The Influence Of Administrative Service Quality And Campus Infrastructure On Student Satisfaction: The Role Of Student Loyalty As A Mediator

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ABSTRACT

Higher education in Indonesia is expanding, but challenges in administrative services and infrastructure affect student satisfaction and loyalty. Politeknik Bumi Akpelni faces significant gaps, with 65% of students dissatisfied with services and 58% with facilities. This study uses primary data from questionnaires and secondary data, with a sample of 499 final-year students selected purposively. Data analysis includes validity and reliability tests, multiple linear regression, F-test, R², t-tests, and Sobel test for mediation analysis on student loyalty. Addressing these issues is crucial to improving student loyalty and the institution's reputation. Administrative Service Quality has a positive and significant effect on Student Loyalty. Campus Infrastructure has a positive and significant effect on Student Loyalty. Administrative Service Quality has a positive and significant effect on Student Satisfaction. Campus Infrastructure does not have an effect on Student Satisfaction. Student Loyalty has a positive and significant effect on Student Satisfaction. There is a mediating effect of Student Loyalty in mediating the relationship between Administrative Service Quality and Student Satisfaction. There is a mediating effect of Student Loyalty in mediating the relationship between Campus Infrastructure and Student Satisfaction.

INTRODUCTION

Higher education in Indonesia continues to experience growth in terms of the number of institutions and students. According to data from the Ministry of Education, Culture, Research, and Technology, there are more than 4,000 higher education institutions across Indonesia, with the number of students exceeding 8 million (Pangkalan Data Pendidikan Tinggi, 2024). However, despite the increase in the number of higher education institutions, the quality of administrative services and infrastructure remains an important issue. Many universities are still unable to

provide optimal services (Buditjahjanto, 2020), This data indicates an urgent need for universities to improve the quality of administrative services and infrastructure in order to maintain their competitiveness and reputation amidst the increasing number of students.

The changing student demographics and increased competition among educational institutions make service quality one of the key indicators of success and attractiveness for educational institutions. Responsive administrative services and modern infrastructure have now become an inseparable part of the student experience on campus. Universities that fail to meet students' expectations in these areas risk losing competitiveness and diminishing student loyalty to their institutions (Susetyo et al., 2022). This issue is becoming even more relevant in the context of the demands of Industry 4.0, which pushes educational institutions to continuously innovate in providing the best services.

Student satisfaction can be defined as the condition in which students are satisfied with the educational experience they receive at university, both academically and non-academically. Student satisfaction is not only related to academic achievements but also to the quality of administrative services, campus facilities, and easy access to various services provided by the campus. Satisfaction can be measured by comparing students' expectations with the reality they experience (Wijana & Dwi Rusiawati, 2021). A case study at Universitas Mercu Buana Yogyakarta found high satisfaction levels in aspects such as tangibles, reliability, responsiveness, assurance, and empathy, but moderate satisfaction in the area of information systems (Udjang & Subarjo, 2019). Meanwhile, a study at Campus X Jakarta revealed that educational services need improvement, as student satisfaction only reached a scale of 3.0–3.1 out of 4 (Rustanta & Setyawati, 2019). Ultimately, student satisfaction can influence their loyalty to the educational institution.

There are several factors that influence student satisfaction, one of which is the quality of the administrative services received. Fast, accurate, and transparent services make students feel valued and supported during their education (Abidin et al., 2020). In addition, campus infrastructure such as classrooms, laboratories, libraries, and other supporting facilities also significantly affect the student experience (Bunyamin et al., 2021). Student loyalty to the campus is often influenced by how well the institution meets their needs in both of these aspects (Zulkarnaini & Fatmasari, 2021a), making loyalty a mediating variable between the quality of administrative services and student satisfaction.

Campus administrative services encompass various aspects, from course registration, financial administration, to academic services such as handling transcripts and diplomas. These services must be responsive, easily accessible, and clear in terms of procedures (Tari et al., 2022). Students expect administrative services that are not only efficient but also provide solutions to various problems they encounter during their studies. High-quality administrative services create a sense of security and comfort for students in managing their administrative needs (Yuliana et al., 2021).

Good administrative service quality is the foundation for creating student satisfaction. When students feel facilitated and supported by the university's administrative system, they can focus more on learning and personal development (Dunggio, 2023). On the other hand, if the administrative services are poor, students may feel frustrated and disappointed (Risti, 2019), 2019). Therefore, improving the quality of administrative services is a priority for every educational institution to build a better relationship with students.

Efficient and friendly administrative services will speed up the resolution of students' needs, reduce stress levels, and improve the overall campus experience. When students receive responsive and professional services, they feel more valued and recognized as an important part of the campus community (Sukatin et al., 2022). On the other hand, poor administrative services can lead to frustration and dissatisfaction, which negatively impacts their learning experience (Hartati et al., 2023). Therefore, the quality of administrative services directly correlates with student satisfaction.

Previous studies have shown that there is a significant relationship between administrative service quality and student satisfaction. Research conducted by Abdullatif (2021) stated that service quality affects customer satisfaction because good service creates positive experiences, meets expectations, and reduces dissatisfaction. When customers feel valued and receive fast, accurate, and professional services, it increases their satisfaction with the products or services provided. Research by Murtiningsih et al (2020) shows that service quality has a positive impact on student loyalty. Research by Nurlaily et al (2022) indicated that the quality of administrative services has a positive and significant impact on student satisfaction. However, service quality does not directly influence student loyalty. Muzakki dan Tarigan (2020) explain that their research results show that administrative service quality affects both student satisfaction and loyalty. Uswah et al (2022) also revealed that service quality affects customer satisfaction because good service meets or exceeds customer expectations, creating a positive experience that increases satisfaction. When the service provided is consistent, reliable, and meets customers' needs, they are likely to feel valued and satisfied with the organization. However, research conducted by Eka dan Putri (2019) showed that if the service provided does not meet the students' specific expectations or needs, they may not feel satisfied even if the service is objectively considered good. Campus infrastructure includes all the physical facilities that support the teaching-learning process and student life on campus. This includes classrooms, laboratories, libraries, sports facilities, and student dormitories. Adequate and modern infrastructure not only increases comfort but also helps students explore their academic and non-academic potential. Therefore, good infrastructure plays a key role in creating a productive learning environment.

Previous studies have shown a positive correlation between the quality of campus infrastructure and student satisfaction. Research by Shahbana et al (2021) found that facilities and infrastructure have a significant effect on student satisfaction, with some sub-variables such as responsibility and cohesion having the greatest impact. The completeness of physical facilities at higher education institutions plays an important role in creating an optimal learning environment and supporting the achievement of educational goals. However, the results of research by Abdullatif (2021) show that academic facilities at Universitas Nuku do not affect student satisfaction, with a t-statistic value smaller than the t-table and a significance value above 0.05. This finding is consistent with previous research indicating that during the pandemic era, physical facilities like classrooms and physical books became less relevant, while online learning resources became more dominant. Research conducted by Afsari (2021) showed that facilities and infrastructure affect good university governance but do not have a direct impact on student satisfaction. Therefore, infrastructure management needs to be carried out by applying the principles of good university governance to enhance the student experience and satisfaction. However, there is a gap in understanding which specific infrastructure has the most significant impact on student satisfaction, which requires further research.

Student loyalty refers to students' long-term commitment to the educational institution where they are studying. This loyalty is characterized by continued satisfaction, involvement in campus activities, and the willingness to recommend the institution to others. Loyal students tend to remain connected to their alma mater even after graduation and contribute to the institution's positive reputation. Student satisfaction has a strong relationship with loyalty. When students are satisfied with the services and facilities provided by the campus, they are likely to be more loyal to the institution. Satisfaction creates an emotional attachment that encourages students to continue contributing to the campus, both during their studies and after graduation. On the other hand, dissatisfaction can lead to students transferring to another institution and negatively affecting the institution's reputation (Zulkarnaini & Fatmasari, 2021b).

Research by (Abdullatif, 2021; Ismanova, 2019; Windasari et al., 2021; Yurindera, 2021), Ismanova (2019), Windasari et al. (2021), and Yurindera (2021) indicates that student satisfaction influences student loyalty. However, research by (Bakrie et al., 2019; Muzakki & Tarigan, 2020)

explains that student satisfaction does not affect student loyalty. Student loyalty acts as a mediating variable that bridges the relationship between administrative service quality and campus infrastructure with student satisfaction. When administrative services and campus infrastructure are of high quality, students feel more satisfied, which ultimately enhances their loyalty to the institution. This loyalty becomes an indicator of the long-term success of an educational institution in creating a positive student experience (Naulanda, 2022). Research by (Naulanda, 2022; Pintauli & Girsang, 2024; Uswah et al., 2022) explains that student satisfaction mediates the relationship between service quality and student loyalty. However, research by Abdullatif (2021) explains that student satisfaction does not mediate the relationship between service quality and student loyalty. Data related to the quality of administrative services and infrastructure at Politeknik Bumi Akpelni shows a gap between students' expectations and the reality on the ground. According to an internal survey conducted in 2024, 65% of students expressed dissatisfaction with slow and unresponsive administrative services. Additionally, 58% of students highlighted the lack of supporting facilities, such as poorly maintained laboratories and limited internet access. This data reflects that, despite the potential of this vocational institution, there are significant shortcomings that need to be addressed.

The gap in phenomena at Politeknik Bumi Akpelni is clearly seen when comparing students' expectations of the quality of administrative services and infrastructure with the reality they face. Students today demand faster and more efficient administrative services and adequate infrastructure to support their academic and non-academic activities. However, this polytechnic is still facing challenges in meeting those expectations. This can impact student loyalty, as those who are dissatisfied with the campus conditions may choose to transfer to other institutions or provide negative perceptions to prospective new students. If this situation is not addressed promptly, the reputation of the polytechnic could decline, ultimately affecting the institution's sustainability in the long term.

LITERATURE REVIEW

Student Satisfaction

Student satisfaction is the result of an evaluation of educational services based on their experiences. It reflects how well the students' expectations are met by the educational institution and serves as an indicator of the quality of administrative services. Satisfied students are more likely to provide positive recommendations, continue their studies, and contribute to the institution's reputation, which can potentially generate long-term benefits for the institution (Barusman, 2021). The indicators of student satisfaction include the quality of teaching, academic services, campus facilities, extracurricular activities, administrative services, opportunities for communication with lecturers, career placement services, and empathy and care. These factors collectively contribute to the overall student experience, ensuring their academic and personal needs are effectively met while fostering a supportive learning environment (Aisyah et al, 2021).

The Quality of Administrative Services

The quality of administrative services reflects service excellence, encompassing reliability, empathy, responsiveness, and security assurance. Reliability signifies the consistency of services provided in line with user expectations, while empathy highlights the staff's attention to individual needs. Responsiveness refers to the speed and readiness to assist, and security assurance ensures the confidentiality of user information. The combination of these factors creates a positive experience that fosters user satisfaction and trust in the organization (Jayengsari et al., 2021). Indicators of Administrative Service Quality include Reliability, Responsiveness, Assurance, Empathy, and Tangibles (Tjiptono dan Diana,2022).

Campus Infrastructure

Campus infrastructure includes physical systems that support both academic and non-academic operations, such as lecture halls, laboratories, libraries, dormitories, as well as transportation, irrigation, and drainage facilities. Supportive amenities like sports areas, cafeterias, and recreational spaces also contribute to students' well-being. Adequate infrastructure creates a comfortable learning environment, improves operational efficiency, and reflects the institution's commitment to quality education (Resmisari & Mulki, 2020). The indicators are physical condition of buildings, supporting facilities, basic services, information technology, extracurricular activity spaces, accessibility, administrative service quality, student engagement (Universitas Medan Area, 2020).

Student Loyalty

Student loyalty to an educational institution refers to a strong, positive commitment demonstrated through active involvement in both academic and non-academic activities. Loyal students are responsible, dedicated to achieving success, and work to promote their institution's reputation. Their loyalty is driven by a deep emotional connection rather than a transactional relationship, fostering long-term commitment to the institution (Zulkarnaini & Fatmasari, 2021b). The three indicators of loyalty according to Kotler dan Keller (2020) are repurchase loyalty, resistance to negative influences dan referral to others.

METHODS

Data Types and Sources

The type of data used is primary data, which is obtained directly from respondents through a questionnaire distributed to students at Politeknik Bumi Akpelni Semarang. The data sources consist of:

1. Primary Data: Data obtained directly from the respondents without intermediaries (Sugiyono, 2023).
2. Secondary Data: Data obtained from other sources, such as documents or other people (Sugiyono, 2023).

Data Analysis

1. Descriptive Analysis: Describes the collected data without making generalizations (Ghozali, 2021).
2. Instrument Testing: Includes validity and reliability tests to ensure the quality of the questionnaire used.
3. Validity Test: Using Exploratory Factor Analysis (EFA) to test the construct validity.
4. Reliability Test: Using Cronbach Alpha to measure the consistency of the questionnaire. A Cronbach Alpha value > 0.60 is considered reliable (Ghozali, 2021).
5. Multiple Linear Regression : Used to analyze the influence of several independent variables on one dependent variable, with the regression equation as follows:

$$Z = \alpha + \beta1. X1 + \beta2. X2 + e$$

$$Y = \alpha + \beta1. X1 + \beta2. X2 + \beta3. Z + e$$

Y = Student Satisfaction
X1 = Quality of Administrative Services
X2 = Campus Infrastructure
Z = Student Loyalty (mediating variable).

Model Testing
1. F-Test: Determines whether the independent variables simultaneously influence the dependent variable (Ghozali, 2021). If the significance value < 0.05, the hypothesis is accepted.
2. Coefficient of Determination (R^2): Measures the extent to which the independent variables affect the dependent variable (Ghozali, 2021).
a. Hypothesis Testing (t-Test)
   Used to test the individual influence of the independent variables on the dependent variable. If the significance value < 0.05, the hypothesis is accepted (Ghozali, 2021).
b. Mediation Test (Sobel Test)
   Used to test the indirect effect through the mediating variable (Student Loyalty). The test is conducted using the Sobel formula, and if the t-value > 1.96, it indicates a mediating effect.

RESULTS

Instrumen Validity Test
Table 1 Result Instrumen Validity Test

Variabel	Item	Factor Loading	Criteria Factor Loading	Description
Administrative Service Quality (X1)	X1.1	0,816	> 0,4	Valid
	X1.2	0,938	> 0,4	Valid
	X1.3	0,505	> 0,4	Valid
	X1.4	0,948	> 0,4	Valid
Campus Infrastructure (X2)	X2.1	0,585	> 0,4	Valid
	X2.2	0,702	> 0,4	Valid
	X2.3	0,818	> 0,4	Valid
	X2.4	0,836	> 0,4	Valid
	X2.5	0,834	> 0,4	Valid
	X2.6	0,695	> 0,4	Valid
	X2.7	0,528	> 0,4	Valid
Student Loyalty (Y1)	Y1.1	0,777	> 0,4	Valid
	Y1.2	0,604	> 0,4	Valid
	Y1.3	0,883	> 0,4	Valid
Student Satisfaction (Y2)	Y.1	0,983	> 0,4	Valid
	Y.2	0,420	> 0,4	Valid
	Y.3	0,967	> 0,4	Valid
	Y.4	0,975	> 0,4	Valid
	Y.5	0,974	> 0,4	Valid
	Y.6	0,906	> 0,4	Valid
	Y.7	0,414	> 0,4	Valid

Source : Primary data processed (2024)

From Table 1, it can be seen that all indicators for each variable have a Loading Factor value greater than the required threshold of > 0.4. Therefore, it can be concluded that all indicators of the four variables Administrative Service Quality, Campus Infrastructure, Student Loyalty, and Student Satisfaction are valid.

Instrumen Reliability Test
Tabel 2 Instrumen Reliability Test

Variable	N of Items	Cronbach's Alpha	Criteria	Description
Administrative Service	4 Item	0,820		Reliabel
Campus Infrastructure	7 Item	0,842	> 0,60	Reliabel
Student Loyalty	3 Item	0,636		Reliabel
Student Satisfaction	7 Item	0,913		Reliabel

Source : Primary data processed (2024)

From the summary of Table 2 above, it is evident that the instrument used as the research measurement tool is valid. The reliability test results indicate that the α value for each variable is greater than > 0.60, leading to the conclusion that the variables Administrative Service Quality, Campus Infrastructure, Student Loyalty, and Student Satisfaction are proven to be reliable and dependable as tools for collecting research data.

Multiple Linear Regression Analysis
Tabel 3 Multiple Linear Regression Analysis– Equation Model 1

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.469	.190		2.475	.014
Administrative Service	.439	.052	.497	8.434	.000
Campus Infrastructure	.455	.062	.433	7.341	.000

a. Dependent Variable: loyalitas mahasiswa
Source : Primary data processed (2024)

Based on the data processing results shown in Table 3 in the Unstandardized Coefficients column B, the first equation model is obtained as follows:

$$Y1 = a + 0{,}439.X1 + 0{,}455.X2 + e$$

1. The regression coefficient ($\beta1$) shows a positive value of 0.439, meaning that the Quality of Administrative Services (X1) has a positive effect on Student Loyalty (Y1). In other words, when the Quality of Administrative Services improves, it can enhance Student Loyalty.
2. The regression coefficient ($\beta2$) shows a positive value of 0.455, meaning that Campus Infrastructure (X2) has a positive effect on Student Loyalty (Y1). In other words, when Campus Infrastructure improves, it can enhance Student Loyalty.

Tabel 4 Multiple Linear Regression Analysis– Equation Model 2

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.155	.118		-1.313	.191
Quality of Service Admin.	.526	.039	.543	13.631	.000
Campus Infrastructure	.045	.044	.039	1.030	.305
student loyalty	.478	.050	.436	9.524	.000

a. Dependent Variable: Student Satisfaction
Source : Primary data processed (2024)

Based on the data processing results shown in Table 4, in the Unstandardized Coefficients column section B, the second regression equation model is obtained as follows:

Y2 = a + 0,526.X1 + 0,045.X2 + 0,478.Y1 + e

From the equation above, it can be explained:

a. The regression coefficient (β3) shows a positive value of 0.574, which means that Administrative Service Quality (X1) has a positive impact on Student Satisfaction (Y2). In other words, when the quality of administrative services improves, it can increase student satisfaction.

b. The regression coefficient (β4) shows a positive value of 0.146, which means that Campus Infrastructure (X2) has a positive impact on Student Satisfaction (Y2). In other words, when the campus infrastructure improves, it can enhance student satisfaction.

c. The regression coefficient (β5) shows a positive value of 1.561, which means that Student Loyalty (Y1) has a positive impact on Student Satisfaction (Y2). In other words, when student loyalty increases, it can enhance student satisfaction.

Model Test
Simultaneous Hypothesis Testing (F Test)

The F-statistic test determines whether all independent variables included in the model have a joint effect on the dependent variable. The results of the F-test for model equation 1 and model equation 2 in this study can be seen in the following table:

Tabel 5 Results of the F-test or Simultaneous Test – Model Equation 1

ANOVAª

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	259.636	2	129.818	179.989	.000ᵇ
Residual	106.024	147	.721		
Total	365.660	149			

a. Dependent Variable: Loyalitas Mahasiswa
b. Predictors: (Constant), Infrastruktur Kampus, Kualitas Layanan Administrasi
Source : Primary data processed (2024)

In table 5 above, it can be seen that the significance value is 0.000. Therefore, it can be concluded that the significance value of 0.000, which is smaller than the significance level of α < 0.05, means that the variables of Administrative Service Quality (X1) and Campus Infrastructure (X2) collectively have an effect on Student Loyalty (Y1).

Tabel 6 Results Of The F-Test Or Simultaneous Test – Model Equation 2

ANOVAª

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	44.857	3	14.952	536.030	.000ᵇ
Residual	4.073	146	.028		
Total	48.930	149			

a. Dependent Variable: Kepuasan Mahasiswa
b. Predictors: (Constant), loyalitas mahasiswa, Infrastruktur Kampus, Kualitas Layanan Administrasi
Source : Primary data processed (2024)

In table 6 above, it can be seen that the significance value is 0.000. Therefore, it can be concluded that the significance value of 0.000, which is smaller than the significance level of α < 0.05, means that the variables of Administrative Service Quality (X1), Campus Infrastructure (X2), and Student Loyalty (Y1) collectively have an effect on Student Satisfaction (Y2).

Coefficient of Determination (R²)
The coefficient of determination essentially measures how well the model explains the variation in the dependent variable. The coefficient of determination in this study uses the Adjusted R Square value. Based on the calculations using the SPSS program, the coefficient of determination for model equation 1 and model equation 2 is presented in Table 7 below:

Tabel 7 Coefficient Of Determination (R²)- Model Equation 1
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.843^a	.710	.706	.84927

a. Predictors: (Constant), Infrastruktur Kampus, Kualitas Layanan Administrasi

b. Dependent Variable: Loyalitas Mahasiswa

Source : Primary data processed (2024)

The calculation of the coefficient of determination can be seen through the Adjusted R Square value of 0.706 (70.6%), which indicates that 70.6% of the variation in Student Loyalty (Y1) can be explained by Administrative Service Quality (X1) and Campus Infrastructure (X2). The remaining 29.4% is explained by other variables outside of the research model.

Tabel 8 Coefficient Of Determination (R²)- Model Equation 2
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.957^a	.917	.915	0.16702

a. Predictors: (Constant), Loyalitas Mahasiswa, Kualitas Layanan Administrasi, Infrastruktur Kampus

b. Dependent Variable: Kepuasan Mahasiswa

Source : Primary data processed (2024)

The calculation of the coefficient of determination can be seen through the Adjusted R Square value of 0.915 (91.5%), which indicates that 91.5% of the variation in Student Satisfaction (Y2) can be explained by Administrative Service Quality (X1), Campus Infrastructure (X2), and Student Loyalty (Y1). The remaining 8.5% is explained by other variables outside of the research model.

Partial Hypothesis Testing (t-Test)
This test is used to determine the analysis of the influence of Administrative Service Quality (X1), Campus Infrastructure (X2), and Student Loyalty (Y1) on Student Satisfaction (Y2), as indicated by a significance value of less than < 0.05. The t-test results are presented in Table 9 below:

Tabel 9 The T-Test Or Partial Test Results - Model Equation 1

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.469	.190		2.475	.014
Quality of Service Admin	.439	.052	.497	8.434	.000
Campus Infrastructure	.455	.062	.433	7.341	.000

a. Dependent Variable: loyalitas mahasiswa
Source : Primary data processed (2024)

Tabel 10 The T-Test Or Partial Test Results - Model Equation 2

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.155	.118		-1.313	.191
Quality of Service Admin.	.526	.039	.543	13.631	.000
Campus Infrastructure	.045	.044	.039	1.030	.305
student loyalty	.478	.050	.436	9.524	.000

a. Dependent Variable: Kepuasan Mahasiswa
Source : Primary data processed (2024)

Based on Table 9 for the first model equation and Table 10 for the second model equation, the results show:

1. The variable X1 (Quality of Administrative Services) shows a significance value of 0.000 < 0.05, which proves that H1 is accepted. This means the variable Quality of Administrative Services influences the Student Loyalty variable.
2. The variable X2 (Campus Infrastructure) shows a significance value of 0.000 < 0.05, which proves that H2 is accepted. This means the variable Campus Infrastructure influences the Student Loyalty variable.
3. The variable X1 (Quality of Administrative Services) shows a significance value of 0.000 < 0.05, which proves that H3 is accepted. This means the variable Quality of Administrative Services influences the Student Satisfaction variable.
4. The variable X2 (Campus Infrastructure) shows a significance value of 0.305 > 0.05, which proves that H4 is rejected. This means the variable Campus Infrastructure does not influence the Student Satisfaction variable.

5. The variable Y1 (Student Loyalty) shows a significance value of 0.000 < 0.05, which proves that H5 is accepted. This means the variable Student Loyalty influences the Student Satisfaction variable.

Sobel Test (Intervening)
The Mediating Effect of Student Loyalty in Mediating the Quality of Administrative Services on Student Satisfaction
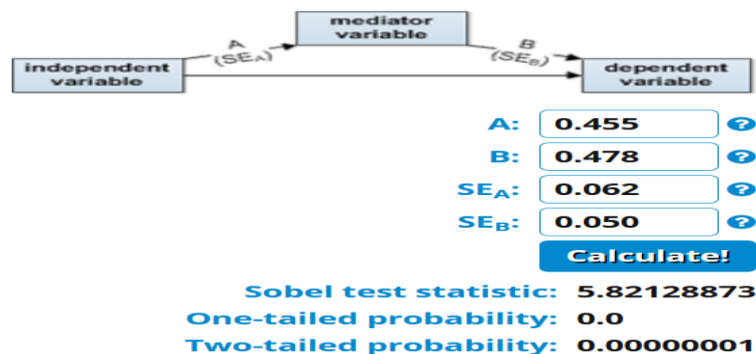
Figure 1 Result Calculator of Sobel Test
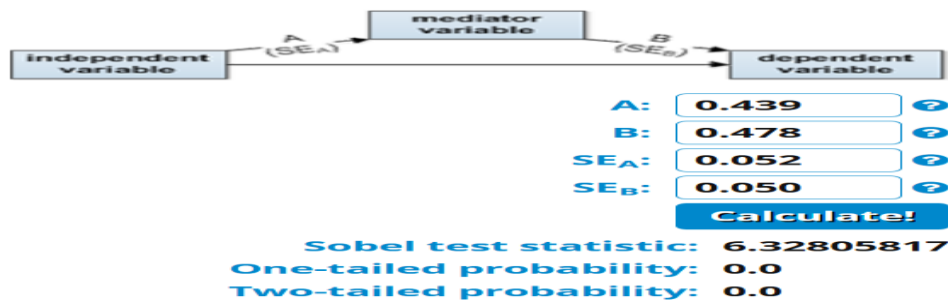
Based on the Sobel calculator, the Sobel value is 6.3280, which is greater than the critical ratio value of 1.96. Thus, it can be proven that H6 is accepted. This means it can be concluded that Student Loyalty has a mediating effect in mediating the Quality of Administrative Services on Student Satisfaction.

The Mediating Effect Of Student Loyalty In Mediating Campus Infrastructure On Student Satisfaction

Figure 2 Result Calculator of Sobel Test

Based on the Sobel calculator, the Sobel value is 5.8212, which is greater than the critical ratio value of 1.96. Therefore, it can be proven that H7 is accepted. This means it can be concluded that there is a mediating effect of Student Loyalty in mediating Campus Infrastructure on Student Satisfaction..

DISCUSSION

The Influence Of Campus Infrastructure On Student Loyalty

The study shows that the quality of administrative services has a positive impact on student loyalty, with a significant level of 0.000 < 0.05 and a positive regression coefficient of 0.439. This suggests that as the quality of administrative services improves, so does student loyalty. Quality administrative services in higher education play a crucial role in creating positive student experiences, which include aspects such as registration, academic management, and information services. When managed well, students feel supported, leading to increased satisfaction and loyalty to the institution. Conversely, poor administrative services can lead to

frustration and hinder students' focus on their studies. Several studies, including those by Abdullatif (2021), Muzakki and Tarigan (2020), Naulanda (2022), and Murtiningsih et al. (2020), confirm that good administrative services lead to higher student loyalty, as they enhance satisfaction, trust, and emotional attachment to the institution. Satisfied students are more likely to recommend the university, participate in campus activities, and contribute to its positive reputation. Therefore, improving administrative service quality is essential for maintaining long-term student loyalty and institutional sustainability.

The Influence Of Administrative Service Quality On Student Satisfaction

The research shows that campus infrastructure has a positive impact on student loyalty, as indicated by a significance level of 0.000 < 0.05 and a positive regression coefficient of 0.455. This suggests that better campus infrastructure leads to higher student loyalty. Campus infrastructure includes physical facilities like classrooms, laboratories, libraries, dormitories, and recreational areas, which contribute to a comfortable and supportive learning environment. Modern, safe, and adequate facilities enhance students' satisfaction with their educational experience, fostering strong emotional attachment to the institution and increasing loyalty. Conversely, inadequate infrastructure can cause dissatisfaction, reduce student loyalty, and increase the likelihood of students transferring to other institutions. Studies have shown that well-maintained infrastructure, such as modern classrooms, complete laboratories, and comfortable libraries, supports academic success and creates a positive social environment, ultimately contributing to higher student engagement and long-term loyalty to the university. Thus, investment in campus infrastructure is a key strategy for improving student experiences and strengthening institutional reputation.

The Influence Of Campus Infrastructure On Student Satisfaction

The study found that campus infrastructure does not significantly affect student satisfaction, as indicated by a significance level of 0.305 (greater than 0.05) and a positive regression coefficient of 0.045. This suggests that changes in campus infrastructure do not impact student satisfaction. Despite the importance of campus facilities, such as classrooms, laboratories, libraries, and recreational areas, other factors, such as teaching quality, relationships with faculty and peers, and curriculum relevance to career goals, play a more significant role in shaping student satisfaction. Students may tolerate infrastructure limitations if they perceive other aspects, like affordable tuition, scholarships, or a supportive social environment, as more important to their academic and professional success (Abdullatif, 2021; Shahbana et al., 2021).

The Influence Of Student Loyalty On Student Satisfaction

The research shows that student loyalty has a positive influence on student satisfaction, as indicated by a significance level of 0.000 < 0.05 and a positive regression coefficient of 0.478. This suggests that the better the student loyalty, the higher the student satisfaction. Student loyalty is defined as the emotional attachment and commitment students have towards their educational institution.

Loyal students tend to feel proud, trustful, and devoted to their campus, which influences their overall satisfaction with services, including teaching quality, facilities, and academic support. Loyal students are more likely to engage in campus activities, recommend the institution, and support it as alumni, ultimately creating a positive learning environment. Furthermore, loyalty strengthens satisfaction as students perceive their institution as supporting their academic and personal development. Therefore, student loyalty is a key indicator of the success of higher education institutions in meeting student needs and expectations.

The Influence Of Student Loyalty In Mediating The Effect Of Administrative Service Quality On Student Satisfaction Variable

The research findings indicate that student loyalty moderates the effect of administrative service quality on student satisfaction. This is evident from the value of 6.3280, which is greater than the critical ratio value of 1.96, suggesting that better student loyalty enhances the quality of administrative services in improving student satisfaction. According to Naulanda (2022), student loyalty mediates the effect of administrative service quality on student satisfaction by reflecting the emotional bond and attachment formed through positive experiences with the services provided. Good administrative service quality, such as responsiveness, reliability, and ease of access, creates positive perceptions among students, which not only directly increases their satisfaction but also strengthens their loyalty to the institution. When students are satisfied with administrative services, they are more likely to exhibit loyal behaviors, such as continuing their studies at the institution, recommending it to others, and trusting the services offered, further enhancing their satisfaction. Therefore, loyalty acts as a bridge that strengthens and clarifies the relationship between administrative service quality and student satisfaction (Shahbana et al., 2021).The Influence of Student Loyalty in Mediating the Effect of Campus Infrastructure on Student Satisfaction.

The research indicates that student loyalty moderates the effect of campus infrastructure on student satisfaction, as shown by a value of 5.8212, which is higher than the critical ratio of 1.96. This suggests that the better the student loyalty, the better the campus infrastructure is in enhancing student satisfaction. According to Naulanda (2022), student loyalty mediates the impact of campus infrastructure on student satisfaction because good infrastructure not only provides physical comfort but also fosters emotional attachment to the institution. Adequate infrastructure, such as comfortable study spaces, sports facilities, well-equipped laboratories, and good technology access, creates a positive learning experience, boosting students' confidence in the institution and strengthening their loyalty. Loyal students are more likely to appreciate their overall learning experience, even if some aspects of the infrastructure are not perfect. This loyalty ultimately contributes to higher satisfaction, as students feel the institution supports their academic and personal needs comprehensively. Therefore, student loyalty plays a crucial role in bridging the relationship between campus infrastructure and student satisfaction.

CONCLUSION

Administrative Service Quality has a positive and significant effect on Student Loyalty. Campus Infrastructure has a positive and significant effect on Student Loyalty. Administrative Service Quality has a positive and significant effect on Student Satisfaction.. Campus Infrastructure does not have an effect on Student Satisfaction. Student Loyalty has a positive and significant effect on Student Satisfaction. There is a mediating effect of Student Loyalty in mediating the relationship between Administrative Service Quality and Student Satisfaction. There is a mediating effect of Student Loyalty in mediating the relationship between Campus Infrastructure and Student Satisfaction.

SUGGESTION

Based on the research results, the author provides several suggestions to contribute to the progress of the organization. First, future researchers should ensure that respondents are aware that their responses will remain confidential and will not affect their evaluation or identity. This can help reduce social pressure that may lead to biased answers. Additionally, researchers should consider adding other variables, such as Promotion, Location, Environment, Pressure, Service Quality, etc., to further explore the factors influencing and mediating Student Satisfaction. Furthermore, future researchers are encouraged to conduct studies in other

regions to determine whether the effects of Administrative Service Quality, Campus Infrastructure, and Student Loyalty on Student Satisfaction are consistent with the results of this study. For Politeknik Bumi Akpelni Semarang, it is recommended to maintain and enhance Student Satisfaction while supporting Cadets in improving Administrative Service Quality, Campus Infrastructure, and Student Loyalty to maximize the company's revenue.

REFERENCES

Abdullatif, R. (2021). Pengaruh Sarana Prasarana Akademik, Kualitas Mengajar Dosen Dan Kualitas Layanan Administrasi Terhadap Loyalitas Mahasiswa Dengan Kepuasan Mahasiswa Sebagai Variabel Intervening Pada Universitas Nuku. *Jurnal Akrab Juar*, *6*(5).

Abidin, N., Ary Sandy, G., & Hasan, H. (2020). Analisis Kualitas Layanan Pendidikan Terhadap Tingkat Kepuasan Mahasiswa Pada Perguruan Tinggi Swasta Di Kabupaten Manokwari Papua Barat Tahun 2019. *Pedagogik: Jurnal Pendidikan*, *15*(1), 27–39. https://doi.org/10.33084/pedagogik.v15i1.1281

Aisyah, S., Kurniati, K., & Suryani, H. (2021). Dimensi Tingkat Kepuasan Mahasiswa Terhadap Fasilitas dan Layanan Akademik Jurusan PKK FT UNM. *Seminar Nasional LP2M UNM*, 1013–1026.

Bakrie, M., Sujanto, B., & Rugaiyah, R. (2019). The Influence of Service Quality, Institutional Reputation, Students' Satisfaction on Students' Loyalty in Higher Education Institution. *International Journal for Educational and Vocational Studies*, *1*(5), 379–391. https://doi.org/10.29103/ijevs.v1i5.1615

Barusman, A. R. (2021). *Student Satisfaction Model*. CV Adanu Abimata.

Buditjahjanto, I. G. P. A. (2020). Analisis Layanan Sistem Informasi Akademik Perguruan Tinggi Berbasiskan Fuzzy Service Quality. *Jurnal Nasional Teknik Elektro Dan Teknologi Informasi*, *9*(3), 225–232. https://doi.org/10.22146/.v9i3.264

Bunyamin, N., Supriyati Sardiyarso, E., & Tundono, S. (2021). Perilaku Mahasiswa Dalam Memanfaatkan Ruang Kelas, Kantin Dan Perpustakaan Pada Kampus Universitas Trilogi Jakarta Selatan Student Behavior in Utilizing Class Room, Canteen and Library in Campus University of Trilogi, South Jakarta. *Prosiding Seminar Intelektual Mud*, 86–91. https://somanymany.wordpress.com/2014/05/08/des

Dunggio, T. (2023). Hubungan Antara Sarana Prasarana, Kualitas Pelayanan dan Kepuasan Mahasiswa: Perspektif dan Implikasinya. *Jurnal Bisnisman : Riset Bisnis Dan Manajemen*, *4*(3), 92–100. https://doi.org/10.52005/bisnisman.v4i3.128

Eka, D., & Putri, Y. H. (2019). Pengaruh Tingkat Pelayanan, Citra Kampus, Dan Kepuasan Terhadap Motivasi Mahasiswa: Studi Kasus Mahasiswa Fakultas Ekonomi Universitas Sriwijaya. *Jurnal Manajemen Dan Bisnis Sriwijaya*, *17*(2).

Ghozali, I. (2021). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 26* (10th ed.). Penerbit Universitas Diponegoro.

Hartati, R., Ningtyas, A. A., Sudiyono, R. N., Tetap, D., Insan, U., Indonesia, P., & Tinggi, P. (2023). Keyword : Kepuasan, pelayanan, administrasi, akademik. *JOCE IP*, *17*(2), 29–35.

Ismanova, D. (2019). Students' loyalty in higher education: The mediating effect of satisfaction, trust, commitment on student loyalty to Alma Mater. *Management Science Letters*, *9*(8), 1161–1168. https://doi.org/10.5267/j.msl.2019.4.024

Jayengsari, R., Yunita, R., & Maloka, S. (2021). Pengaruh Kualitas Pelayanan Customer Service Terhadap Kepuasan Nasabah Pada Bank Bjb Kcp Cipanas. *Ar-Rihlah : Jurnal Keuangan Dan Perbankan Syariah*, *1*(1), 11. https://doi.org/10.35194/arps.v1i1.1291

Kotler, P., & Keller, K. L. (2020). *Manajemen Pemasaran*. Erlangga.

Luthfiah, N. I. (2023). Teknologi Rfid Di Upt Perpustakaan ITB. *Jurnal Multidisiplin Kapalama*, *2*(4), 240–252.

Murtiningsih, D., Usino, W., & Chandra, J. C. (2020). *The Influence of Customer Relationship Management Influencing Factors on Student Loyalty using Student Satisfaction as Mediation Variable*. *Icib 2019*, 622–627. https://doi.org/10.5220/0008434506220627

Murtiningsih, D., & Wahyudi, W. (2021). Analisis Pengaruh Kualitas Pelayanan, Kepercayaan, Perceived Value dan Kepuasan Mahasiswa terhadap Loyalitas Mahasiswa. *Judicious*, *2*(2), 138–145. https://doi.org/10.37010/jdc.v2i2.462

Muzakki, M. A., & Tarigan, Z. J. H. (2020). The Analysis of the Effect of Academic Service Quality on Student Loyalty Through Student Satisfaction and Organizational Performance. *Petra International Journal of Business Studies*, *3*(1), 47–53. https://doi.org/10.9744/ijbs.3.1.47-53

Naulanda, N. (2022). Quality of Administrative Services and Campus Infrastructure on Student Satisfaction with Student Loyalty as Intervening Variables at The Faculty of Administrative Science Universitas Brawijaya. *WACANA, Jurnal Sosial Dan Humaniora*, *25*(01), 38–46. https://doi.org/10.21776/ub.wacana.2022.025.01.04

Nazilah, Ilhamsyah, & Rahmayuda, S. (2020). *Rancang Bangun Sistem Informasi Manajemen Pengukuran Kualitas Layanan Akademik Menggunakan Model Servqual*. *08*(01).

Nurlaily, Alfaruqi, H., & Susilawati, T. (2022). Satisfaction and Loyalty Using Structural Equation. *Jurnal Signal*, *10*(1), 1–10.

Pangkalan Data Pendidikan Tinggi. (2024). *Perguruan Tinggi di Indonesia*. Pangkalan Data Pendidikan Tinggi. https://pddikti.kemdikbud.go.id/perguruan-tinggi

Pintauli, R. F., & Girsang, L. I. (2024). Strategic Integration: Assessing the Influence of Academic Information Systems on Student Loyalty and Campus Facilities. *Jurnal Ilmiah Mahasiswa Perbankan Syariah (JIMPA)*, *4*(1), 13–26. https://doi.org/10.36908/jimpa.v4i1.328

Rahayu, I. A. T., & Hidayati, L. (2021). Kepuasan Pengguna (Mahasiswa) Terhadap Dosen Di Prodi S1 Pendidikan Tata Busana Universitas Negeri Surabaya. *Journal of Vocational and Technical Education (JVTE)*, *3*(2).

Resmisari, H., & Mulki, G. Z. (2020). Pengembangan Infrastruktur Kawasan Kampus Universitas Tanjungpura. *Pengembangan Infrastruktur Kawasan Kampus Universitas Tanjungpura*, *17*, 1–8. https://jurnal.untan.ac.id/index.php/jtsuntan/article/view/24570

Risti, A. S. (2019). *Presepsi Mahasiswa Prodi Pendidikan Teknik Elektro Angkatan 2018 Terhadap Pelayanan Administrasi Jurusan Teknik Elektro Universitas Negeri Padang*. Universitas Negeri Padang.

Rustanta, A., & Setyawati, R. K. (2019). Hubungan Layanan Komunikasi Terhadap Kepuasan Mahasiswa Studi Kasus: Kampus X, JAKARTA. *Jurnal Ilmu Komunikasi Dan Bisn*, *4*(2), 120–139.

Shahbana, E. B., Timan, A., & Sultoni, S. (2021). Pengaruh Mutu Layanan Akademik, Sarana dan Prasarana Terhadap Kepuasan Mahasiswa Pascasarjana Terintegrasi di Fakultas Program Magister Universitas Negeri Malang. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, *6*(5), 772. https://doi.org/10.17977/jptpp.v6i5.14847

Sugiyono. (2023). *Metode Penelitian Pendidikan (Kuantitatif, Kualitatif Kombinasi, R&D dan Penelitian Pendidikan)* (3rd ed.). CV ALFABETA.

Sujianto, Mujiono, Suardika, I. B., & Indriani, S. (2023). *Pengaruh Kualitas Layanan Administrasi Akademik tentang Kepuasan Mahasiswa*. *14*(1), 29–33.

Sukatin, Nuraini, N., Azzahra, A. C., Yunita, F. R., Fransiska, S., & Nafi', T. (2022). Manajemen pelayanan publik di pendidikan tinggi. *Histeria Jurnal: Ilmiah Soshum Dan Humaniora*, *1*(2), 70–78. https://doi.org/10.55904/histeria.v1i2.272

Susetyo, D. P., Pranajaya, E., Setiawan, T., & Suryana, A. (2022). Kualitas Pelayanan Akademik dan Citra Institusi sebagai Determinan Kepuasan Mahasiswa. *Formosa Journal of Applied Sciences*, *1*(4), 473–492. https://doi.org/10.55927/fjas.v1i4.1250

Tari, E., Liufeto, M. C., & Koroh, L. I. . (2022). Analisis Kepuasan Mahasiswa terhadap Layanan Administrasi dan Akademik di Sekolah Tinggi Agama Islam Kupang. *Edukatif : Jurnal Ilmu Pendidikan*, *4*(3), 3405–3418. https://doi.org/10.31004/edukatif.v4i3.2585

Tjiptono, F., & Diana, A. (2022). *Manajemen dan Strategi Kepuasan Pelanggan*. Andi.

Udjang, R., & Subarjo, S. (2019). Analisis Tingkat Kepuasan Mahasiswa Pada Kualitas Layanan Universitas Mercu Buana Yogyakarta. *Jurnal Perilaku Dan Strategi Bisnis*, *7*(1), 64. https://doi.org/10.26486/jpsb.v7i1.675

Universitas Medan Area. (2020). *The Importance Of Adequate Campus Infrastructure*. Universitas Medan Area. https://bktaruna.uma.ac.id/pentingnya-memiliki-infrastruktur-kampus-memadai/

Uswah, Muljono, H., & Musringudin, M. (2022). the Effect of Quality of Academic Services and Infrastructure on Student Satisfaction At Uhamka Postgraduate School. *JKP | Jurnal Kepemimpinan Pendidikan*, *5*(1), 652–659. https://doi.org/10.22236/jkpuhamka.v5i1.9233

Wijana, I. K., & Dwi Rusiawati, R. T. H. (2021). Tingkat Kepuasan Mahasiswa terhadap Mutu Pelayanan Pendidikan. *Mimbar Ilmu*, *26*(2), 268. https://doi.org/10.23887/mi.v26i2.34538

Windasari, W., Soedjarwo, S., & Mutohir, T. C. (2021). Pengaruh Kualitas Layanan dan Kepuasan Terhadap Loyalitas Mahasiswa (Studi Kasus Program Pascasarjana Fakultas Ekonomi dan Bisnis Universitas Airlangga). *Kelola: Jurnal Manajemen Pendidikan*, *8*(1), 103–109. https://doi.org/10.24246/j.jk.2021.v8.i1.p103-109

Yuliana, Rachmawati, I., & Eka, A. (2021). Kualitas Pelayanan Administrasi Bidang Akademik Fakultas Ilmu Sosial Dan Ilmu Politik Universitas Tanjungpura Pontianak Kalimantan Barat. *Jurnal Ilmu Administrasi Negara (e-Journal)*.

Yurindera, N. (2021). Pengaruh Efektivitas E-Learning Terhadap Kepuasan Mahasiswa Dan Dampaknya Pada Loyalitas Mahasiswa Di Institut Bisnis Nusantara. *Esensi: Jurnal Manajemen Bisnis*, *24*(3), 345–358.

Zulkarnaini, Z., & Fatmasari, R. (2021a). Pengaruh Layanan Akademik dan Citra Institusi terhadap Loyalitas Mahasiswa Universitas Terbuka. *Jurnal Ilmu Pendidikan Nonformal*.

Zulkarnaini, Z., & Fatmasari, R. (2021b). Pengaruh Layanan Akademik dan Citra Institusi terhadap Loyalitas Mahasiswa Universitas Terbuka. *Aksara: Jurnal Ilmu Pendidikan Nonformal*, *7*(3), 1285. https://doi.org/10.37905/aksara.7.3.1285-1294.2021