

The Influence of Service Quality, School Image, and Student Achievement on Student Loyalty by Student Satisfaction as Variable Moderating at an Islamic Junior High School Karawang

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ABSTRACT

This research has the objectives to explore the influence of service quality, school reputation, and student achievement on student loyalty at an Islamic Junior High School in Karawang, by student satisfaction serving as a moderating factor. The research utilized a sample of 111 participants, specifically students from Islamic Junior High School in Karawang. The purposive sampling method was utilized for participant selection. The research adopts a field research approach by a quantitative emphasis. The primary data was gathered using questionnaires completed by the participants. The research has the objectives to assess how service quality, school reputation, and academic achievement influence student loyalty at an Islamic Junior High School in Karawang, considering student satisfaction as a moderating factor. A cohort of 111 students from an Islamic Junior High School in Karawang were chosen as participants using purposive sampling methods.

The analysis methods utilized in this research are multiple linear regression, *Moderating Regression Analysis* (MRA), determination coefficient (Adjusted R^2) and F test. The outcomes revealed that the adjusted coefficient of determination (R^2) in the regression model was 0.573, signifying

that the variability in service quality factors, school reputation, and academic performance can account for 57.3% of the variance in student loyalty factors. Furthermore, the adjusted R^2 score in the regression model increased to 0.646, or 64.6%, following the introduction of the moderating variable. According to the outcomes of the F-test, the F-table score stands at 2.47 by a significance level of 5% (0.05). The calculated F-score of 50.113 surpasses the threshold of 2.47 at a significance level of 0.05, showing that the combined effects of service quality, school image, and academic performance have a considerable influence on student loyalty by the moderation model, the F-test outcome of 29.669 exceeds the critical score of 2.11 at a significance level of 0.05, suggesting that service quality, school image, and student achievement, when moderated by student satisfaction, significantly effect student loyalty.

Keywords: Service Quality, School Image, Student Achievement, Student Loyalty, Student Satisfaction.

INTRODUCTION

The life of a nation is decided by the level of education of its people. Education service providers in Indonesia are categorized into two: *public schools* and *private schools*.

Schools organized by the government are called public schools while schools organized by non-government organizations are called private schools. Schools organized by the government are called public schools while schools organized by non-government organizations are called private schools. In public schools, particularly at the elementary and junior high levels, the government covers all operational expenses. Meanwhile, senior high schools and universities receive partial funding from the state, making education more affordable. The intensifying competition among educational institutions, both public and private, compels school administrators to actively seek market share. One effective strategy for capturing this share is to produce high-quality graduates and ensure consumer satisfaction. As awareness of the importance of education for national development grows, so does the number of private schools. According to data from dapo.kemendikbud.go.id, as of 2021, Karawang Regency's Kominfo reports the existence of 59 public junior high schools (SMPN) and 101 private junior high schools (SMP). This substantial number of educational institutions, especially private ones, necessitates that private schools develop effective strategies to remain competitive and attract students.

The high number of educational institutions at the junior high school level, particularly private schools, leads to heightened competition for prospective students. Schools that cannot compete effectively may end up by fewer students. Various factors effect a student's decision when selecting an educational institution. One significant factor is satisfaction. According to Mehboob (2018: 89), parents, friends, and alumni play a crucial role in influencing a student's decision to enroll in a particular school. Positive feedback from these groups can be a key consideration for students when choosing an educational institution.

One way to capture market share is to produce quality graduates and by fostering a sense of student loyalty. The concept of

loyalty to schools is the commitment of students and parents who love and are proud to use their school's educational services so that they do not want to move to another school (Ramadania, 2020: 46). When students and parents are satisfied, where everything promised by the school can be fulfilled and even more than what was promised, there will be a possibility to become loyal to their school.

The initial determinant influencing student loyalty is the level of service quality. High service quality has the potential to generate satisfaction, thereby fostering loyalty among students (Ramadania, 2020: 45). It is evident that service quality exerts a favorable and substantial effect on student loyalty. In essence, the higher the standard of service extended to students, the stronger their sense of loyalty towards the institution. The second factor is school image. School image is an abstract form and cannot be measured mathematically but can be felt from the outcomes of positive and negative assessments that come from the target audience (public) and the wider community. There exists a strong and noteworthy correlation among the reputation of a school and the allegiance of its students (Khusaeni, 2016). The third element to consider is academic accomplishment. As stated by Djamarah (2017: 80), achievement encompasses endeavors undertaken, whether independently or collaboratively. The greater the academic accomplishments of students in school, the more elevated their satisfaction levels, consequently influencing their loyalty as students.

LITERATURE REVIEW

Student Loyalty

According to Sopiah (2018:104), loyalty is the behavior exhibited by decision-making units that consistently choose to purchase goods or services from a particular company. In the context of education, customer loyalty pertains to students. Student loyalty significantly effects educational institutions both in the short and long term. It involves students' willingness

to share positive feedback about the institution and recommend it to family, friends, employers, and other organizations whenever possible.

Tjiptono, as cited in Rofiah and Wahyuni (2017:72), identifies three key indicators influencing loyalty: 1) consistently liking the brand, 2) believing the brand is the best, and 3) recommending the brand to others.

Service Quality

As per Arianto (2018:83), service quality revolves around fulfilling needs and demands, along by ensuring punctuality to align by customer anticipations. Assessing service quality in the realm of education involves juxtaposing students' perceptions of the services they anticipate or desire by the service attributes offered by the provider (school).

The assessment of service excellence as outlined by Parasuraman, Zeithaml, and Berry encompasses five distinct dimensions: 1) tangible, 2) reliability, 3) responsiveness, 4) assurance, and 5) empathy.

School Image

Dharmayanti (2016:410) defines an image as a potent representation that is associated by personal, collective, or organization. An effectful image influences three key aspects: firstly, it strengthens the identity and score propositions of the product; secondly, it communicates a distinct identity to avoid being mistaken for competitors; and thirdly, it evokes emotional resonance beyond mere visual representation (Suciningtyas: 2019:2).

Indicators for evaluating image, as discussed by Harrison, S in the research conducted by Habibah and Bayu (2018:65), include 1) *Personality*, 2) *Reputation*, 3) *score*, and 4) *Corporate identity*.

Learning Achievement

As per Winkel, as referenced by Pratiwi (2015:81), academic performance serves as a tangible indication of an personal's accomplishments. Academic performance involves a transformative process that

encompasses cognitive, emotional, and physical dimensions, as highlighted by Mawarni & Fitriani (2019:4).

According to Goulla and Ihsan (2019:425), the criteria utilized to assess academic performance include comprehension, motivation, educational tools, interpersonal skills, and support for overcoming learning obstacles.

Student Satisfaction

According to Kotler and Armstrong (2016:39), satisfaction can be defined as the emotional reaction of either pleasure or disappointment that arises from assessing performance in comparison to expectations. Therefore, satisfaction is the demonstrated contentment of personals. Customers can be described as personals or groups who derive score from a particular product or service, while students can be identified as personals or groups who benefit from educational services.

Indicators for assessing student satisfaction, as outlined by Tjiptono in Pane and Ritonga (2020:35), include adherence to expectations, likelihood of returning, and inclination to recommend.

MATERIALS & METHODS

Research Design

The researchers in this research have chosen to utilize a quantitative methodology. As outlined by Arikunto (2019:27), quantitative research entails the predominant utilization of numerical data in all phases of data collection, analysis, and dissemination of outcomes. This methodology is utilized to examine hypotheses through rigorous statistical analyses. Given the context and issues at hand, this research utilizes a quantitative methodology to assess the impact of service quality, school reputation, and student academic achievement on student loyalty, by student satisfaction serving as a moderating variable.

Participant

The researcher carried out the research at Islamic Junior High School Karawang, by a

population comprising 372 students who are currently enrolled in the school. The sampling methodology utilized is non-probability sampling, more precisely a purposive sampling method as delineated by Sugiyono (2019:133). This method was chosen due to its specific considerations and criteria that need to be fulfilled. The research samples selected for this research include: 1) Integrated Islamic Junior High School in Karawang, and 2) Boarding School-based Integrated Islamic Junior High School. Researchers opted to sample 30% of the entire population. The sample size for this investigation is outlined below:

Table 1. Research Sample

NO	School Name	Total	Sample
1	SMP IT Am'sar	108	33
2	SMP IT Kharisma Darussalam	99	30
3	SMP IT Gema Insan Cendekia	55	15
4	SMP IT Mentari Ilmu Azhari Boarding School	110	33
Total		372	111

Instruments

In this research, the tool utilized was a questionnaire employing Likert scale assessments. As stated by Sugiyono (2019:93), the Likert scale serves as a measurement tool for gauging the attitudes, opinions, and perceptions of persons or groups regarding social phenomena. by the Likert scale framework, responses to each item of the instrument range from highly positive to highly negative. The Likert scale measures levels of approval through a spectrum of responses, ranging from "strongly agree" (5) to "strongly disagree" (1). Validation and reliability evaluations were carried out to gauge the appropriateness and accuracy of the research tools employed to measure the variables of the subject under investigation. The Statistical Product and Service Solution (SPSS) software was utilized for the purpose of data analysis.

Data Analysis methods

In this research, the main aim is to investigate the impact of different

independent variables (X), including service quality (X1), school image (X2), and student achievement (X3), on the dependent variable of student loyalty (Y), while considering moderating variables such as student satisfaction (M).

The research methodology utilized in this research entails the implementation of multiple linear regression analysis through the software platform SPSS. Various assessments were conducted, including: 1) Validation and reliability testing of the research instrument, 2) Examination of classical assumptions such as normality, heteroscedasticity, and multicollinearity, and 3) Hypothesis testing which encompassed multiple linear regression, moderated regression analysis (MRA), the coefficient of determination (Adjusted R²), and the simultaneous F test.

RESULT AND DISCUSSION

Normality Test

Table 2. Normality Test outcomes

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		111
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	1.26069293
	Most Extreme Differences	
	Absolute	.068
	Positive	.050
	Negative	-.068
Test Statistic		.068
Asymp. Sig. (2-tailed)		.200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

According to the output findings, the p-value is computed to be 0.200 by the p-value surpassing 5%, we can deduce that the residuals adhere to a normal distribution.

Multicollinearity Test

Table 3. Multicollinearity Test outcomes

Coefficients ^a				
Model		Collinearity Statistics		
		Tolerance	VIF	
1	(Constant)			
	Service Quality	.482	2.076	
	School Image	.528	1.895	
	Learning Achievement	.607	1.648	
	Student Satisfaction	.451	2.219	

a. Dependent Variable: Student Loyalty

The data presented above indicates that the tolerance scores for all independent variables exceed 0.1, and the VIF scores for these variables are below 10, showing the absence of multicollinearity. Following this, a heteroscedasticity assessment was conducted to ascertain the presence of differing residual variances among observations by the regression model. The outcomes of the assessment are as follows:

Heteroscedasticity Test

Table 4. Heteroscedasticity Test outcomes

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.560	1.679		1.525	.130
	Service Quality	-.006	.007	-.111	-.826	.411
	School Image	.048	.030	.207	1.618	.109
	Learning Achievement	-.036	.022	-.195	-1.635	.105
	Student Satisfaction	-.036	.023	-.217	-1.570	.119

Dependent Variable: absresid3

According to the aforementioned outcomes, it is evident that the p-scores associated by service quality, school reputation, student performance, and student contentment all exceed 5%. Therefore, it can be inferred that there is a lack of heteroscedasticity.

Hypothesis Test

The hypothesis test utilized in this research is Multiple Linear Regression

Multiple Linear Regression

Table 5. Multiple Linear Regression Test outcomes

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.714	1.553		1.104	.272
	Service Quality	.062	.012	.429	5.224	.000
	School Image	.124	.051	.189	2.446	.016
	Learning Achievement	.147	.041	.283	3.543	.001

a. Dependent Variable: Student Loyalty

The multiple linear regression equation obtained from this research is as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

$$Y = 1.714 + 0.062X_1 + 0.124X_2 + 0.147X_3 + e$$

The above equation can be described as follows:

1. The coefficient of 1.714 suggests that even byout any effect from variables such as service quality, school image, and student achievement, the level of student loyalty remains at 1.714.
2. The regression coefficient for service quality was found to be 0.062,

suggesting that when controlling for school image and student achievement, an enhancement in service quality will lead to a proportional boost in student loyalty by 0.062.

3. The regression analysis unveiled a school image coefficient of 0.124. This signifies that by service quality and student achievement held constant, a rise in the school image variable will outcome in a commensurate increase of 0.124 in student loyalty.
4. The regression coefficient for student

achievement yielded a score of 0.147. This indicates that as the student achievement variable increases, holding the quality of service and school image constant, student loyalty is expected to

increase by 0.147 as well.

Moderated Regression Analysis (MRA) Test

Table 6. MRA Test outcomes

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.627	8.457		-.429	.669
	Service Quality	-.151	.052	-1.048	-2.914	.004
	School Image	.686	.302	1.046	2.270	.025
	Learning Achievement	.735	.241	1.415	3.045	.003
	Student Satisfaction	.195	.307	.421	.636	.526
	Service Quality * Student Satisfaction	.009	.002	2.325	4.115	.000
	School Image* Student Satisfaction	-.026	.012	-1.371	-2.190	.031
	Learning Achievement * Student Satisfaction	-.024	.009	-1.603	-2.567	.012

a. Dependent Variable: Student Loyalty

The regression equation derived from this research follows a moderation model by multiple linear components.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4Z + b_5X_1Z + b_6X_2Z + b_7X_3Z + e$$

$$Y = -3.627 - 0.151X_1 + 0.686X_2 + 0.735X_3 + 0.195Z + 0.009X_1Z - 0.026X_2Z - 0.024X_3Z + e$$

The previously mentioned equation of moderation can be described as follows:

1. The regression coefficient representing the interaction among service quality and student satisfaction yielded a score of 0.009, by a significance level of 0.000 (showing significance). Conversely, the significance level of student satisfaction was found to be 0.526 (showing insignificance). This suggests that the student satisfaction variable functions as a pure moderating variable, influencing the interaction among service quality variables and student loyalty byout being the dependent variable itself.
2. The regression coefficient for the interaction among school image and student satisfaction was found to be -0.026, by a statistically significant score of 0.031. Conversely, the significance level for student satisfaction was 0.526, showing that this variable plays a role as

a pure moderating variable or moderates the correlation among school image and student loyalty byout being the primary dependent variable.

3. The regression coefficient for the interaction among student achievement and student satisfaction was found to be -0.024, by a significance level of 0.012 (statistically significant). Conversely, the significance level for student satisfaction alone was decided to be 0.526 (statistically insignificant). This indicates that the student satisfaction variable functions as a pure moderating variable, influencing the correlation among student achievement and student loyalty byout being the dependent variable.

Test Coefficient of Determination (Adjusted R)²

Table 7. Determination Coefficient Test outcomes

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764 ^a	.584	.573	1.30602

a. Predictors: (Constant), Learning Achievement, School Image, Service Quality
b. Dependent Variable: Student Loyalty

The table above indicates that the adjusted R-squared score in the regression model is 0.646, corresponding to 64.6%. Additionally, the coefficient of determination for model I stands at 0.573, or 57.3%. This suggests that the factors of service quality, school image, and student

achievement effect student loyalty by 57.3%. However, upon integrating the moderating variable into the analysis, the adjusted R Square score escalates to 0.646, showing a 64.6% influence.

Simultaneous F Test

Table 8. Simultaneous Test outcomes Regression Model 1

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	256.429	3	85.476	50.113	.000 ^b
	Residuals	182.508	107	1.706		
	Total	438.937	110			
a. Dependent Variable: Student Loyalty						
b. Predictors: (Constant), Learning Achievement, School Image, Service Quality						

The critical F score in this research is 2.47 at a 5% significance level. Upon examination, it is evident that the computed F score of 50.113 surpasses the critical score of 2.47, while the significance level of 0.000

is less than 0.05. Therefore, it can be inferred that the combined effect of service quality, school image, and student achievement on student loyalty is statistically significant.

Table 9. Moderation Model F Test outcomes

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	293.418	7	41.917	29.669	.000 ^b
	Residuals	145.519	103	1.413		
	Total	438.937	110			
a. Dependent Variable: Student Loyalty						
b. Predictors: (Constant), Learning Achievement* Student Satisfaction, Learning Achievement, School Image, Service Quality, School Image* Student Satisfaction, Service Quality* Student Satisfaction, Student Satisfaction						

According to the data presented in the table, the computed F statistic is 29.669, which surpasses the critical value of 2.11, indicating statistical significance at a p-value of 0.000, which is less than the conventional threshold of 0.05. Therefore, it can be inferred that the factors of service quality, school image, student achievement. The interaction among service quality and student satisfaction, the correlation among school image and student satisfaction, and the connection among student achievement and student satisfaction collectively have a substantial impact on student loyalty.

The Effect of Service Quality, School Image, and Student Achievement on Student Loyalty

The outcomes of analyzing the initial hypothesis (H1) regarding the influence of service quality, school image, and student achievement on student loyalty reveal a calculated F score exceeding the critical F score, notably 50.113 at a significance level of 0.000. Consequently, the null hypothesis (H0) is rejected, while the alternative hypothesis (H1) is upheld.

The Effect of Service Quality on Student Loyalty by Student Satisfaction as Moderator

The outcomes of testing the second hypothesis (H2), which posits that student satisfaction moderates the relationship among service quality and student loyalty, demonstrate a significant t statistic of 4.115 by a p-value of 0.000. As an outcome, the

null hypothesis (H0) is rejected, confirming the validity of H2.

The Effect of School Image on Student Loyalty by Student Satisfaction as Moderator

The outcomes of testing the third hypothesis (H3) proposing that student satisfaction acts as a moderating factor in the relationship among school image and student loyalty revealed a substantial t statistic of -2.190 by a p-value of 0.031. Consequently, the null hypothesis (H0) is rejected, thereby confirming the alternative hypothesis (H3).

The Effect of Student Achievement on Student Loyalty by Student Satisfaction as Moderator

The outcomes from testing the fourth hypothesis (H4), which suggests that student satisfaction acts as a moderator in the connection among student achievement and student loyalty, demonstrate a statistically significant t-score of -2.567 by a p-score of 0.012. As an outcome, the null hypothesis (H0) is rejected in favor of accepting H4.

CONCLUSION

According to the data analysis and discussion in the preceding section, the following conclusions can be drawn:

1. The quality of services provided (X1), the reputation of the school (X2), and the academic performance of students (X3) together exert a notable and beneficial influence on student devotion (Y) at an Islamic Junior High School in Karawang.
2. Student satisfaction (M) serves as a moderating factor in the association among service quality (X1) and student loyalty (Y) at an Islamic Junior High School in Karawang.
3. Student satisfaction (M) acts as a moderating variable in the correlation among school image (X2) and student loyalty (Y) at an Islamic Junior High School in Karawang.
4. Student satisfaction moderates the association among student achievement

and student loyalty at an Islamic Junior High School in Karawang.

Declaration by Authors

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