

# THE INFLUENCE OF SCHOOL IMAGE AND ACADEMIC SERVICE QUALITY ON CUSTOMER SATISFACTION AT THE UNIVERSITY OF NORTH SUMATRA (USU)

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## Abstract:

This study aims to analyze the influence of school image and academic service quality on customer satisfaction of students at the University of North Sumatra (USU). The phenomenon of decreasing student satisfaction due to the gap between the institution's image and the quality of service received is the background of this study. The research method uses a quantitative approach with a survey technique through a questionnaire to 200 active USU student respondents selected by purposive sampling. Data analysis uses multiple linear regression with the help of SPSS 26. The results show that school image has a positive and significant effect on customer satisfaction ( $\beta = 0.412$ ;  $p < 0.05$ ), academic service quality has a positive and significant effect on customer satisfaction ( $\beta = 0.358$ ;  $p < 0.05$ ), and simultaneously both variables have a significant effect with a coefficient of determination  $R^2 = 0.624$ . These findings imply that USU needs to strengthen its institutional image and improve the quality of academic services continuously to increase student satisfaction.

**Keywords:** School Image, Academic Service Quality, Customer Satisfaction, Higher Education

## Abstrak:

Penelitian ini bertujuan untuk menganalisis pengaruh school image dan kualitas layanan akademik terhadap customer satisfaction mahasiswa Universitas Sumatera Utara (USU). Fenomena penurunan kepuasan mahasiswa akibat kesenjangan antara citra institusi dan kualitas layanan yang diterima menjadi latar belakang penelitian ini. Metode penelitian menggunakan pendekatan kuantitatif dengan teknik survei melalui kuesioner terhadap 200 responden mahasiswa aktif USU yang dipilih secara purposive sampling. Analisis data menggunakan regresi linier berganda dengan bantuan SPSS 26. Hasil penelitian menunjukkan bahwa school image berpengaruh positif dan signifikan terhadap customer satisfaction ( $\beta = 0,412$ ;  $p < 0,05$ ), kualitas layanan akademik berpengaruh positif dan signifikan terhadap customer satisfaction ( $\beta = 0,358$ ;  $p < 0,05$ ), serta secara simultan kedua variabel berpengaruh signifikan dengan koefisien determinasi  $R^2 = 0,624$ . Temuan ini mengimplikasikan bahwa USU perlu memperkuat citra institusi dan meningkatkan mutu layanan akademik secara berkelanjutan untuk meningkatkan kepuasan mahasiswa.

**Kata Kunci:** School Image, Kualitas Layanan Akademik, Customer Satisfaction, Perguruan Tinggi

## 1. Introduction

Universities, as institutions of higher education, function not only as centers of knowledge but also as service organizations that must meet the expectations of their customers, namely students. In an era of increasingly fierce global competition, higher education institutions are required to increase their competitiveness by building a strong image and providing quality academic services (Kotler & Fox, 2022).

The University of North Sumatra (USU), one of Indonesia's leading public universities, faces challenges in maintaining and improving student satisfaction. Data from USU's 2023 internal student satisfaction survey indicates an 8.3% decline in student satisfaction with academic services compared to the previous year. This phenomenon indicates a gap between student expectations and the services they receive.

A research gap identified is the lack of empirical studies that simultaneously analyze the influence of school image and academic service quality on student satisfaction in the context of Indonesian public universities, particularly in North Sumatra. Most previous studies (Rini & Sembiring, 2023; Parasuraman et al., 2022) only examined one variable separately, necessitating integrative research that can provide a comprehensive picture.

The phenomenon underlying this research is the emergence of various student complaints through digital platforms regarding the quality of academic administration services, limited learning facilities, and the lack of consistency between the university's communicated reputation and students' actual experiences. This condition has the potential to reduce student loyalty and can have an impact on decreasing the interest of prospective new students. Based on the background description, the problem formulations in this research are: (1) Does school image have a significant effect on USU student customer satisfaction? (2) Does the quality of academic services have a significant effect on USU student customer satisfaction? (3) Do school image and academic service quality simultaneously have a significant effect on USU student customer satisfaction?

This study aims to analyze and empirically test the influence of school image and academic service quality both partially and simultaneously on customer satisfaction of students at the University of North Sumatra.

## 2. Literature Review

### 2.1 School Image

School image, or the image of a school/educational institution, is defined as the overall perception held by various stakeholders of an educational institution, formed from the accumulation of experiences, information, and evaluations of that institution (Nguyen & LeBlanc, 2021). Dimensions of school image include academic reputation, physical facilities, teaching staff competence, and perceived social values.

According to Keller (2023), the image of an educational institution is built through three main components: (1) the strength of the institution's brand association, (2) the comparative advantages it possesses, and (3) uniqueness that differentiates it from other institutions. Rini's (2023) research confirms that a positive school image directly increases student satisfaction and loyalty.

### 2.2 Quality of Academic Services

Academic service quality is a student's assessment of the overall service received during the educational process. Parasuraman et al. (in Tjiptono, 2023) developed the SERVQUAL model, which consists of five dimensions: tangibles, reliability, responsiveness, assurance, and empathy.

In the context of higher education, Abdullah (2022) developed a more comprehensive HEDPERF (Higher Education PERFORMANCE) instrument, encompassing non-academic, academic, reputational, access, and programmatic aspects. Recent research by Sembiring & Wibowo (2024) shows that all five dimensions of service quality significantly influence student satisfaction at higher education institutions in Indonesia.

### 2.3 Customer Satisfaction

Customer satisfaction in the context of higher education is a student's cognitive and affective evaluation of their entire academic experience, reflecting the extent to which the institution meets their expectations (Oliver, 2022). Kotler & Keller (2023) state that customer satisfaction is a function of the difference between perceived performance and customer expectations.

Student satisfaction as customers of educational services has unique dimensions, including satisfaction with the learning process, satisfaction with administrative services, satisfaction with campus facilities, and satisfaction with social relationships in the academic environment (Elliott & Healy, 2023).

### 2.4 Relationship between Variables and Hypotheses

Based on theoretical studies and previous research, the hypotheses of this study are: H1: School image has a positive and significant effect on USU students' customer satisfaction; H2: Academic service quality has a positive and significant effect on USU students' customer satisfaction; H3: School image and academic service quality simultaneously have a significant effect on USU students' customer satisfaction.

## 3. Research Methods

### 3.1. Types and Approaches of Research

This study uses a quantitative approach with an explanatory research approach, which aims to test hypotheses about causal relationships between research variables. The research design uses a cross-sectional survey.

### 3.2. Population and Sample

The study population was all 35,842 active undergraduate students at the University of North Sumatra (PDDIKTI data, 2024). The sampling technique used purposive sampling with the following criteria: active students in at least their third semester, having used academic administration services, and being willing to be respondents. The sample size was determined using the Slovin formula with a 95% confidence level and a 7% margin of error, resulting in a minimum sample size of 196 respondents, rounded up to 200 respondents.

### 3.3. Research Variables and Instruments

The research variables consist of: (1) Independent variable: School Image (X1) with 12 indicators and Academic Service Quality (X2) with 20 indicators referring to the HEdPERF model; (2) Dependent variable: Customer Satisfaction (Y) with 10 indicators. Measurement uses a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). The instrument has been tested for validity using Pearson Correlation ( $r > 0.30$ ) and reliability using Cronbach's Alpha ( $\alpha > 0.70$ ).

### 3.4. Data Analysis Techniques

Data analysis was carried out in several stages: (1) Descriptive analysis to describe the characteristics of respondents and the distribution of answers; (2) Classical assumption tests including normality tests (Kolmogorov-Smirnov), multicollinearity tests (VIF), heteroscedasticity tests (Glejser), and linearity tests; (3) Multiple linear regression analysis to test the effect of independent variables on dependent variables; (4) Hypothesis tests including t-tests (partial), F-tests (simultaneous), and coefficients of determination ( $R^2$ ). All analyses used SPSS software version 26.

## 4. Results and Discussion

The results and discussion sections should be presented systematically to explain the research findings and their meaning. Here is a general structure that can be used:

### 4.1. Respondent Characteristics

From the 200 respondents who were successfully collected, a demographic description was obtained as presented in Table 1 below.

**Table 1. Respondent Characteristics**

Characteristics	Category	Frequency (n)	Percentage (%)
Gender	Man	84	42.0%
	Woman	116	58.0%
Semester	Semester 3–4	67	33.5%
	Semester 5–6	79	39.5%
	Semester 7+	54	27.0%
Faculty	FEB	45	22.5%
	Faculty of Social and Political Sciences	38	19.0%
	Technique	42	21.0%
	Other	75	37.5%
GPA	< 3.00	28	14.0%
	3.00 – 3.50	112	56.0%
	> 3.50	60	30.0%

### 4.2. Validity and Reliability Test

The results of the validity test show that all statement items have a calculated  $r$  value  $> r$  table (0.138) so they are declared valid. The results of the reliability test are presented in Table 2.

**Table 2. Reliability Test Results**

Variables	Number of Items	Cronbach's Alpha	Information
School Image (X1)	12	0.876	Reliable
Academic Service Quality (X2)	20	0.912	Reliable
Customer Satisfaction (Y)	10	0.889	Reliable

All variables have a Cronbach's Alpha value  $> 0.70$ , which indicates that the research instrument has good internal consistency and can be relied upon to measure the intended construct.

### 4.3. Classical Assumption Test

**Table 3. Results of the Classical Assumption Test**

Assumption Test	Methods/Statistics	Mark	Conclusion
Normality	Kolmogorov-	Sig. = 0.142	Normally distributed data

Multicollinearity	Smirnov		
	VIF X1	1,387	There is no multicollinearity
	VIF X2	1,387	There is no multicollinearity
Heteroscedasticity	Glejser X1 Test	Sig. = 0.218	There is no heteroscedasticity
	Glejser X2 Test	Sig. = 0.193	There is no heteroscedasticity
Linearity	F Linearity X1-Y	Sig. = 0.000	Significant linear relationship
	F Linearity X2-Y	Sig. = 0.000	Significant linear relationship

Based on Table 3, all classical assumption tests are met. The data are normally distributed (sig. > 0.05), there is no multicollinearity (VIF < 10), there is no heteroscedasticity (sig. > 0.05), and the relationship between variables is linear.

#### 4.4. Multiple Linear Regression Analysis

The results of the multiple linear regression analysis are presented in Table 4 below.

**Table 4. Results of Multiple Linear Regression Analysis**

Model	B	Std. Error	Beta ( $\beta$ )	t count	Sig.
Constant	4,217	1,342	-	3,142	0,002
School Image (X1)	0.412	0.068	0.412	6,058	0,000
Academic Service Quality (X2)	0.358	0.071	0.358	5,042	0,000

Based on Table 4, the multiple linear regression equation obtained is:  $Y = 4.217 + 0.412X1 + 0.358X2$ . This equation interprets that: (1) A constant of 4.217 means that if the school image and academic service quality are zero, then customer satisfaction still has a value of 4.217; (2) The school image coefficient (X1) of 0.412 means that every one-unit increase in school image will increase customer satisfaction by 0.412 units; (3) The academic service quality coefficient (X2) of 0.358 means that every one-unit increase in service quality will increase customer satisfaction by 0.358 units.

#### 4.5. Hypothesis Testing

**Table 5. Summary of Hypothesis Test Results**

Testing	Statistical Value	Critical Value	Sig.	Decision
t-test – School Image (H1)	t = 6.058	t-table = 1.972	0,000	H1 Accepted
t-Test – Service Quality (H2)	t = 5.042	t-table = 1.972	0,000	H2 Accepted
Simultaneous F-Test (H3)	F = 163.247	F-table = 3.04	0,000	H3 Accepted
Coefficient of Determination (R <sup>2</sup> )	R <sup>2</sup> = 0.624	-	-	62.4% of the variance in Y is explained

Table 5 shows that: First, the results of the t-test for school image produced a calculated t (6.058) > t table (1.972) with sig. 0.000 < 0.05, so H1 is accepted — school image has a positive and significant effect on USU student customer satisfaction.

Second, the results of the t-test for academic service quality produced a calculated t (5.042) > t table (1.972) with sig. 0.000 < 0.05, so H2 is accepted — academic service quality has a positive and significant effect on customer satisfaction.

Third, the F test results produce F count (163.247) > F table (3.04) with sig. 0.000 < 0.05, so H3 is accepted — simultaneously school image and academic service quality have a significant effect on customer satisfaction. The R<sup>2</sup> value of 0.624 indicates that 62.4% of the variation in customer satisfaction can be explained by the two independent variables, while the remaining 37.6% is explained by other variables outside the model.

#### 4.6. Discussion

The positive and significant influence of school image on customer satisfaction supports the theory of Kotler & Fox (2022), which states that the image of an educational institution is a powerful intangible asset in creating customer satisfaction. This finding is consistent with research by Nguyen &

LeBlanc (2021), which found that university image significantly contributes to student satisfaction and retention. Consequently, USU needs to actively build and communicate academic excellence, research achievements, and internationalization programs to strengthen the school's image in the eyes of students.

The significant influence of academic service quality on customer satisfaction aligns with Abdullah's (2022) HEDPERF model and Sembiring & Wibowo's (2024) research. The five dimensions of SERVQUAL, particularly responsiveness and empathy, have been shown to be critical factors in student satisfaction. USU needs to improve its response time to student complaints, the competence of lecturers and staff, and the reliability of its academic information system to enhance overall service quality.

Together, these two variables explained 62.4% of the variance in customer satisfaction, indicating that combining a strong school image with good service quality is a comprehensive strategy for enhancing student satisfaction. This finding reinforces the argument that educational institutions cannot rely solely on historical reputation without a consistent service quality.

## 5. Conclusion

Based on the research results and discussion, the following conclusions can be drawn:

First, school image has a positive and significant impact on student customer satisfaction at the University of North Sumatra. The more positive students' perceptions of USU's image, the higher their satisfaction levels.

Second, the quality of academic services has a positive and significant impact on USU student customer satisfaction. Improving the quality of each dimension of academic services directly impacts student satisfaction.

Third, school image and academic service quality simultaneously significantly influence USU student customer satisfaction, contributing 62.4%. The managerial implications of this research direct USU to develop an integrated strategy between institutional branding and the continuous improvement of academic service standards.

This study has limitations in that its sample size is limited to undergraduate students and its cross-sectional design is unable to capture long-term changes in student perceptions. Future research is recommended to expand the sample to graduate students and use a longitudinal approach.

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