and Loyalty through Educational Service Quality and Lecturer Performance in Islamic University

Hari Suriadi<sup>1</sup>, Nora Eka Putri<sup>1</sup>, Yulia Septi Wahyuni<sup>2</sup>

<sup>1</sup>Universitas Negeri Padang, Indonesia

<sup>2</sup>Universitas Muhammadiyah Riau, Indonesia

✉ [suriadihari6@gmail.com](mailto:suriadihari6@gmail.com) \*

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## Abstract

The issue of student loyalty to higher education institutions is an important concern in education management, especially because student loyalty can reflect the success of educational services and lecturer performance. This study aims to analyze the effect of educational service quality and lecturer performance on student satisfaction, as well as its impact on student loyalty in one of the Islamic universities in Indonesia. The research method uses a quantitative approach with Structural Equation Modeling analysis operated through the Analysis Moment of Structural version 28 application. The research sample consists of 300 randomly selected students. The results showed that the quality of educational services and lecturer performance had a positive and significant effect on student satisfaction, with estimated coefficients of 0.489 and 0.391 ( $p < 0.05$ ), respectively. Student satisfaction also had the greatest influence on student loyalty (estimated coefficient of 0.6511;  $p < 0.05$ ) and proved to be a significant mediating variable in the relationship between educational service quality and lecturer performance on student loyalty. The research model was declared fit with the data based on various fit indices such as The Minimum Sample Discrepancy Function divided by Degree of Freedom (1.512), Root Mean Square Error of Approximation (0.039), and Comparative Fit Index (0.961). The conclusion of this study shows that superior educational service quality and good lecturer performance can increase student satisfaction, which in turn contributes significantly to student loyalty. The findings provide practical implications for higher education institutions to focus on improving educational services and professional development of lecturers to create positive experiences for students.

## INTRODUCTION

The global higher education sector has experienced tremendous growth and transformation in recent years, as evidenced by the existence of more than 30,000 universities worldwide (Latif et al., 2019; Nguyen et al., 2024). This rapid expansion underscores the critical need to address service quality and its significant influence on student satisfaction and loyalty (Teeroovengadum et al., 2019). In the face of intensifying competition among higher education institutions, prioritizing

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the improvement of service quality and student satisfaction has become an important strategy to ensure the long-term sustainability and competitiveness of universities (Chen, 2019; Qian et al., 2022).

Student satisfaction is an important aspect of higher education management as it has a significant impact on student loyalty. The quality of educational services has a positive effect on student satisfaction, which in turn increases their loyalty to the institution (Nguyen et al., 2024). In addition, lecturer performance also plays an important role in shaping positive student experiences. The quality of service provided by lecturers has a significant effect on student satisfaction and loyalty (Asril et al., 2023). In the face of global competition in the higher education sector, improving service quality and lecturer performance has become an important strategy to attract and retain students. Superior service quality has also been shown to increase student satisfaction, which in turn fosters institutional loyalty (Santini et al., 2024).

UM Sumatera Barat, as one of the private universities in West Sumatera, faces similar challenges. Internal survey results show an increase in student complaints in the last three years, with 122 complaints recorded in 2023 compared to 90 complaints in the previous year. Most of the complaints were related to teaching quality (40%), limited learning facilities (40%), and slow administrative services (10%). This data is further exacerbated by a 22% decline in new student enrollment by 2023, highlighting the need for strategic interventions to maintain student satisfaction and prevent a decline in the institution's reputation.

The quality of educational services is a fundamental factor that influences student perceptions and experiences. Service quality has become a crucial factor in the success of organizations in various industries. It refers to customers' perceptions of the services provided, based on a comparison between their expectations and the actual services received (Sochenda, 2022). In the context of higher education, the dimensions of service quality include academic aspects, administration, facilities, reputation, and accessibility (Abdullah, 2006). Higher education institutions are committed to providing the best service to meet student needs (Napitupulu et al., 2018). This commitment includes providing adequate physical facilities, infrastructure, and qualified teaching staff. All of these efforts aim to increase overall student satisfaction (Gunarto & Hurriyati, 2020).

In addition, Lecturer Performance refers to the level of work achieved by lecturers or the extent to which their behavior in carrying out their duties meets the qualitative and quantitative standards set by the university (Husnul et al., 2024). Lecturer performance is a significant determinant of the student learning experience, including academic competence, innovation in teaching, and interpersonal interactions (Terblanche et al., 2020). The dimensions or sub-variables of Lecturer Performance, adapted and refined from previous frameworks, highlight key areas such as work quality, ability, initiative, communication, and punctuality (Damanik, 2019). These five aspects become important benchmarks in evaluating Lecturer Performance in higher education institutions.

Student satisfaction is a holistic evaluation of the educational experience they receive, including physical, emotional, and cognitive dimensions. Expectation-disconfirmation theory states that satisfaction occurs when students' perceptions of service quality and lecturer performance meet or exceed their expectations. In addition, student loyalty is an indicator of institutional success, which is reflected in students' commitment to continue their education at the same institution,

participate in alumni activities, and provide positive recommendations to prospective students (Subandi & Hamid, 2021). Annamdevula & Bellamkonda (2016) developed the HiEduQual model, which links higher education service quality with student satisfaction and loyalty. They measured student loyalty through indicators such as intention to continue their studies, recommending the institution, and giving positive reviews about the institution.

Although UM Sumatera Barat has made efforts to improve educational services, the data showed a significant gap between students' expectations and their perceived reality. Students expressed concerns regarding the lack of innovative teaching methods, limited interaction with lecturers, and inadequate learning support facilities. These issues affect not only student satisfaction, but also their loyalty to the institution. In addition, the low level of recommendations from students and alumni indicates the need for substantial improvements to enhance the institution's image and attractiveness (Sukrisman et al., 2020).

This study proposes a data-driven approach to analyze and improve the relationship between educational service quality, lecturer performance, student satisfaction, and student loyalty at UM Sumatera Barat. This study adopts the HedPERF model, which was originally introduced to evaluate service quality in higher education (Abdullah, 2006). Lecturer performance was assessed using indicators such as work quality, ability, initiative, communication, and timeliness (Engkizar et al., 2018). Using Structural Equation Modeling analysis, this study aims to explore the direct and indirect effects of service quality and lecturer performance on student satisfaction, as well as the mediating role of satisfaction in driving student loyalty.

## LITERATURE REVIEW

The quality of educational services is a crucial factor in determining student satisfaction in higher education institutions. The HEdPERF model developed by Abdullah (2006) assesses service quality based on the dimensions of non-academic, academic, reputation, accessibility and program issues. Research by Napitupulu et al (2018) confirms that good service quality increases students' positive perceptions of the institution. Another study by Gunarto & Hurriyati (2020) shows that quality services create a positive learning experience and increase student loyalty. At UM Sumatera Barat, challenges in maintaining service quality are reflected in student complaints related to limited facilities and administration. Recent research by Syefudin (2019) also emphasizes that good academic services have a significant effect on student satisfaction.

Lecturer performance plays an important role in shaping the student learning experience. Husnul et al (2024) identified five main dimensions of lecturer performance: quality of work, ability, initiative, communication, and timeliness. Setyaningsih & Suchyadi (2021) emphasized the importance of academic competence and innovation in teaching. In Islamic universities, students highlighted the need for increased interaction with lecturers to increase satisfaction and loyalty. A study by Syefudin (2019) found that good lecturer performance has a positive and significant effect on student satisfaction. In addition, the study shows that good lecturer performance increases student satisfaction with academic services.

Expectation-disconfirmation theory explains that student satisfaction occurs when their perceptions of service quality meet or exceed expectations (Helgesen & Nettet, 2007). Nguyen et al (2024) found that satisfaction has a direct relationship

with loyalty, which is reflected in students' intention to continue their studies and provide positive recommendations. At UM Sumatera Barat, student satisfaction mediates the relationship between educational service quality and student loyalty. Research by Syefudin (2019) also shows that academic services and lecturer performance together have a significant effect on student satisfaction.

Student loyalty is an indicator of the success of higher education institutions. Annamdevula & Bellamkonda (2016) developed the HiEduQual model that links the quality of educational services with student loyalty. Institutions that offer holistic learning experiences tend to have higher levels of loyalty (Santini et al., 2024). However, at UM Sumatera Barat, the decline in the number of new student enrollments reflects the challenge of maintaining a positive image amid global competition. A study by Chandra et al (2019) found that institutional image has a positive and significant effect on student loyalty through student satisfaction.

Internal survey data at UM Sumatera Barat revealed student complaints related to teaching, facilities, and administration. Roga et al (2015) emphasized the importance of a holistic approach in managing educational services. Integrating technological innovations and improving lecturer competencies can be a strategy to answer this challenge. The implementation of a digital administration system is also considered to increase efficiency and student convenience. Research by Syefudin (2019) suggests that improving academic services and lecturer performance can increase student satisfaction.

The use of Structural Equation Modeling in this study provides an in-depth understanding of the relationship between educational service quality, lecturer performance, student satisfaction, and student loyalty (Black & Babin, 2019). This model shows that student satisfaction is a significant mediating variable, which reinforces the importance of a data-driven approach to service improvement. The study by Qomariah et al (2020) used Structural Equation Modeling - Partial Least Square to analyze the effect of service quality and institutional image on student loyalty through student satisfaction.

This study provides an empirical basis for educational institutions to improve service and lecturer development. The results show that investment in service quality and lecturer training has a significant impact on student loyalty. As a strategic step, UM Sumatera Barat can adopt a lecturer professional development program and improve learning support facilities. Research by Syefudin (2019) recommends improving academic services and lecturer performance to increase student satisfaction.

## METHODS

This study uses a quantitative approach with a survey method to analyze the influence between the quality of educational services, lecturer performance, student satisfaction, and student loyalty at UM Sumatera Barat (Apuke, 2017; Snelson, 2016; Sukrisman et al., 2020). The research design used is associative correlation which aims to identify the causal relationship between these variables. Data were collected using a 5-point Likert scale questionnaire (Rokeman, 2024). Which was designed based on indicators of educational service quality and student satisfaction and loyalty. The instrument was tested for validity and reliability to ensure reliable results (Sürücü & Maslakçı, 2020).

The study population consisted of 3,717 active students in the odd semester of the 2024/2025 academic year spread across 12 faculties at UM Sumatera Barat.

The sampling technique used was Proportionate Stratified Random Sampling to ensure proportional representation of each faculty. The minimum sample size required for Structural Equation Modeling analysis is between 200 and 400 respondents (Black & Babin, 2019). Given the potential for invalid or outlier data, this study involved 300 respondents to ensure optimal and generalizable results. The research instrument was designed to measure the variables of educational service quality, lecturer performance, student satisfaction, and student loyalty. The following is the research instrument framework in Table 1.

**Table 1. Research Instrument Grid**

Variable	Indicators	Items
Quality of Education Services	Non-Academic Aspects	1,2,3,4
	Academic Aspects	5,6,7
	Reputation Aspect	8,9,10,11
	Access Aspect	12,13,14
	Program Issue Aspect	15,16,17,18
Lecturer Performance	Quality of Work	19,20,21
	Ability	22,23
	Initiative	24,25
	Communication	26,27,28
	Punctuality	29,30,31
Student Satisfaction	Satisfaction with physical facilities	32,33,34
	Satisfaction with teaching quality	35,36,37,38
	Satisfaction with support services	39,40,41,42
	Intention to continue study	43,44,45,46
	Recommend the institution	47,48,49,50
	Speak positively about the institution	51,52,53,54

The research instrument was tested using Confirmatory Factor Analysis (CFA) to test validity, with a loading factor value  $> 0.5$  considered valid (Hair Jr et al., 2019). Reliability tests were conducted using Cronbach's Alpha and Composite Reliability (CR), where Cronbach's Alpha and CR values  $> 0.7$  indicate good reliability. In addition, average variance extracted (AVE) was used to ensure convergent validity, with AVE values  $> 0.5$  as an accepted criterion. Discriminant validity was also evaluated using the Fornell-Larcker criterion and cross-loading values, where the square root of the AVE should be greater than the correlations between constructs (Sarstedt et al., 2022). The results of the analysis are summarized in Table 2.

**Table 2. Validity and Reliability Testing Results**

Variable	Number of Statement Items	Loading Factor (Average)	Cronbach's Alpha	Composite Reliability (CR)	Description
Education Service Quality	18	0.79	0.89	0.91	Valid and Reliable
Lecturer Performance	13	0.82	0.91	0.93	Valid and Reliable
Student Satisfaction	11	0.81	0.87	0.90	Valid and Reliable
Student Loyalty	12	0.83	0.90	0.92	Valid and Reliable



## RESULT AND DISCUSSION

### Normality Test

In this study, Structural Equation Modeling with path analysis was used to explore the effect of educational service quality and lecturer performance on student satisfaction and loyalty at UM Sumatera Barat. Path analysis in Structural Equation Modeling not only facilitates a comprehensive understanding of these relationships, but also serves to rigorously test research hypotheses (Kline, 2023a). In line with the conceptual framework developed for this study, Structural Equation Modeling was chosen as the main tool for data analysis and was run using the Structural Moment Analysis software version 28.

To ensure the validity of the Structural Equation Modeling analysis, normality testing was conducted by analyzing the z value (critical ratio or C.R.) obtained from the skewness and kurtosis of the data distribution. A critical value limit of  $\pm 2.58$  at a significance level of 0.01 was applied to confirm the normality of the data (Sarstedt et al., 2022). Multivariate normality is evaluated based on the critical ratio (CR) value of kurtosis, where data are considered normal if the  $CR \leq 2.58$  at the 0.01 significance level (Black & Babin, 2019; Tabri & Elliott, 2012). In this study, the CR value of 1.902 indicates that the data meets the assumption of multivariate normality at the predetermined tolerance level. The results of the normality test, which is essential for verifying the assumptions of Structural Equation Modeling, are detailed in Table 3.

**Table 3. Univariate and Multivariate Normality Test Results**

Value	Normality Assumption	Multivariat	Criteria
Critical ratio (C.R)	Range -2.58 to +2.58	1.902	Normal
Kurtosis	Range -2.58 to +2.58		Normal
Skewness	Range -2.58 to +2.58		Normal

Evaluation of multivariate outliers was conducted by observing the Analysis Moment of Structural output using the Mahalanobis Distance method (. The criterion for identifying outliers was determined by a significance level of  $p < 0.001$ , where the calculation of  $X^2 (54; 0.001)$  resulted in a critical value of 91.872 (Collier, 2020). Based on this criterion, any case with a Mahalanobis Distance value that exceeds 91.872 is classified as a multivariate outlier (Xun & He, 2017). The results of in-depth analysis and interpretation of the Mahalanobis Distance test values show that no data has a value greater than 91.872. Thus, it can be concluded that there are no outliers in the analyzed data.

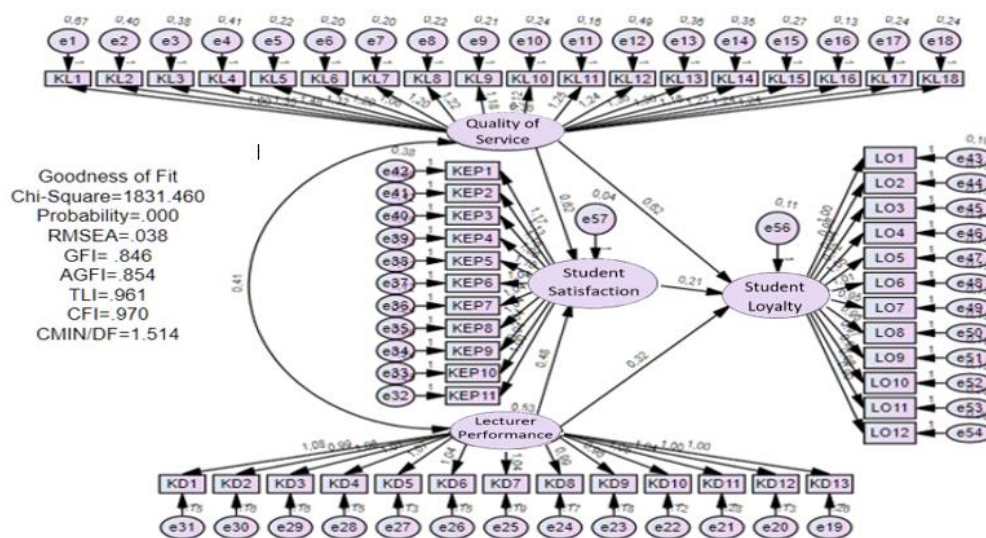
### Goodness of Fit Test

The Goodness of Fit test is an important step in evaluating the extent to which the proposed research model fits the observed data. This test provides a comprehensive assessment of the fit of the model through various statistical indices, which ensures its validity and reliability for further analysis. A model that has good fit indicates that the hypothesized relationship between variables is consistent with empirical data, thus supporting the strength of the structural equation model (Black & Babin, 2019). The Goodness of Fit test results summarized in Table 5 confirm that the model meets the necessary standards for goodness of fit, thus providing a strong basis for interpreting the relationships between variables.

**Table 4. Goodness of Fit Index Test**

Goodness of Fit Index	Cut-off Value	Research Model Value	Model Classification
Chi-square	Expected to be small	1831.460	Marginal
Significant Probability	$\geq 0.05$	0.000	Marginal
RMSEA	$\leq 0.08$	0.038	Fit
GFI	$\geq 0.90$	0.846	Marginal
AGFI	$\geq 0.90$	0.854	Marginal
TLI	$\geq 0.90$	0.961	Fit
CFI	$\geq 0.90$	0.970	Fit
CMIN/DF	$\leq 2.00$	1.514	Fit

The structural model provides a visual representation of the relationships between variables, highlighting both direct and indirect effects within the research framework. It serves as an important tool for understanding the causal pathways, strength of relationships, and overall dynamics between Educational Service Quality, Lecturer Performance, student satisfaction, and student loyalty. The Research Structural Model is presented in Figure 1 below, which provides a clear and comprehensive perspective of these interactions.

**Figure 1. Research Structural Model**

### Hypothesis Testing

#### Testing the direct effect of independent variables on the dependent variable

Hypothesis testing in this study aims to analyze the relationship in the structural model, which includes a total of seven hypotheses. Based on data analysis using the Structural Equation Modeling method with Analysis Moment of Structural version 28, a hypothesis is considered significant if the probability value (P-value)  $\leq 0.05$  (Hair Jr et al., 2019). The results showed that the quality of educational services has a significant and positive influence on student satisfaction (H1, coefficient 0.489, C.R. 9.733,  $P=0.000 < 0.05$ ) and student loyalty (H3, coefficient 0.150, C.R. 2.855,  $P=0.003 < 0.05$ ). Similarly, lecturer performance was also found to have a significant influence on student satisfaction (H2, coefficient 0.391, C.R. 8.046,  $P=0.000 < 0.05$ ) and student loyalty (H4, coefficient 0.144, C.R. 3.126,  $P=0.004 < 0.05$ ). Among these variables, student satisfaction showed a significant influence on student loyalty (H5, coefficient 0.511, C.R. 9.167,  $P=0.000 < 0.05$ ). These values are summarized in Table 6.

**Table 5. Hypothesis Test Results**

Hypothesis	Independent Variable	Dependent Variable	Estimate	S.E.	C.R.	P	Conclusion
H1	Quality of Education Services	Student Satisfaction	0.489	0.049	9.733	0.000	Positive and Significant
H2	Lecturer Performance	Student Satisfaction	0.391	0.047	8.046	0.000	Positive and Significant
H3	Quality of Education Services	Student Loyalty	0.150	0.045	2.855	0.003	Positive and Significant
H4	Lecturer Performance	Student Loyalty	0.144	0.044	3.126	0.004	Positive and Significant
H5	Student Satisfaction	Student Loyalty	0.511	0.060	9.167	0.000	Positive and Significant

### Testing indirect effects

In addition to direct effects, this study also identified indirect effects mediated by student satisfaction. The Sobel test was used to analyze these relationships, and the results showed that educational service quality significantly influenced student loyalty through student satisfaction (H6, t-value 6.681 & gt; 1.96, P & lt; 0.05). Similarly, lecturer performance has a significant influence on student loyalty through student satisfaction (H7, t-value 6.070 & gt; 1.96, P & lt; 0.05). The values of this analysis are also presented in Figures 2 and 3, which provide quantitative evidence of the mediating role of student satisfaction in strengthening the effect of educational service quality and lecturer performance on student loyalty.

Input:		Test statistic:	Std. Error:	p-value:
a	0.489	Sobel test: 6.47827473	0.03857184	0
b	0.511	Aroian test: 6.45953791	0.03868373	0
s <sub>a</sub>	0.049	Goodman test: 6.49717555	0.03845963	0
s <sub>b</sub>	0.060	Reset all	Calculate	

**Fig 2. Sobel test for H6: The Effect of Educational Service Quality on Student Loyalty Through Student Satisfaction**

Input:		Test statistic:	Std. Error:	p-value:
a	0.391	Sobel test: 5.95113087	0.03357362	0
b	0.511	Aroian test: 5.93024845	0.03369184	0
s <sub>a</sub>	0.047	Goodman test: 5.97223545	0.03345498	0
s <sub>b</sub>	0.060	Reset all	Calculate	

**Fig 3. Sobel test for H7: The Effect of Lecturer Performance on Student Loyalty through Student Satisfaction**

The results of testing H1 indicate a significant and positive effect of Educational Service Quality on student satisfaction. The probability value (P-value) of 0.000, which is smaller than the significance level of 0.05, and the path coefficient of 0.489, provide strong evidence of this relationship. The coefficient indicates that everyone standard deviation increase in educational service quality will result in a 0.490 standard deviation increase in student satisfaction. This relatively strong relationship confirms the importance of Educational Service Quality in shaping student satisfaction in higher education. This finding is in line with expectancy confirmation theory, which explains that student satisfaction is achieved when educational services meet or exceed their expectations (Zydney et al., 2019). Institutions that met or exceeded students' expectations on five service dimensions



reported 42% higher satisfaction levels than other institutions (Farahmandian, 2013). Previous studies also support this conclusion, showing that Quality of Education Services has a long-term impact on student satisfaction (Khan, 2024; Tan et al., 2022).

Thus, Quality of Education Services is shown to be a key factor in improving student satisfaction across a range of higher education contexts. Consistent with recent findings, this study strengthens the relationship between Quality of Education Services and student satisfaction. Research across various contexts shows that high-quality education services not only increase student satisfaction but also build loyalty and strengthen the institution's positive image (Amzat et al., 2023; Daud et al., 2023; Mohammed et al., 2023). This confirms the importance of a holistic and contextual approach in measuring Quality of Education Services in higher education. In Indonesia, research at public universities also revealed a significant effect of service quality on student satisfaction (Kamaludin et al., 2023; Mardiana et al., 2022). Using theoretical frameworks relevant to local conditions, these studies found that the implementation of service dimensions that focus on students' needs has a positive impact on their level of satisfaction (Noerhartati & Budiharseno, 2024; Nurhidayah & Slamet, 2024). This highlights the need to customize the Educational Service Quality model to address specific challenges in the context of higher education in Indonesia.

The findings of this study have significant practical implications for the management of higher education institutions. The significant results show that investment in improving the quality of education services is an effective strategy to increase student satisfaction. This includes developing academic staff, improving learning facilities, and improving administrative service systems. In addition, the results of this study provide a strong empirical basis for formulating strategies to improve the quality of educational services in higher education institutions. The highly significant probability value ( $P=0.000$ ) indicates that the relationship between service quality and student satisfaction is not a coincidence, but a consistent and reliable pattern. This pattern can be used as a basis for strategic decision-making for university management.

The results of H2 testing show a significant effect of lecturer performance on student satisfaction (coefficient 0.391;  $p = 0.000$ ), which emphasizes the importance of lecturer competence in creating high-quality learning experiences. This finding is in line with previous research that highlights five key dimensions of lecturer performance that contribute to student satisfaction: pedagogical competence, teaching quality, effective communication, innovation in teaching, and time management (Hoque et al., 2023; Zenouzagh et al., 2023; Wong & Chapman, 2023). Other studies have also confirmed that higher-performing lecturers tend to generate greater levels of student satisfaction compared to moderately performing lecturers (Alsalhi et al., 2023). Teaching effectiveness is directly linked to students' learning motivation and academic satisfaction (Siahaya et al., 2024).

This is supported by student engagement theory, which explains that lecturer performance plays an important role in creating a supportive learning environment and encouraging active student engagement. Lecturers with outstanding performance usually demonstrate strong mastery of the material, effective facilitation skills, clear communication abilities, as well as adaptability in teaching methods (Phulpoto et al., 2024; Riza et al., 2024). Institutions that prioritize continuing professional development for faculty often report significant increases in student satisfaction (Meyer et al., 2023). The implications of these findings provide an empirical basis for

formulating policies related to lecturer performance in higher education. A holistic approach to lecturer development is essential as a strategy to improve education quality and overall student satisfaction.

The results of testing H3 show a significant effect of Educational Service Quality on student loyalty (coefficient 0.150;  $p = 0.003$ ), which confirms the importance of a holistic service experience in building students' long-term commitment. This finding is consistent with previous research that highlights five key dimensions of Educational Service Quality that contribute to student loyalty: academic quality, support facilities, institutional reputation, service accessibility, and program innovation (Feng, 2023; Toscano-Hernández et al., 2024). Institutions with superior service quality tend to achieve higher levels of student loyalty compared to other institutions (Ali et al., 2024; Daud et al., 2023). A positive service experience directly influences students' willingness to recommend the institution to others and strengthens their emotional attachment to the university (Özer et al., 2023).

Institutions that offer high-quality educational services generally provide complete learning infrastructure, efficient administrative systems, adequate academic support, relevant industry engagement, and strong career development programs (Aithal & Maiya, 2023). Quality of Education Services has a significant and consistent impact on student loyalty (Daud et al., 2023). Institutions that adopt an integrated approach to service quality management can significantly increase student loyalty. Universities with comprehensive quality management systems have successfully increased student retention rates over time, confirming the importance of investment in service quality for the sustainability of higher education institutions. These findings emphasize the need to build a responsive and sustainable education service ecosystem. By prioritizing service quality across multiple dimensions, institutions can not only increase student loyalty but also ensure their long-term growth and competitiveness in the higher education sector.

The results of testing H4 show a significant effect of lecturer performance on student loyalty (coefficient 0.144;  $p = 0.004$ ), which emphasizes the important role of lecturers in building students' long-term commitment to the institution. These findings identify several key dimensions of lecturer performance that impact student loyalty, including pedagogical competence, teaching quality, innovation in teaching, effective communication, and responsiveness (Snow & Matthews, 2016). High-performing lecturers tend to generate greater student loyalty compared to low-performing lecturers. Teaching effectiveness is directly correlated with students' intention to recommend the institution to others as well as their emotional attachment to the university (Roga et al., 2015). High-performing lecturers typically have strong mastery of material, facilitation skills, effective interpersonal communication, and innovation in teaching methods (Prasetyo et al., 2022; Wibowo et al., 2020).

Lecturer performance shows a strong and consistent impact on student loyalty, highlighting the importance of focusing on improving teaching quality. Institutions that implement ongoing faculty professional development programs report significant increases in student loyalty (Ali et al., 2024). Universities that have structured lecturer mentoring programs have successfully increased student retention rates over time, confirming the importance of investing in lecturer development for the sustainability of higher education institutions (Gulcimen et al., 2023). These findings provide an empirical basis for formulating strategies to improve lecturer performance. Investment in lecturer competency development provides significant

returns through increased student loyalty and positive recommendations. Institutions that consistently prioritize teaching quality tend to experience sustained growth in student retention rates and referrals from alumni. These findings confirm the importance of building a responsive and sustainable ecosystem for lecturer professional development, ensuring that lecturers are prepared to meet the evolving needs of students and institutions.

The results of testing H5 show a significant effect of student satisfaction on student loyalty (coefficient 0.511;  $p = 0.000$ ), which emphasizes the important role of positive experiences in building long-term commitment to the institution. This finding is consistent with research highlighting three key dimensions of student satisfaction that influence loyalty: physical facilities, teaching quality, and support services. Institutions with high levels of student satisfaction are better able to build loyalty than others. Student satisfaction is directly related to their intention to recommend the institution to others as well as their emotional attachment to the university (Rotana et al., 2021). Institutions with high levels of student satisfaction generally excel in several aspects, including learning infrastructure, academic systems, student services, and career development.

Student satisfaction has a strong and consistent impact on loyalty, confirming the importance of ongoing strategies to improve the student experience. An integrated approach to student satisfaction management significantly increases student loyalty to the institution. In addition, institutions with comprehensive student experience management systems have successfully increased student retention rates over time, demonstrating the close relationship between satisfaction and sustainability of higher education institutions (Hoque et al., 2023). These findings provide an empirical basis for formulating strategies to improve student satisfaction. By prioritizing the improvement of key dimensions of satisfaction, institutions can build stronger loyalty, ensure long-term growth, and create a competitive advantage in the higher education sector.

The results of testing H6 show that Educational Service Quality indirectly affects student loyalty through student satisfaction, with a Sobel test value of 6.478 ( $p = 0.000$ ). This highlights the mediating role of satisfaction in building long-term loyalty. The strategic importance of student satisfaction lies in its ability to link service quality with loyalty, which serves as a significant mediating element in this relationship (Borishade et al., 2021). Institutions that excel in service quality succeed in increasing student satisfaction, which in turn strengthens their loyalty to the institution. Satisfaction acts as an important link in transforming high-quality service experiences into loyal student behavior (Subandi & Hamid, 2021). The three main elements underlying the relationship between service quality, satisfaction, and loyalty include: academic experience, supporting infrastructure, and administrative services.

Other research also confirms the important role of student satisfaction in this dynamic, showing that an integrated approach to managing service quality and satisfaction creates a consistent impact on loyalty (Alsheyadi & Albalushi, 2020; Latif et al., 2021). Universities that prioritize the synergy between service quality and student satisfaction achieve higher levels of loyalty. A comprehensive student experience management system was shown to significantly increase student retention rates over time (Singh et al., 2023). The implications of these findings provide an empirical basis for formulating satisfaction-based loyalty enhancement strategies. Investments in improving service quality yield significant results by increasing student satisfaction and loyalty. These findings emphasize the importance of building a

responsive and sustainable education ecosystem that focuses on the interconnectedness of quality, satisfaction, and loyalty.

The results of testing H7 indicate a significant relationship between lecturer performance and student loyalty through student satisfaction, as evidenced by the Sobel test value of 5.951 ( $p = 0.000$ ). Lecturer performance, which includes dimensions such as work quality, teaching ability, initiative, communication, and punctuality, plays an important role in shaping students' learning experience (Dacholfany et al., 2024). Institutional reputation and a positive academic experience are key factors in building student loyalty. Students who rate their lecturers as competent, communicative, and innovative tend to have higher levels of satisfaction, which ultimately contributes to their loyalty towards the institution (Qazi et al., 2022; Wiranto & Slameto, 2021).

Students' loyalty is reflected not only in their intention to continue their studies at the institution, but also in their pride in the institution and their willingness to recommend it to others. To strengthen this loyalty, universities need to adopt a holistic approach that integrates academic and non-academic aspects, including improving teaching quality through professional training of lecturers, developing physical facilities, and optimizing administrative services (Hidayah et al., 2023). This comprehensive approach will not only increase student satisfaction and loyalty, but also contribute to strengthening the institution's overall reputation. By addressing these interrelated dimensions, universities can create an environment that encourages long-term commitment and pride among students.

## CONCLUSION

This study found that the quality of educational services and lecturer performance at UM Sumatera Barat have a significant influence on student satisfaction, which in turn becomes the main mediating factor in increasing student loyalty to the institution. New findings in this study indicate that student satisfaction has the greatest impact on maintaining student loyalty, confirming that a positive academic experience is key in building long-term relationships between students and institutions.

The implication of this study is the importance of more strategic management of educational services, including innovation in teaching methods, improvement of supporting facilities, and optimization of digital-based administrative services. In addition, professional development of lecturers through continuous training is also a crucial factor in improving the quality of students' academic experience. The benefits of this research can be felt by university management in designing data-based policies to improve service quality and institutional competitiveness. In addition, the results of this study can serve as a reference for other higher education institutions in developing strategies to increase student satisfaction and loyalty to ensure better academic sustainability and growth.

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