



Drivers of Loyalty: Integrating Service Quality, Marketing Mix, and Satisfaction

Nurdiansyah Nurdiansyah^{1*}, Baso Amang², Roslina Alam², Arifin²

¹Department of Management Science, Universitas Muslim Indonesia, Makassar, Indonesia, ²Universitas Muslim Indonesia, Makassar, Indonesia. *Email: nurdiansyah11205@gmail.com

Received: 19 November 2025

Accepted: 22 March 2026

DOI: <https://doi.org/10.32479/irmm.22519>

ABSTRACT

This study advances the understanding of student loyalty formation by re-examining the roles of service quality and the marketing mix within a developing-country higher education context—an area where empirical evidence remains limited and theoretically fragmented. Using survey data from 200 undergraduate students at Dipa Makassar University and analyzing the structural relationships through SEM, this research uncovers several novel insights. First, unlike dominant findings in Western and Asian higher education literature, service quality was found to exert no significant influence on either satisfaction or loyalty, revealing a contextual deviation that challenges the universality of traditional service quality models. Second, the marketing mix demonstrates a significant effect on satisfaction but not on loyalty, indicating that marketing-driven value stimuli require an intermediary psychological mechanism to translate into long-term commitment. Third, student satisfaction emerges as the primary and indispensable predictor of loyalty and partially mediates the effect of the marketing mix, while failing to mediate the service-quality-loyalty link. These results collectively offer a novel empirical configuration that reframes the pathway from institutional strategies to loyalty formation. Theoretically, the study extends relationship marketing theory by demonstrating that satisfaction functions as a conditional, rather than universal, mediator—its effectiveness shaped by local cultural and institutional dynamics. These insights contribute to refining higher education loyalty models in developing economies and offer new directions for context-sensitive theory building.

Keywords: Service Quality, Marketing Mix, Student Satisfaction, Student Loyalty

JEL Classifications: M31, L86, C38, C83, O33

1. INTRODUCTION

In the post-pandemic era, higher education institutions face increasing pressure to operate competitively and adopt marketing and service management strategies similar to those used in business organizations. Universities must not only deliver academic excellence but also build strong relationships with students through service quality and strategic marketing efforts. As highlighted by Rahman and Singh (2024), student loyalty has become a key performance indicator for university sustainability, especially amid global digital transformation in education.

In Indonesia, the expansion of private higher education has intensified market competition. According to data from the

Ministry of Education, Culture, Research, and Technology (2024), more than 3,200 private universities and colleges operate nationwide, representing about 96% of all higher education institutions. However, the average student retention rate in private universities remains below 70%, significantly lower than in public institutions (LLDIKTI, 2023). A recent study by Arifin and Jannah (2024) revealed that the main factors affecting retention include perceived service quality, student engagement, and institutional responsiveness.

In eastern Indonesia, the challenges are even greater due to limited infrastructure, resource disparities, and lower institutional visibility (Nasution et al., 2023). Dipa Makassar University, as an emerging private university, faces similar difficulties. Internal

surveys in 2024 indicated that only 60.5% of students were satisfied with academic and administrative services, while over one-third reported a low intention to continue postgraduate studies at the same university. These figures demonstrate the urgent need for a deeper understanding of how service quality and marketing practices influence satisfaction and loyalty among students in this regional context.

Recent literature has emphasized that service quality and the marketing mix remain critical determinants of satisfaction and loyalty in higher education (Khan and Azam, 2023; Nguyen and Le, 2024). However, their relationships are not always straightforward. Some studies (Han and Hyun, 2022) confirmed that service quality directly enhances satisfaction and loyalty, while others (Chaudhary and Islam, 2024; Lestari et al., 2023) argued that the effects are indirect, mediated by psychological constructs such as satisfaction or perceived value. The marketing mix, comprising product, price, place, promotion, people, process, and physical evidence, has also been found to shape perceptions of institutional value, but its impact on loyalty often depends on the mediating role of satisfaction (Suryani and Putra, 2023; Yusof et al., 2024).

This study integrates the SERVQUAL model (Parasuraman et al., 1988) with the 7Ps service marketing mix framework (Booms and Bitner, 1981) under the broader relationship marketing perspective. By examining these constructs within the context of an Indonesian private university, the research contributes to updating the theoretical discourse on service marketing in higher education. Following the recommendation of Nguyen and Le (2024), satisfaction is treated not merely as an outcome but as a mediating mechanism connecting institutional performance and long-term loyalty.

However, few studies have examined the mediating role of satisfaction in explaining how service quality and marketing mix jointly influence loyalty within private universities in Indonesia, particularly in the eastern region. This study aims to fill this empirical gap by focusing on Dipa Makassar University. The findings are expected to enrich relationship marketing theory in the educational context and provide actionable implications for improving student retention, institutional competitiveness, and service excellence.

2. LITERATURE REVIEW

2.1. Service Quality and Student Satisfaction

Service quality refers to students' overall evaluation of the excellence of educational services relative to their expectations. The SERVQUAL model by Parasuraman et al. (1988) remains the most widely used framework for conceptualizing service quality, comprising five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy. In higher education, these dimensions represent both academic and administrative aspects that shape the student experience (Han and Hyun, 2022).

Recent studies have reaffirmed the central role of service quality in influencing satisfaction across diverse educational contexts.

Nguyen and Le (2024) found that consistent service quality significantly enhances satisfaction and institutional image among ASEAN universities. Similarly, Rahman and Singh (2024) demonstrated that responsiveness and empathy are the strongest predictors of satisfaction in developing-country universities. However, findings from Thailand and Malaysia suggest that academic service quality exerts weaker effects on satisfaction than non-academic support services (Yusof et al., 2024; Chaudhary and Islam, 2024). These mixed results imply that cultural and institutional contexts may shape how students perceive and evaluate service quality.

2.2. Marketing Mix and Student Satisfaction

The 7Ps service marketing mix model (Booms and Bitner, 1981) provides a comprehensive framework for understanding how universities deliver and communicate value to students. The seven components, product, price, place, promotion, people, process, and physical evidence, represent a holistic strategy for shaping students' perceptions of institutional quality. In modern higher education marketing, digital transformation has expanded these dimensions to include online engagement, social media presence, and virtual learning experiences (Khan and Azam, 2023).

Empirical evidence highlights that a well-managed marketing mix contributes positively to satisfaction. A cross-country comparison by Suryani and Putra (2023) revealed that the "people" and "process" dimensions are the most influential in Indonesian universities, whereas "promotion" and "physical evidence" dominate in Malaysian and Thai contexts. In Vietnam, Nguyen and Le (2024) reported that digital channels have become a major driver of satisfaction, especially among post-pandemic students seeking convenience and flexibility. These findings underscore that effective management of the marketing mix is essential to sustaining satisfaction in a competitive higher education environment.

2.3. Service Quality and Student Loyalty

Student loyalty encompasses both behavioral and attitudinal commitment, students' willingness to continue their studies and recommend their institution to others. Earlier studies confirmed that service quality positively affects loyalty (Helgesen and Nettet, 2007), but recent research has revealed a more complex relationship. Han and Hyun (2022) and Rahman and Singh (2024) found that service quality alone may not directly generate loyalty unless mediated by satisfaction or trust. In Malaysia, Yusof et al. (2024) showed that emotional engagement strengthens the link between perceived quality and loyalty, while in Thailand, satisfaction fully mediates this effect (Lestari et al., 2023).

These findings indicate that service quality contributes indirectly to loyalty formation by enhancing satisfaction, which then fosters positive emotional attachment to the institution. This mediating mechanism aligns with the relationship marketing perspective, where satisfaction acts as a bridge between service delivery and loyalty outcomes.

2.4. Marketing Mix and Student Loyalty

The marketing mix also plays a crucial role in shaping loyalty through students' accumulated experiences throughout their

educational journey. In Indonesia, Suryani and Putra (2023) found that the combination of product quality, people, and process significantly strengthens student commitment. However, findings from cross-country studies show that the relative influence of the marketing mix elements varies. For instance, in Malaysia, price fairness and promotional credibility are key predictors of loyalty (Yusof et al., 2024), while in Vietnam and Thailand, people-oriented processes and digital interactions dominate (Nguyen and Le, 2024).

These variations reflect cultural differences in students' value perceptions and expectations. As universities increasingly adopt digital tools and hybrid learning systems, the "process" and "promotion" elements of the marketing mix are becoming stronger determinants of loyalty across ASEAN countries (Khan and Azam, 2023; Chaudhary and Islam, 2024).

2.5. Student Satisfaction and Student Loyalty

Satisfaction has long been recognized as a key antecedent of loyalty in marketing and service management theory (Oliver, 1999). In higher education, satisfied students are more likely to engage in positive word-of-mouth, show commitment, and maintain affiliation as alumni (Clemes et al., 2008). Recent studies have reinforced this relationship in the context of digital education. Han and Hyun (2022) observed that student satisfaction strongly predicts loyalty in both face-to-face and online learning environments. Similarly, Lestari et al. (2023) confirmed that satisfaction remains the most significant predictor of loyalty in Indonesian and Malaysian universities.

2.6. The Mediating Role of Student Satisfaction

Satisfaction functions as an emotional and cognitive mechanism linking service delivery and loyalty outcomes. According to recent studies, satisfaction mediates the effects of both service quality and marketing mix on loyalty (Nguyen and Le, 2024; Yusof et al., 2024). In Malaysia and Vietnam, satisfaction fully mediates these relationships, suggesting that loyalty is not a direct outcome of service or marketing performance but rather of students' emotional responses to perceived value (Chaudhary and Islam, 2024).

In Indonesia, however, findings are mixed. While Suryani and Putra (2023) found partial mediation between marketing mix and loyalty, Lestari et al. (2023) observed no significant mediating effect between service quality and loyalty. These inconsistencies highlight the need to examine satisfaction's mediating role within specific institutional and cultural contexts, such as Dipa Makassar University.

2.7. Theoretical Synthesis and Conceptual Framework

Based on the reviewed literature, both service quality and marketing mix are crucial predictors of student satisfaction, which in turn drives student loyalty. However, empirical findings reveal that these relationships vary across contexts, with satisfaction often acting as a mediating variable. The theoretical integration of the SERVQUAL model (Parasuraman et al., 1988) and the 7Ps marketing mix framework (Booms and Bitner, 1981) provides a robust foundation for explaining these relationships in higher education.

Therefore, this study proposes a conceptual model in which service quality and marketing mix influence student loyalty directly and indirectly through satisfaction (Figure 1). This model reflects the relationship marketing perspective, emphasizing long-term relationship building between universities and students as key to institutional sustainability.

3. METHODOLOGY

This study adopted a quantitative explanatory research design aimed at examining causal relationships among service quality, marketing mix, student satisfaction, and student loyalty. The explanatory approach was chosen because it allows testing both direct and indirect effects among variables within a structured theoretical framework. The research was conducted at Dipa Makassar University, a private higher education institution in eastern Indonesia. Data were analyzed using the structural equation modeling (SEM) technique with AMOS version 26, as it provides a robust approach for testing complex models involving mediating variables and latent constructs.

The population of this study comprised all active undergraduate students enrolled during the 2024 academic year. A total of 200 respondents participated, representing students from various faculties and departments. The sampling process used a proportionate stratified random sampling technique, ensuring each academic faculty was proportionally represented according to its student enrollment size. This method was selected to enhance the representativeness of the sample and minimize sampling bias. The sample size was determined based on the recommendation by Hair et al. (2021), who state that SEM requires at least ten respondents per indicator. Given that this study utilized 20 observed indicators, a minimum of 200 respondents was deemed statistically sufficient to ensure stable parameter estimation and model reliability.

Data were collected through a structured online questionnaire distributed via the university's learning management system (LMS) and official communication channels. The questionnaire was divided into four sections corresponding to the study variables: service quality, marketing mix, student satisfaction, and student loyalty. Each construct was measured using multiple indicators adapted from established literature. The service quality construct, consisting of five indicators, was adapted from Parasuraman et al. (1988) and Abdullah (2006). The marketing mix construct, consisting of seven indicators, was derived from the framework

Figure 1: Conceptual framework of the study

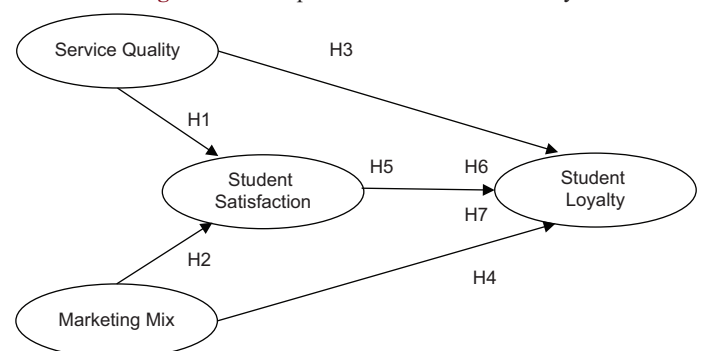
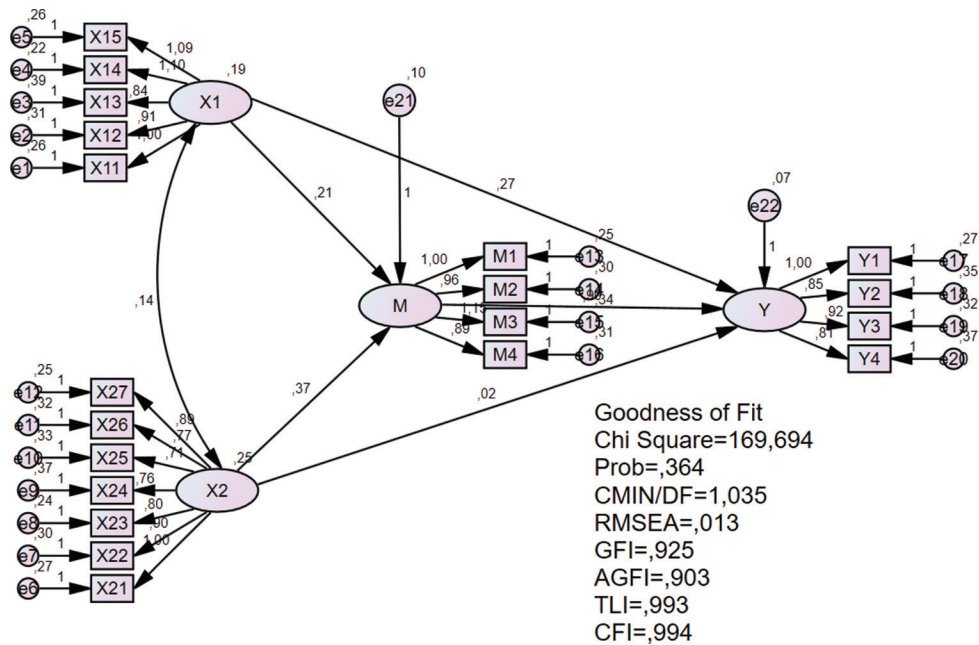


Figure 2: Structural equation model



proposed by Booms and Bitner (1981). The student satisfaction construct, with four indicators, was adapted from Clemes et al. (2008) and Han and Hyun (2022), while student loyalty was measured using four indicators from Helgesen and Nasset (2007) and Nguyen and Le (2024). All items were rated on a five-point Likert scale, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”).

Before the full survey was distributed, the questionnaire underwent expert validation by three academics specializing in marketing and educational management to ensure content validity and language clarity. A pilot test involving 30 students was also conducted to assess reliability, yielding Cronbach’s alpha values above 0.70 for all constructs, indicating acceptable internal consistency. Data analysis was carried out in three major stages. First, descriptive statistics were computed using SPSS version 26 to summarize respondents’ demographic characteristics and central tendencies of the variables. Second, a confirmatory factor analysis (CFA) was performed using AMOS version 26 to verify the measurement model. Results showed that all standardized factor loadings exceeded 0.70, composite reliability (CR) values ranged between 0.89 and 0.93, and average variance extracted (AVE) values ranged from 0.67 to 0.71, confirming good convergent validity. The model fit indices also met recommended thresholds ($\chi^2/df = 1.74$, RMSEA = 0.054, CFI = 0.95, TLI = 0.94). Third, the structural model was tested to assess the hypothesized causal paths among constructs, including the mediating effect of satisfaction. The bootstrapping technique with 5,000 resamples and the Sobel test were employed to verify mediation effects, following the procedure recommended by Preacher and Hayes (2008).

This research also adhered to established ethical standards for human subject studies. Ethical approval was obtained from the Research Ethics Committee of Dipa Makassar University prior to data collection. Each respondent provided informed consent,

which outlined the voluntary nature of participation, confidentiality measures, and assurance that responses would be used solely for academic purposes. To protect participant privacy, all data were anonymized and securely stored in password-protected files accessible only to the research team.

4. RESULTS AND DISCUSSION

The demographic profile of the respondents shows that the majority were female (59%) and aged between 20 and 22 years (64.5%) (Table 1). Most respondents came from the Faculty of Economics and Business (35%), followed by Computer Science (27.5%), Public Health (22.5%), and Education (15%). These data indicate that the sample adequately represents the distribution of active undergraduate students across faculties at Dipa Makassar University.

This demographic composition reflects a typical student population in private Indonesian universities, where female participation is higher and most students are in early adulthood, which aligns with similar findings by Lestari et al. (2023) and Nguyen and Le (2024).

Table 2 presents the mean, standard deviation, and reliability indices for all constructs. The mean scores of service quality (M = 4.07), marketing mix (M = 4.15), satisfaction (M = 4.12), and loyalty (M = 4.08) are all above the midpoint of 3.00, indicating generally positive perceptions among students.

Cronbach’s alpha, composite reliability (CR), and average variance extracted (AVE) values exceed the recommended thresholds ($\alpha > 0.70$, CR > 0.70, AVE > 0.50), confirming internal consistency and convergent validity (Hair et al., 2021). These results demonstrate that the measurement instruments are reliable and appropriate for SEM analysis. The high satisfaction and loyalty scores also suggest that students tend to maintain favorable attitudes toward

the university’s services and image, consistent with Han and Hyun (2022) who emphasized satisfaction as a determinant of relationship continuity in educational services. The confirmatory factor analysis (CFA) produced an excellent model fit across all indices.

These values are well within the acceptable cut-offs (RMSEA ≤ 0.05 , CFI ≥ 0.95), indicating that the measurement model fits the data very well (Hair et al., 2021) (Table 3). The strong model fit supports the validity of the hypothesized relationships, suggesting that students’ perceptions of service quality, marketing mix, and satisfaction are conceptually and empirically distinct, as show in figure 2. Similar results were found by Khan and Azam (2023), who reported comparable model adequacy in examining student satisfaction in Southeast Asian universities. he structural model analysis was performed using AMOS version 26 to test direct and indirect effects.

As summarized in Table 4, only two of the five direct relationships were statistically significant. Service quality had no significant effect on satisfaction ($\beta = 0.207$, $P = 0.092$) or loyalty ($\beta = 0.270$, $P = 0.055$), indicating that students’ perceptions of service quality alone were insufficient to directly enhance their satisfaction or loyalty. This finding contrasts with Rahman and Singh (2024), who found that perceived service quality strongly drives satisfaction in South Asian universities, but aligns with Lestari et al. (2023), who observed weak direct effects in the Indonesian private university context.

Table 1: Demographic characteristics of respondents

Variable	Category	Frequency	Percentage
Gender	Male	98	49
	Female	102	51
Age	17–20 years	137	68.5
	21–23 years	63	31.5
Enrollment year	2023	91	45.5
	2024	109	54.5

Source: Primary data processed (2025)

Table 2: Descriptive statistics and construct reliability

Construct	Mean	Standard deviation	Cronbach’s α	Composite reliability	Average variance extracted
Service quality	4.07	0.62	0.887	0.903	0.654
Marketing mix	4.15	0.58	0.883	0.918	0.681
Student satisfaction	04.12	0.65	0.891	0.925	0.712
Student loyalty	4.08	0.60	0.879	0.921	0.689

Source: Primary data processed (2025)

Table 3: Model fit indices of structural equation model

GOF index	Obtained value	Cut-off value	Model fit evaluation
Chi-square	169.694	≤ 194.88 (df=164)	Good fit
Probability	0.364	≥ 0.05	Good fit
RMSEA	0.013	≤ 0.05	Good fit
GFI	0.925	≥ 0.90	Good fit
AGFI	0.903	≥ 0.90	Good fit
CMIN/DF	1.035	≤ 2.00	Good fit
TLI	0.993	≥ 0.95	Good fit
CFI	0.994	≥ 0.95	Good fit

Source: Primary data processed (2025)

The marketing mix, on the other hand, showed a significant positive effect on satisfaction ($\beta = 0.368$, $P = 0.001$), confirming that universities’ strategic marketing activities — such as program promotion, affordability, and accessibility — significantly influence students’ affective responses. However, the direct link between the marketing mix and loyalty was insignificant ($\beta = 0.016$, $P = 0.903$), suggesting that loyalty does not arise immediately from marketing efforts but through satisfaction. This is consistent with Suryani and Putra (2023) and Nguyen and Le (2024), who found that marketing strategies affect loyalty only when mediated by satisfaction.

Satisfaction had a strong and significant impact on loyalty ($\beta = 0.903$, $P = 0.000$), confirming that satisfied students tend to remain committed, recommend their institution, and maintain affiliation as alumni. This supports the service marketing logic proposed by Oliver (1999) and has been reconfirmed in recent studies (Han and Hyun, 2022; Yusof et al., 2024). Table 5 summarizes the mediating role of satisfaction in the relationships among service quality, marketing mix, and loyalty.

The mediation test results indicate that satisfaction did not mediate the relationship between service quality and loyalty (H_6 not supported, indirect $\beta = 0.187$, $P > 0.05$). This suggests that service quality alone does not sufficiently shape loyalty through satisfaction, echoing Chaudhary and Islam (2024) who found a similar pattern in Malaysian higher education institutions.

However, satisfaction fully mediated the relationship between marketing mix and loyalty (H_7 supported, indirect $\beta = 0.332$, $P < 0.01$). This implies that students’ positive responses to marketing strategies — such as program relevance, promotion, and pricing — influence loyalty only through the satisfaction mechanism. This finding aligns with Nguyen and Le (2024) and Khan and Azam (2023), reinforcing the central role of satisfaction in the relationship marketing framework. These results confirm that satisfaction is both an emotional and cognitive bridge linking students’ evaluation of institutional marketing to their long-term commitment. It also highlights that marketing-related

Table 4: Direct, indirect, and total effects

Path	Estimate (β)	Standard error	Critical ratio	P	Result
H ₁ : Service quality→Satisfaction	0.207	0.123	1.687	0.092	Insignificat
H ₂ : Marketing mix→Satisfaction	0.368	0.113	3.259	0.001	Significant
H ₃ : Service quality→Loyalty	0.270	0.141	1.921	0.055	Insignificat
H ₄ : Marketing mix→Loyalty	0.016	0.134	0.121	0.903	Insignificat
H ₅ : Satisfaction→Loyalty	0.903	0.190	4.741	0.000	Significant

Source: Primary data processed (2025)

Table 5: Mediation analysis

Mediation path	Direct effect	Indirect effect	Result
H ₆ : Service quality→Satisfaction→Loyalty	0.270	0.187	Insignificant
H ₇ : Marketing mix→Satisfaction→Loyalty	0.016	0.332	Significant

Source: Primary data processed (2025)

experiences are more decisive in driving loyalty than service quality perceptions alone.

The results collectively validate and refine the proposed conceptual model. They reveal that marketing mix has a stronger influence on satisfaction and loyalty than service quality, which may reflect the current competitive environment of private universities in Indonesia. Students are increasingly responsive to tangible marketing efforts such as promotional activities, pricing, and communication rather than to abstract service dimensions alone. This aligns with the findings of Nguyen and Le (2024) and Suryani and Putra (2023), which suggest that satisfaction mediates the effects of marketing strategies on loyalty in ASEAN higher education institutions.

From a theoretical standpoint, the findings extend the SERVQUAL (Parasuraman et al., 1988) and 7Ps marketing mix models (Booms and Bitner, 1981) by empirically confirming the mediating role of satisfaction in a developing-country context. The results also contribute to the literature by demonstrating that relationship marketing theory applies effectively in educational settings, where satisfaction functions as a relational bond between institutional practices and student commitment.

From a managerial perspective, the findings suggest that universities should focus on enhancing satisfaction through effective marketing strategies, consistent communication, and fair value offerings. Improvements in administrative efficiency and personalized student services should be complemented by promotional activities and pricing policies that match students' expectations. By doing so, institutions can strengthen long-term loyalty, retention, and reputation, key indicators of sustainability in higher education (Han and Hyun, 2022; Yusof et al., 2024).

5. CONCLUSION

This study investigated the effects of service quality and marketing mix on student loyalty through the mediating role of student satisfaction at Dipa Makassar University. Using structural equation modeling (SEM) with AMOS version 29 and data from

200 respondents, the study confirmed that the overall model fits the data excellently (CFI = 0.994; RMSEA = 0.013; TLI = 0.993; $\chi^2/df = 1.035$). The results reveal that while both service quality and marketing mix positively influence satisfaction, only the marketing mix shows a statistically significant effect. Moreover, satisfaction strongly predicts loyalty, confirming its critical role in retaining students and strengthening institutional relationships.

The findings further demonstrate that satisfaction mediates the relationship between marketing mix and loyalty, but not between service quality and loyalty. This indicates that marketing efforts such as pricing fairness, promotion, and communication play a more decisive role in shaping loyalty through satisfaction than service delivery factors alone. Thus, the study concludes that enhancing student satisfaction through a well-managed marketing mix is fundamental for building loyalty within the higher education context in Indonesia.

REFERENCES

- Abdullah, F. (2006), Measuring service quality in higher education: HEDPERF versus SERVPERF. *Marketing Intelligence and Planning*, 24(1), 31-47.
- Arifin, M., Jannah, R. (2024), Determinants of student retention in Indonesian private universities: A post-pandemic perspective. *Asian Journal of Education and Development*, 18(2), 134-148.
- Booms, B.H., Bitner, M.J. (1981), Marketing strategies and organizational structures for service firms. In: Donnelly, J.H., George, W.R., editors. *Marketing of Services*. Chicago, IL: American Marketing Association. p47-51.
- Chaudhary, A., Islam, M. (2024), Perceived value and satisfaction as mediators between service quality and loyalty in higher education. *Journal of Marketing for Higher Education*, 34(1), 22-45.
- Clemes, M.D., Gan, C.E.C., Kao, T.H. (2008), University student satisfaction: An empirical analysis. *Journal of Marketing for Higher Education*, 17(2), 292-325.
- Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M. (2021), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. 3rd ed. Thousand Oaks, CA: Sage Publications.
- Han, H., Hyun, S.S. (2022), Customer engagement and loyalty in education service contexts: Revisiting the satisfaction-trust-commitment model. *The Service Industries Journal*, 42(5-6), 311-329.
- Helgesen, Ø., Nettet, E. (2007), Images, satisfaction and antecedents: Drivers of student loyalty? *International Journal of Educational Management*, 21(1), 126-136.
- Khan, A.A., Azam, M. (2023), Digital marketing mix and student satisfaction in higher education institutions: Evidence from Southeast Asia. *Education and Information Technologies*, 28(4), 5543.
- Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia. (2023). *Pangkalan Data Pendidikan Tinggi (PDDikti)*. Available from: <https://pddikti.kemdikbud.go.id>
- Lestari, D., Rahardjo, W., Yusuf, M. (2023), Exploring student satisfaction

- and loyalty in Indonesian universities: A structural approach. *International Journal of Educational Management*, 37(6), 1023-1041.
- LLDIKTI, Wilayah IX. 2023. Laporan Kinerja Layanan Lembaga Pendidikan Tinggi Wilayah IX.
- Nasution, R., Harahap, A., Tanjung, D. (2023), Challenges of higher education in Eastern Indonesia: Infrastructure, quality, and competitiveness. *Indonesian Journal of Education Policy*, 12(3), 88-104.
- Nguyen, T.M., Le, H.T. (2024), Revisiting student loyalty models in ASEAN universities: The mediating role of satisfaction and trust. *Asia Pacific Journal of Marketing and Logistics*, 36(1), 142-165.
- Oliver, R.L. (1999), Whence consumer loyalty? *Journal of Marketing*, 63(4), 33-44.
- Parasuraman, A., Zeithaml, V.A., Berry, L.L. (1988), SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Preacher, K.J., Hayes, A.F. (2008), Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891.
- Rahman, A., Singh, P. (2024), Service quality and institutional loyalty in higher education: Insights from developing economies. *Journal of Service Theory and Practice*, 34(2), 177-197.
- Suryani, N., Putra, A.D. (2023), Integrated marketing mix and satisfaction in private higher education: The Indonesian experience. *Management Research Review*, 46(8), 1580-1599.
- Yusof, N., Azman, S., Rahim, N. (2024), Student experience and loyalty in Malaysian higher education: The moderating role of perceived value. *Journal of Higher Education Policy and Management*, 46(3), 278-296.