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The Mediating Role of Satisfaction in the Relationship Between Brand Image, Price, Service Quality, and Digital Marketing on Student Loyalty in Higher Education

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Abstract

In the increasingly competitive higher education sector, understanding the determinants of student satisfaction and loyalty is essential for institutional sustainability. This study aims to examine the influence of brand image, price, service quality, and digital marketing on student satisfaction and loyalty in a higher education context. The research was conducted at Universitas Klabat with a sample of 370 students selected through a purposive sampling technique. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings show that brand image, price, and service quality have positive and significant effects on student satisfaction, whereas digital marketing does not. Moreover, brand image, price, service quality, and satisfaction do not exert a significant direct impact on student loyalty. Instead, digital marketing demonstrates a positive and significant direct effect on student loyalty. These results highlight the importance of managing brand perception, pricing strategies, and service quality to enhance student satisfaction, while also emphasizing the crucial role of digital marketing in strengthening student loyalty. Additionally, the study reveals that student satisfaction does not serve as a significant mediator in the relationship between the independent variables and student loyalty. This research contributes to the literature by clarifying the distinct roles of satisfaction and digital engagement strategies in shaping loyalty within higher education institutions.

Keywords: *brand image, price, service quality, digital marketing, brand loyalty, costumer satisfaction.*

Introduction

Loyalty is a critical strategic component in modern marketing, particularly within the higher education sector, where institutions face increasingly intense competition for student enrollment and retention. Student loyalty reflects a sustained commitment to continue using educational services and to recommend the institution to others, even when alternative options may appear more appealing (Dwidienawati, 2023; Alves, 2022). In higher education, loyalty serves as an indicator of an institution's ability to build stable, long-term relationships with its students (Kim, 2023). However, maintaining loyalty is a complex challenge due to external factors, including fluctuations in economic conditions, shifts in government policy, and the emergence of new learning formats and educational providers (Li, 2023). Similar challenges are also reflected in service-based sectors where loyalty is highly dependent on perceived experience and emotional connection (Mandagi *et al.*, 2024). As a result, understanding the key determinants of student loyalty is essential for higher education institutions in designing effective marketing and service-delivery strategies that align with students' needs and expectations.

Previous studies have identified several factors that contribute to student loyalty, including brand image, perceived price fairness, service quality, and digital marketing engagement. Brand image shapes students' perceptions of institutional reputation and influences their emotional attachment to the institution (Jin, 2022; Alalwan, 2022; Suryani, 2023). Research in tourism, education, and service industries further emphasizes the

importance of holistic brand representation—often conceptualized as brand gestalt—in shaping satisfaction and loyalty (Rondonuwu & Mandagi, 2023; Mandagi *et al.,* 2024). Perceptions of fair pricing, in which educational costs are considered reasonable relative to the benefits provided, have also been shown to significantly affect loyalty (Rahman, 2022; Zeithaml, 2022). In addition, service quality—particularly in academic support, administrative responsiveness, and campus facilities—plays a critical role in shaping the overall learning experience (Wijaya, 2024; Liao, 2023). Studies across sectors similarly confirm that service quality influences satisfaction and revisit/reuse intention (Lebo & Mandagi, 2023; Inaray *et al.,* 2024).

Digital transformation has further changed how institutions interact with and engage students. Digital marketing strategies that utilize social media, institutional websites, and interactive platforms have been shown to enhance student engagement and loyalty (Hossain, 2023; Alalwan, 2022). This is consistent with findings showing that social media marketing significantly influences public attitudes and satisfaction in both government and educational contexts (Poluan *et al.,* 2022; Kainde & Mandagi, 2023; Marhareita *et al.,* 2022). However, students' growing concerns about digital privacy and data security may weaken trust and hinder engagement if not managed appropriately (Li, 2023). Moreover, previous research highlights that student satisfaction often acts as a mediating variable between these determinants and student loyalty (Fahmi, 2023), a mediating role also commonly observed in service consumption, tourism, healthcare, and telecommunications (Walean *et al.,* 2024; Tumober *et al.,* 2024). However, other studies suggest that high levels of satisfaction do not always guarantee loyalty, particularly when external conditions exert more substantial influence (Rahman, 2022). These differing conclusions indicate the need for a clearer understanding of the specific mediating role of satisfaction in loyalty formation.

Despite the extensive literature, several gaps remain. Many studies examine only direct relationships among variables and do not sufficiently analyze the interdependent pathways that link them, especially the potential mediation effect of student satisfaction. Furthermore, the application of comprehensive theoretical frameworks, such as Expectation Confirmation Theory, SERVQUAL, and Relationship Marketing Theory, remains limited in explaining the complex dynamics of loyalty formation in higher education settings. Empirical research evaluating how satisfaction mediates the effects of brand image, price fairness, service quality, and digital marketing on loyalty in Indonesian higher education institutions remains limited in scope (Kelejan *et al.,* 2022).

To address these gaps, this study develops an integrated conceptual model that examines the mediating role of student satisfaction in the relationships among brand image, price fairness, service quality, and digital marketing toward student loyalty. The research focuses on answering three key questions: (1) How does digital marketing influence student loyalty in higher education institutions? (2) To what extent does student satisfaction mediate the effects of brand image, price fairness, and service quality on loyalty? (3) Which factors exert the most decisive influence on loyalty in the digital era?

The novelty of this study lies in its simultaneous integration of four key antecedent variables and satisfaction as a mediating construct to explain student loyalty. The study is grounded in core theoretical concepts, including loyalty as repeated commitment based on satisfaction and trust (Oliver, 1999), brand image as perceived institutional value (Jin, 2022) and brand gestalt as holistic brand perception that drives satisfaction and loyalty (Walean *et al.,* 2024; Mandagi *et al.,* 2024), service quality as the fulfillment of academic and administrative expectations (Parasuraman *et al.,* 1988), price fairness as the evaluation of value relative to cost (Zeithaml, 2022), and digital marketing as a technology-based approach to communication and relationship building (Hossain, 2023; Waworuntu *et al.,* 2022). Through this integrated analysis, the study aims to make theoretical contributions to marketing scholarship in higher education and to provide practical insights for institutions seeking to strengthen student-centered retention strategies.

Analysis Method

This study employs a descriptive, quantitative approach to analyze the mediating role of student satisfaction in the relationships among brand image, price, service quality, digital marketing, and student loyalty in higher education. Primary data were collected using a structured questionnaire measured with a five-point Likert scale. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software, as this method is appropriate for examining causal relationships among latent variables while simultaneously assessing mediation effects comprehensively.

The study population includes all students at Universitas Klabat. The sample comprises third- and fourth-year undergraduate students (S1) and postgraduate students. A purposive sampling technique was applied, with respondents selected based on their experience and exposure to the institution's brand image, price, service quality, and digital marketing activities. The sample size was determined using the N10 rule, which recommends a minimum of ten respondents per indicator. With 30 indicators, a minimum of 300 respondents was required to ensure the validity and reliability of the findings.

The research instrument was a structured questionnaire comprising six main variables: brand image, price, service quality, digital marketing, satisfaction, and student loyalty. Each variable was measured using several indicators adopted and adapted from previous studies. All items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Validity and reliability of the research instrument were evaluated using SmartPLS, employing tests of convergent validity, discriminant validity, composite reliability, and Cronbach's Alpha. The instrument was deemed acceptable once all constructs met the minimum thresholds recommended in quantitative research standards, thereby ensuring that the indicators were both theoretically sound and statistically reliable. This step was essential to confirm that each construct accurately represented the latent variable it was intended to measure and that the responses were consistent across items within the same construct.

The data collection process was carried out using an online questionnaire distributed via Google Forms from February to March. Before responding, participants were provided with clear information about the study's purpose, the voluntary nature of participation, and assurances of confidentiality and anonymity to protect their personal data. After responses were collected, the dataset was carefully examined for completeness, and a data-cleaning process was conducted to identify and remove invalid, inconsistent, or incomplete responses. This step was crucial to maintain the integrity of the data and ensure the accuracy of the analysis.

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM), which allowed simultaneous assessment of the measurement and structural models. The first stage involved descriptive analysis to outline respondents' characteristics and provide an overview of the sample profile. Next, the measurement model was evaluated to determine the validity and reliability of each construct. Once the measurement model was confirmed to meet the required standards, the structural model was analyzed to test the hypothesized relationships among variables, including the mediating effect of student satisfaction. The significance of the path coefficients was assessed using the bootstrap method, with t-statistics and p-values used to accept or reject the hypotheses. The results of the model analysis were then interpreted to explain how brand image, price, service quality, and digital marketing influence student loyalty in higher education, with particular attention to the mediating role of student satisfaction.

Results and Discussion

Results

Table 1. Respondent's Demographic Profile

Variable	Level	n	%
Gender	Woman	219	59.2
	Man	151	40.8
Age	26 - 30	222	60.0
	31 - 35	99	26.8
	20 - 25	37	10.0
	36 - 40	12	3.2
Occupation	Private	186	50.3
	Student	118	31.9
	Entrepreneur	58	15.7
	Civil Servant	8	2.2

Table 2. Descriptive Statistics

	Mean	Median	Observed min	Observed max	Standard deviation
BI1	4.262	4.000	3.000	5.000	0.446
BI2	4.262	4.000	3.000	5.000	0.446
BI3	4.262	4.000	4.000	5.000	0.440
BI4	4.270	4.000	4.000	5.000	0.444
BI5	4.251	4.000	2.000	5.000	0.464
DM1	4.103	4.000	4.000	5.000	0.304
DM2	4.103	4.000	4.000	5.000	0.304
DM3	4.097	4.000	3.000	5.000	0.305
DM4	4.114	4.000	4.000	5.000	0.317
DM5	4.111	4.000	4.000	5.000	0.314
P1	4.127	4.000	3.000	5.000	0.341
P2	4.122	4.000	4.000	5.000	0.327
P3	4.111	4.000	3.000	5.000	0.339
P4	4.127	4.000	4.000	5.000	0.333
P5	4.132	4.000	4.000	5.000	0.339
S1	4.230	4.000	4.000	5.000	0.421
S2	4.230	4.000	4.000	5.000	0.421
S3	4.227	4.000	3.000	5.000	0.425
S4	4.230	4.000	3.000	5.000	0.427
S5	4.235	4.000	4.000	5.000	0.424
SQ1	4.195	4.000	4.000	5.000	0.396
SQ2	4.197	4.000	4.000	5.000	0.398
SQ3	4.184	4.000	3.000	5.000	0.394
SQ4	4.184	4.000	3.000	5.000	0.394
SQ5	4.192	4.000	4.000	5.000	0.394
ST1	4.089	4.000	4.000	5.000	0.285
ST2	4.078	4.000	2.000	5.000	0.332
ST3	4.095	4.000	4.000	5.000	0.293
ST4	4.084	4.000	3.000	5.000	0.287
ST5	4.086	4.000	4.000	5.000	0.281

Demographic respondents and Descriptive Statistic

Table 1 presents the demographic profile of the respondents. The data indicate that the majority of respondents were female (59.2%). In terms of age distribution, the largest proportion falls within the 26–30-year age group, accounting for 60.0% of the total sample, followed by respondents aged 31–35 years, who accounted for 26.8%. Regarding occupation, the majority of respondents (50.3%) were employed in the private sector, making it the most dominant category. Other occupational groups included students (31.9%), entrepreneurs (15.7%), and civil servants (2.2%). This demographic distribution provides an overview of the study participants' general characteristics.

Based on Table 2, the highest mean value is observed for indicator BI4, with an average score of 4.270, indicating that this item received the most favorable evaluation from respondents. Conversely, the lowest mean value is recorded for indicator ST2, at 4.078; however, this score remains relatively high, suggesting generally positive responses across all indicators. Regarding the standard deviation values, the highest variation is found in

indicator BI5, with a standard deviation of 0.464, indicating slightly greater diversity in respondents' answers compared to the other indicators, although overall variation remains low. In contrast, the lowest standard deviation is observed for indicator ST5 (0.281), indicating the highest level of response consistency among the variables examined.

Measurement Model

The evaluation of the measurement model shown in Figure 1 aims to assess the validity and reliability of the research instrument. Convergent validity was examined through the analysis of outer loadings (factor loadings) and the Average Variance Extracted (AVE). The visualization indicates that several indicators fall close to or below the recommended loading threshold of 0.708, suggesting potential concerns about the convergent validity and reliability of the related latent constructs —Brand Image, Price, Service Quality, Digital Marketing, Satisfaction, and Student Loyalty. To confirm whether the measurement model meets the required standards, further evaluation is necessary, particularly by examining the AVE values to ensure adequate shared variance and the Composite Reliability (CR) values to verify internal consistency. Additionally, discriminant validity must be assessed using either the Fornell–Larcker criterion or the Heterotrait–Monotrait Ratio of Correlations (HTMT), with the results presented in the subsequent tables.

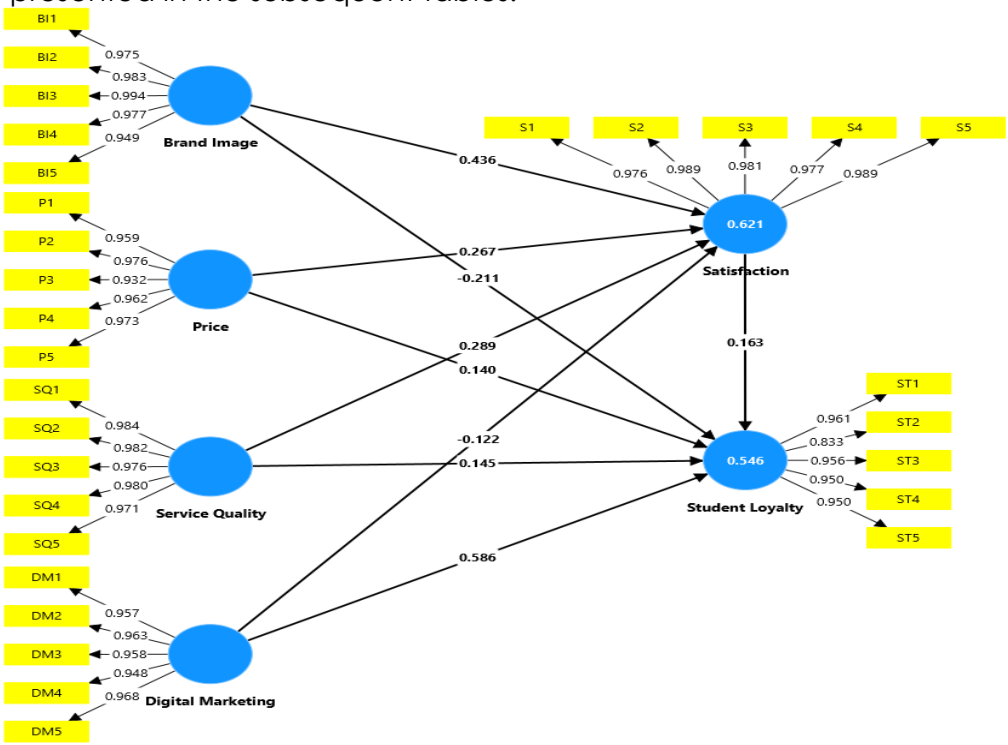

Figure 1. Measurement Model

Convergent Validity

Factor loadings represent the correlation between each indicator and its underlying latent construct, with a recommended threshold of 0.70 or higher. Table 3 presents the factor loadings for all indicators associated with the constructs of Brand Image, Digital Marketing, Price, Satisfaction, Service Quality, and Student Loyalty. The results show that all factor loadings exceed the recommended threshold, indicating that each indicator strongly correlates with the latent construct it is intended to measure. This provides initial support for the measurement model's convergent validity. Furthermore, the Average Variance Extracted (AVE), which should exceed 0.50, reflects the proportion of variance in the indicators that is explained by the construct (Hair *et al.*, 2019). Although the AVE values are not explicitly displayed in this table, the consistently high factor loadings suggest that adequate convergent validity is likely achieved across all constructs. Nevertheless, further examination of the AVE values is required to confirm this conclusion more comprehensively.

Table 3. Loading Factor

	Brand Image	Digital Marketing	Price	Satisfaction	Service Quality	Student Loyalty
BI1	0.975					
BI2	0.983					
BI3	0.994					
BI4	0.977					
BI5	0.949					
DM1		0.957				
DM2		0.963				
DM3		0.958				
DM4		0.948				
DM5		0.968				
P1			0.959			
P2			0.976			
P3			0.932			
P4			0.962			
P5			0.973			
S1				0.976		
S2				0.989		
S3				0.981		
S4				0.977		
S5				0.989		
SQ1					0.984	
SQ2					0.982	
SQ3					0.976	
SQ4					0.980	
SQ5					0.971	
ST1						0.961
ST2						0.833
ST3						0.956
ST4						0.950
ST5						0.950

Discriminant Validity

Fornell Lacker Criterion

Discriminant validity was evaluated using the Fornell–Larcker criterion, as presented in Table 4. This approach compares the square root of the Average Variance Extracted (AVE) for each construct with the correlations between that construct and the other constructs in the model. According to this criterion, discriminant validity is established when the square root of the AVE of each construct (displayed on the diagonal of the construct correlation matrix) is greater than its correlations with all other constructs. When this condition is met, it indicates that each latent construct is empirically distinct and measures a concept that is not redundant with the others in the model. Thus, fulfillment of the Fornell–Larcker criteria demonstrates that the constructs in the study possess adequate discriminant validity.

Table 4. Fornell-Larcker Criterion

	Brand Image	Digital Marketing	Price	Satisfaction	Service Quality	Student Loyalty
Brand Image	0.976					
Digital Marketing	0.533	0.959				
Price	0.584	0.643	0.960			
Satisfaction	0.748	0.436	0.573	0.982		
Service Quality	0.765	0.534	0.448	0.677	0.978	
Student Loyalty	0.416	0.712	0.551	0.439	0.469	0.931

Table 4 presents the results of the discriminant validity assessment using the Fornell–Larcker criterion. The square root of the AVE for each construct (displayed on the diagonal) is consistently higher than the correlations between that construct and the other constructs (values outside the diagonal). For example, the square root of the AVE for Brand Image (0.976) is greater than its correlations with other constructs, such as Digital Marketing (0.533) and Student Loyalty (0.416). This pattern is observed across all constructs, indicating that each latent variable is empirically distinct from the others in the model. Therefore, based on the Fornell–Larcker criterion, the measurement model demonstrates adequate discriminant validity.

Table 5. Cross loading

	Brand Image	Digital Marketing	Price	Satisfaction	Service Quality	Student Loyalty
BI1	0.975	0.528	0.557	0.738	0.736	0.396
BI2	0.983	0.511	0.583	0.729	0.758	0.409
BI3	0.994	0.523	0.576	0.742	0.752	0.409
BI4	0.977	0.535	0.582	0.737	0.755	0.416
BI5	0.949	0.505	0.550	0.700	0.731	0.400
DM1	0.494	0.957	0.621	0.425	0.492	0.658
DM2	0.514	0.963	0.622	0.438	0.506	0.684
DM3	0.522	0.958	0.586	0.415	0.498	0.695
DM4	0.516	0.948	0.635	0.396	0.533	0.662
DM5	0.510	0.968	0.618	0.417	0.530	0.712
P1	0.579	0.595	0.959	0.567	0.448	0.536
P2	0.561	0.633	0.976	0.545	0.428	0.542
P3	0.552	0.590	0.932	0.540	0.400	0.503
P4	0.571	0.637	0.962	0.561	0.434	0.550
P5	0.540	0.631	0.973	0.535	0.439	0.514
S1	0.744	0.435	0.568	0.976	0.672	0.422
S2	0.732	0.431	0.560	0.989	0.662	0.435
S3	0.740	0.416	0.556	0.981	0.655	0.435
S4	0.724	0.425	0.563	0.977	0.665	0.422
S5	0.733	0.436	0.567	0.989	0.670	0.442
SQ1	0.747	0.535	0.451	0.666	0.984	0.469
SQ2	0.739	0.525	0.455	0.666	0.982	0.475
SQ3	0.747	0.505	0.438	0.645	0.976	0.440
SQ4	0.763	0.519	0.434	0.658	0.980	0.446
SQ5	0.748	0.527	0.413	0.674	0.971	0.465
ST1	0.407	0.696	0.545	0.424	0.469	0.961
ST2	0.350	0.577	0.445	0.367	0.398	0.833
ST3	0.382	0.677	0.553	0.420	0.453	0.956
ST4	0.387	0.674	0.485	0.423	0.412	0.950
ST5	0.410	0.683	0.533	0.407	0.450	0.950

Cross-loading analysis was conducted to further evaluate discriminant validity, with the results presented in Table 5. The diagonal elements represent the correlations between each construct and its own indicators, while the off-diagonal elements represent the loadings of these indicators on other constructs. The results show that the indicators have substantially higher loadings on their respective constructs than on other constructs, as reflected in the low cross-loadings. This confirms that each construct is measured uniquely by its indicators, providing further support for satisfactory discriminant validity within the measurement model. Table 5 presents the cross-loadings, showing the correlations of each indicator with its corresponding construct (highlighted in bold) and with other constructs. The data indicate that most indicators exhibit their highest loading values on the construct they are intended to measure, rather than on other constructs. For example, indicator BI1 shows the strongest correlation with the Brand Image construct (0.975), compared with its correlations with Digital Marketing (0.528) and Student Loyalty (0.396). This pattern is consistently observed across most indicators, suggesting that each item primarily measures the underlying concept it was designed to represent. Although a few indicators exhibit relatively high cross-loadings, the overall results still support the measurement model's discriminant validity, indicating that the latent constructs are empirically distinct.

Reliability

Reliability assessment was conducted using Cronbach's Alpha, rho_A, and Composite Reliability. The results summarized in Table 6 clearly indicate that all constructs exhibit high reliability. Each reliability coefficient exceeds the recommended minimum of 0.70, as per Hair et al. (2019). These strong reliability values reinforce the validity and trustworthiness of the measurement instrument, thereby enhancing confidence in the accuracy and consistency of the data collected throughout the study.

Table 6. Reliability

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Brand Image	0.987	0.988	0.990	0.952
Digital Marketing	0.978	0.979	0.983	0.919
Price	0.979	0.979	0.983	0.922
Satisfaction	0.991	0.991	0.993	0.965
Service Quality	0.989	0.989	0.991	0.957
Student Loyalty	0.961	0.965	0.970	0.867

The table presents the results of the reliability analysis for the research constructs, showing that the Cronbach's Alpha values (ranging from 0.961 to 0.991) and Composite Reliability values (rho_A: 0.965–0.991; rho_c: 0.970–0.993) for all constructs—Brand Image, Digital Marketing, Price, Satisfaction, Service Quality, and Student Loyalty—substantially exceed the recommended minimum threshold of 0.70. These results indicate a very high level of internal consistency within each construct. Additionally, the Average Variance Extracted (AVE) values, ranging from 0.867 to 0.965, are well above the recommended minimum of 0.50, indicating strong convergent validity. Collectively, these findings provide comprehensive confirmation of both the reliability and convergent validity of the measurement instruments employed in this study.

Goodness of Fit

Table 7 presents the goodness-of-fit indicators for the measurement model, including SRMR, d_ULS, d_G, and Chi-Square, for both the saturated and estimated models. The SRMR values for both models are 0.026, which are below the recommended threshold of 0.08, indicating good model fit. However, the d_ULS value for both models is 0.325, which does not meet the recommended cutoff of 2.00 or higher. The d_G value is 90.271 for the saturated model and 162.700 for the estimated model, both of which exceed the benchmark threshold of 0.90. Additionally, the Chi-Square value is reported as infinite for both models, which is commonly indicative of potential model fit concerns, particularly when working with large sample sizes. Information regarding the Normed Fit Index (NFI) is not reported. Overall, these findings suggest that assessing model fit requires a holistic interpretation of all available indicators rather than reliance on any single statistic, underscoring the need to consider measurement quality, theoretical justification, and the robustness of the model's structural relationships.

Table 7. Goodness of Fit Model

	Saturated model	Estimated model
SRMR	0.026	0.026
d_ULS	0.325	0.325
d_G	90.271	162.700
Chi-square	infinite	Infinite
NFI	n/a	n/a

Structural Model

Following the successful evaluation of the measurement model, which confirmed that all constructs met the required standards of validity and reliability, the analysis proceeded to the assessment of the structural model. This stage focuses on hypothesis testing to examine the relationships proposed in the study. The structural model was evaluated by assessing the significance of the path coefficients using the PLS Bootstrapping procedure in SmartPLS. The results of this analysis, which indicate the strength and significance of the hypothesized relationships among the latent variables, are presented in Table 8.

Direct Effect

Based on the results presented in Table 8 (Final Model), several significant direct effects were identified. Brand Image has a positive and significant effect on Satisfaction (β = 0.436;

p = 0.000). In addition, Digital Marketing exerts a positive and significant influence on Student Loyalty (β = 0.586; p = 0.000). The Price variable also demonstrates a positive and significant effect on Satisfaction (β = 0.267; p = 0.000). Lastly, Service Quality shows a positive and significant effect on Satisfaction (β = 0.289; p = 0.001). These findings indicate that improvements in brand perception, pricing perceptions, and service delivery contribute meaningfully to enhancing student satisfaction. At the same time, strategic digital marketing plays a key role in strengthening student loyalty.

Table 8. Hypotheses Testing Result

	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Brand Image ➔ Satisfaction	0.435	0.086	5.078	0.000
Brand Image ➔ Student Loyalty	-0.214	0.110	1.916	0.055
Digital Marketing -> Satisfaction	-0.124	0.077	1.592	0.111
Digital Marketing ➔ Student Loyalty	0.590	0.098	5.979	0.000
Price ➔ Satisfaction	0.270	0.074	3.602	0.000
Price ➔ Student Loyalty	0.141	0.104	1.346	0.178
Satisfaction ➔ Student Loyalty	0.166	0.112	1.453	0.146
Service Quality ➔ Satisfaction	0.289	0.087	3.320	0.001
Service Quality ➔ Student Loyalty	0.143	0.113	1.280	0.200

Discussion

The findings indicate varied patterns of influence in shaping Satisfaction and Student Loyalty. Brand Image is shown to enhance Satisfaction, reinforcing that a credible institutional image supports positive student perceptions of trust, value, and educational identity. This aligns with research demonstrating that holistic brand perception—often conceptualized as brand gestalt—plays a central role in shaping satisfaction and subsequent behavioral intentions across sectors such as tourism, healthcare, telecommunications, and educational services (Rondonuwu & Mandagi, 2023; Tumober *et al.,* 2024; Walean *et al.,* 2024). Studies also emphasize that while brand representation strengthens emotional attachment, it does not automatically lead to loyalty unless satisfaction reinforces commitment (Ole *et al.,* 2025; Lebo & Mandagi, 2023).

Digital Marketing does not directly enhance Satisfaction, indicating that online promotional activities may not immediately shape students' evaluations of their educational experience. However, Digital Marketing strongly contributes to Loyalty, demonstrating its role in sustaining relational engagement and fostering emotional closeness between students and the institution. Similar findings appear in research showing that social media marketing improves attitudes, brand awareness, and loyalty in government, educational, and consumer contexts (Poluan *et al.,* 2022; Waworuntu *et al.,* 2022; Marhareita *et al.,* 2022; Kainde & Mandagi, 2023; Walean *et al.,* 2025). These studies highlight that interactive communication and continuous engagement are essential for building long-term loyalty.

Price fairness is found to influence Satisfaction, meaning students feel more satisfied when tuition and academic costs are perceived as reasonable relative to the benefits received. However, financial considerations alone do not create long-term loyalty. This is consistent with research demonstrating that while fairness contributes to positive evaluation, loyalty requires deeper relational or emotional reinforcement (Ole *et al.,* 2025).

Service Quality also enhances Satisfaction, affirming that supportive academic, administrative, and student service interactions shape positive educational experiences (Inaray *et al.,* 2024; Kelejan *et al.,* 2022). However, its direct influence on Loyalty remains limited. Parallel findings across multi-level marketing, hospitality, and healthcare contexts confirm that while quality strengthens satisfaction, loyalty formation requires additional identity-based or emotional drivers (Lebo & Mandagi, 2023; Mandagi *et al.,* 2024; Mandagi *et al.,* 2024).

Satisfaction contributes to Loyalty but does not automatically lead to long-term commitment. This indicates that while satisfaction is an important foundation, loyalty requires reinforcement through ongoing relational engagement, sense of belonging, and perceived alignment between personal identity and institutional values. These results align with relationship marketing and brand loyalty theory, which holds that sustained interaction and emotional resonance are essential for loyalty to form and endure (Mandagi *et al.,* 2024).

The findings show that Satisfaction is shaped primarily by Brand Image, Price fairness, and Service Quality, whereas Loyalty is strengthened more by sustained digital engagement and relational communication. Thus, Digital Marketing plays a strategic role in fostering long-term connections between institutions and students, aligning with the principles of Relationship Marketing and brand-based loyalty development (Poluan *et al.,* 2022; Kainde & Mandagi, 2023; Walean *et al.,* 2025).

Conclusions

This study found that brand image, price, and service quality positively and significantly affect student satisfaction, while digital marketing has a significant direct effect on student loyalty. These findings indicate that positive perceptions of institutional reputation primarily shape student satisfaction, the perceived fairness of tuition relative to educational benefits, and the quality of academic and administrative services. However, loyalty is not solely determined by satisfaction; rather, it is more strongly influenced by the intensity and quality of digital interactions between students and the institution. In other words, adaptive, personalized, and engagement-oriented digital marketing strategies play a crucial role in fostering long-term student attachment. Notably, student satisfaction does not serve as a significant mediating variable in the relationship between the predictors and student loyalty, suggesting a behavioral shift among students in the digital era, in which emotional and experiential engagement exerts greater influence than functional satisfaction alone.

Theoretically, this study contributes to the literature on educational marketing by extending the application of Relationship Marketing Theory into the context of continuous digital engagement within higher education. The findings highlight that the success of higher education institutions in building long-term relational bonds depends not only on achieving high levels of student satisfaction but also on their ability to create meaningful, sustained digital experiences that cultivate emotional closeness and commitment. In practice, the results provide valuable guidance for university management in designing digital marketing strategies that focus not only on information delivery but also on creating interactive, relevant, and value-driven student experiences that can sustainably strengthen loyalty.

The limitations of this research lie in the sample scope, which included only final-year students from a single higher education institution, thereby restricting the generalizability of the findings. Future research is recommended to involve multiple institutions with diverse characteristics to obtain a broader representation. Additionally, incorporating variables such as trust, engagement, and a sense of belonging as mediators or moderators may yield more profound insights into the mechanisms that shape student loyalty. A longitudinal research design is also suggested to capture the dynamic nature of long-term relationships between students and educational institutions more comprehensively.

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