Enhancing Student Loyalty through Educational Quality and Service Innovation: A Case Study at STIE AMKOP Makassar

Dian Angraini[1], Yusrab Ardianto Sabban[2], Saban Echdar[3*], Partono Sumaryo[4], Muhammad Fachmi[5]

[1] Master's Student, Department of Management, STIE Amkop, Makassar, Indonesia.

[2] Department of Economics, Tadulako University, Palu, Indonesia

[3] Department of Management, STIE Amkop, Makassar, Indonesia.

[4] Department of Management, STIE Amkop, Makassar, Indonesia.

[5] Department of Digital Business, State University of Surabaya, Surabaya, Indonesia.

*Email: angrainidian031@gmail.com

Abstract. Purpose – This study aims to examine the effects of educational quality and educational services on student loyalty and satisfaction at STIE AMKOP Makassar, with student loyalty also tested as a mediating variable.

Design/methodology/approach – A quantitative research approach was employed, utilizing survey data collected from 102 undergraduate students at STIE AMKOP Makassar. Data analysis involved validity and reliability testing, path analysis, as well as t-tests and F-tests to assess the relationships among variables.

Findings – The results indicate that both educational quality and educational services have significant and positive effects on student loyalty and satisfaction. Additionally, student loyalty mediates the relationship between educational quality and services with satisfaction, highlighting its pivotal role in enhancing the overall student experience. The proposed model explains 63.9% of the variance in student loyalty and 65.0% of the variance in student satisfaction. These findings are consistent with prior studies emphasizing the dual importance of academic excellence and high-quality service in fostering student retention and satisfaction.

Practical implications – The study suggests that higher education institutions should pursue a balanced strategy that continuously improves both educational quality and support services. Efforts to foster student loyalty, such as through active engagement and responsive support, are also crucial for increasing overall satisfaction and long-term retention.

Originality/value – This research contributes to the literature by empirically confirming the mediating effect of student loyalty in the relationship between educational quality, services, and satisfaction, particularly in the context of Indonesian private higher education.

Keywords: Educational Quality, Educational Services, Student Loyalty, Student Satisfaction.

Introduction

In recent years, the higher education sector in Indonesia has experienced increasingly intense competition, not only among state universities but also among private institutions. Students, as consumers, frequently compare universities and make decisions based on their satisfaction with the services provided. This situation compels higher education institutions to consistently improve both the quality and delivery of educational services in order to foster student loyalty (Windasari et al., 2021). One of the primary challenges faced by universities in Indonesia is the relatively low quality of education, which necessitates cultural reforms and a shift from bureaucratic models toward more corporate, outcome-oriented approaches emphasizing academic excellence, productivity, accuracy, and stakeholder satisfaction.

STIE Amkop Makassar, a leading private higher education institution in South Sulawesi, has continued to strengthen its efforts to provide optimal educational services as a strategy to retain student loyalty. The significance of student loyalty lies in its influence on institutional reputation, student retention, and positive word-of-mouth promotion (Sibarani, 2023; Zeithaml et al., 1996). In the era of globalization, educational quality is no longer optional but rather a necessity, as it shapes graduates' competitiveness and adaptability in a dynamic global landscape (Wiyani, 2011; Patilima, 2022). Nevertheless, the quality of education in Indonesia is still hampered by issues such as uneven teaching competence, limited facilities, and inefficient management practices (Ab Marisyah et al., 2019; Ujud et al., 2023).

Numerous studies have explored the relationships among service quality, student satisfaction, and loyalty, though findings remain inconsistent across contexts (Adnan & Subagiyo, 2020; Budiastuti et al., 2022; Sibarani, 2021; Urfany, 2022; Sirhan et al., 2016). It has become clear that student satisfaction acts as a crucial mediator in the relationship between service quality and student loyalty. However, empirical research that explicitly examines the mediating role of student satisfaction, especially within the context of private universities in Makassar, is still limited.

Given this research gap, this study aims to analyze the effects of educational quality and educational services on student loyalty, with student satisfaction serving as a mediating variable at STIE Amkop Makassar. The main research problem addressed is how student loyalty can be maximized through increased satisfaction with educational services at STIE Amkop Makassar.

Conceptually, educational quality encompasses administrative efficiency, academic services, and meaningful interactions between students and faculty (Aisyatunnadiya, 2021; Pristiwanti, 2022). Educational service quality includes the quality of teaching, faculty competence, campus facilities, educational management, and administrative services (Kemendikbudristek, 2022). Student loyalty is commonly measured by indicators such as re-enrollment, retention, and the willingness to recommend the institution to prospective students (Kotler & Keller in Ika & Widyaningrum, 2020).

This research is supported by a range of previous studies that have investigated the interplay between educational quality, service quality, satisfaction, and student loyalty (Windasari et al., 2021; Ahlan Rasyidi, 2024; Murtiningsih & Wahyudi, 2021). However, a significant gap remains regarding the mediating effect of student satisfaction, particularly in the context of private institutions in Makassar.

Based on the literature and prior research, this study proposes several hypotheses: (1) educational quality positively affects student loyalty, (2) educational services positively affect student loyalty, (3) educational quality and services together positively affect student loyalty, (4) educational quality positively affects student satisfaction, (5) educational services positively affect student satisfaction, (6) student loyalty positively affects satisfaction, and (7) educational quality and services positively affect loyalty through student satisfaction as a mediating variable.

Methods

This research adopts a quantitative design to examine the relationships among four primary variables: educational quality (X1), educational services (X2), student loyalty (Y), and student satisfaction (Z). The study utilizes a causal approach, aiming to identify direct and indirect effects between independent variables and the dependent variable through the mediating role of student satisfaction. The selection of this design is appropriate for testing both direct and mediated effects within a structural framework.

The research was conducted at STIE AMKOP Makassar, an institution specializing in economics and business education located in Makassar, South Sulawesi, Indonesia. The study was carried out over a one-month period, from April to May 2025.

The population for this study comprised all active undergraduate students at STIE AMKOP Makassar in 2024, totaling 1,012 individuals. The research sample was drawn using a non-probability, convenience sampling technique, which selects respondents based on their availability and willingness to participate at the time of data collection (Sugiyono, 2019). Accordingly, a sample of 100 students was recruited for the survey.

Data were collected using a structured questionnaire. Responses were measured using a five-point Likert scale, ranging from "Strongly Disagree" (1) to "Strongly Agree" (5), to capture students' perceptions of educational quality, service quality, satisfaction, and loyalty. The descriptive analysis was employed to summarize and present the data in frequency tables and distribution charts (Egziabher & Edwards, 2013).

Prior to hypothesis testing, the validity and reliability of the questionnaire were evaluated. Validity was assessed using Corrected Item-Total Correlation, where items were deemed valid if the correlation coefficient exceeded the critical value at a 5% significance level (Sugiyono in Dewi & Sudaryanto, 2020; Rosita et al., 2021). Reliability was tested using Cronbach's Alpha, with a value greater than 0.70 considered acceptable for internal consistency (Dewi & Sudaryanto, 2020).

For hypothesis testing and to examine both direct and indirect relationships among variables, path analysis was employed. Path analysis is a statistical technique that enables researchers to test complex models involving mediation and multiple predictors (Juanim, 2020; Saadah et al., 2024). The structural equations in this study can be represented as follows:

$Y = p1X1 + p2X2 + e1$

$Z = p3Y + e2$

where p1, p2, and p3 denote path coefficients, and e1 and e2 represent error terms.

The hypotheses were tested using t-tests for individual predictors and F-tests for simultaneous effects. The t-test determines the significance of each independent variable's effect on the dependent variable, while the F-test assesses the joint significance of all predictors. Significance is established at the 5% level ($p < 0.05$). Additionally, the coefficient of determination (R^2) was calculated to assess the proportion of variance in the dependent variable explained by the independent variables, with the formula: $Kd = r^2 \times 100\%$.

Overall, the combination of quantitative survey methods, validity and reliability testing, and advanced path analysis ensures that the research findings are both rigorous and robust in examining the determinants of student loyalty and satisfaction at STIE AMKOP Makassar.

Result and Discussion

Result

This study investigated the effects of educational quality and educational services on student loyalty and satisfaction among undergraduate students at STIE AMKOP Makassar. The data analysis involved several steps, including validity and reliability testing, path analysis, and hypothesis testing using t-tests and F-tests. The detailed findings and interpretations are presented below.

Validity and Reliability

The validity and reliability of the research instrument were tested to ensure the quality and consistency of the data collected. As shown in Table 1, the Pearson correlation values for all questionnaire items across the four variables—educational quality, educational services, student loyalty, and student satisfaction—were well above the acceptable threshold of 0.30. This demonstrates that each item accurately measures its respective construct. Additionally, the Cronbach's Alpha coefficients for all variables ranged from 0.795 to 0.817, which surpasses the recommended minimum of 0.70 for social science research. This indicates a high degree of internal consistency, confirming that the measurement tool is reliable and appropriate for the analysis.

Table 1

Descriptive Statistics of Main Variables

Variable	Pearson Correlation (Min–Max)	Cronbach's Alpha	Status

Educational Quality (X1)	0.781 – 0.866	0.817	Valid & Reliable
Educational Services (X2)	0.749 – 0.824	0.811	Valid & Reliable
Student Loyalty (Z)	0.636 – 0.770	0.795	Valid & Reliable
Student Satisfaction (Y)	0.719 – 0.833	0.813	Valid & Reliable

The robust psychometric properties of the instrument strengthen the credibility of the findings and enable the use of further advanced statistical analyses. This also aligns with previous research suggesting the importance of rigorous instrument validation in educational studies (Rosita et al., 2021).

Path Analysis: Direct and Indirect Effects

The relationships among the studied variables were analyzed using path analysis. The first regression model assessed the direct effects of educational quality and educational services on student loyalty. As seen in Table 2, both independent variables produced positive and significant coefficients: educational quality (B = 0.238, t = 3.756, $p < 0.05$) and educational services (B = 0.478, t = 7.959, $p < 0.05$). The adjusted R Square value of 0.639 indicates that these two factors explain approximately 63.9% of the variance in student loyalty.

Table 2

Path Analysis Results: Student Loyalty as Dependent Variable

Predictor	Coefficient (B)	t-value	Sig.
Constant	6.745	—	—
Educational Quality (X1)	0.238	3.756	0.000
Educational Services (X2)	0.478	7.959	0.000
Adjusted R Square	0.639		

These findings indicate that improvements in both educational quality and services directly translate to increased student loyalty. Interestingly, the coefficient for educational services is nearly double that of educational quality, suggesting that while both factors are crucial, the perceived service experience (such as responsiveness, facilities, and administration) has a stronger impact on students' decisions to remain loyal to the institution. This supports the argument made by Murtiningsih & Wahyudi (2021), who found that service quality is a significant determinant of loyalty in higher education settings.

The second regression model considered student satisfaction as the dependent variable and included educational quality, educational services, and student loyalty as predictors. Table 3 presents the results.

Table 3.
Path Analysis Results (Equation 2: Student Satisfaction as Dependent Variable)

Predictor	Unstandardized Coefficient (B)	t-value	Sig.
Constant	4.557	—	—
Educational Quality (X1)	0.543	7.924	0.000
Educational Services (X2)	0.198	2.552	0.012
Student Loyalty (Z)	0.456	4.488	0.000
Adjusted R Square	0.65		

All three predictors—educational quality, educational services, and student loyalty—show positive and statistically significant effects on student satisfaction. Educational quality is the most influential predictor in this model, consistent with previous research indicating that academic experience and the perceived value of instruction are central to overall satisfaction (Windasari et al., 2021; Budiastuti et al., 2022). The coefficient for student loyalty also demonstrates that students who feel loyal to their institution are more likely to report higher satisfaction, supporting the hypothesis regarding the mediating role of loyalty in the relationship between quality/services and satisfaction.

It is important to note that while the coefficient for educational services is lower than that of educational quality, it remains statistically significant. This finding suggests that while tangible academic and teaching-related factors remain paramount, high-quality support services also enhance the overall satisfaction experienced by students—a trend observed in successful higher education institutions worldwide (Zeithaml et al., 1996; Murtiningsih & Wahyudi, 2021).

Summary of Hypothesis Testing

The main hypotheses were tested using t-tests and F-tests. Table 4 summarizes the acceptance or rejection of each hypothesis:

Table 4.
Summary of Hypothesis Testing

No.	Hypothesis	t/F value	Sig.	Result
H1	Educational quality has a positive effect on student loyalty	3.756 (t)	0.000	Accepted (significant)
H2	Educational services have a positive effect on student loyalty	7.959 (t)	0.000	Accepted (significant)
H3	Educational quality has a positive effect on student satisfaction	7.924 (t)	0.000	Accepted (significant)

H4	Educational services have a positive effect on student satisfaction	2.552 (t)	0.012	Accepted (significant)
H5	Student loyalty has a positive effect on student satisfaction	4.488 (t)	0.000	Accepted (significant)
H6	Educational quality and services simultaneously affect student loyalty	90.391 (F)	0.000	Accepted (significant)
H7	Educational quality and services affect loyalty through student satisfaction (mediation model)	63.554 (F)	0.000	Accepted (significant)

These results reinforce the theoretical model proposed in this study. Both educational quality and services have significant direct effects on loyalty and satisfaction, and loyalty also mediates the effect on satisfaction. The relatively high Adjusted R Square values for both regression models (0.639 and 0.650, respectively) further indicate that the proposed variables explain a substantial proportion of the variance in loyalty and satisfaction among students.

These findings are consistent with the broader literature on educational management, confirming that continuous improvement in both academic and service domains is essential for fostering student loyalty and satisfaction (Windasari et al., 2021; Murtiningsih & Wahyudi, 2021). In the context of STIE AMKOP Makassar, these results emphasize the need for institutional strategies that address not only the academic quality but also the holistic student experience, including effective administration and student support services. Institutions that invest in both areas are better positioned to retain students and sustain competitive advantage in an increasingly dynamic higher education landscape.

Discussion

The results of this study demonstrate that both educational quality and educational services have significant and positive effects on student loyalty and satisfaction at STIE AMKOP Makassar. The findings provide empirical support for the conceptual framework proposed and align with several key theories and previous empirical research in the field of educational management.

First, the significant impact of educational quality on both student loyalty and satisfaction affirms the central role of academic excellence in higher education institutions. This is in line with the argument by Windasari et al. (2021) and Budiastuti et al. (2022), who emphasize that consistent delivery of high-quality teaching, curriculum relevance, and faculty competence are fundamental to student engagement and institutional reputation. The present study found that educational quality not only encourages students to remain committed to their institution but also enhances their overall academic experience and satisfaction. This is particularly relevant in the context of Indonesian private higher education, where competition among institutions is intensifying and student expectations are continually rising.

Second, the strong and statistically significant relationship between educational services and student loyalty and satisfaction highlights the importance of non-academic factors in the student experience. Services such as administrative support, responsive communication, modern facilities, and effective management practices contribute to a holistic educational environment that supports learning and personal development. This finding corroborates Murtiningsih & Wahyudi (2021) and Zeithaml et al. (1996), who suggest that service quality is a vital determinant of customer (student) loyalty in the service sector, including higher education. The relatively larger coefficient for educational services in predicting student loyalty also indicates that students value the overall service climate, not just the classroom experience.

The significant positive effect of student loyalty on satisfaction, as evidenced in the path analysis, confirms the mediating role of loyalty between educational quality/services and satisfaction. This mediation supports the argument that students who feel a strong sense of loyalty toward their institution are more likely to experience higher satisfaction levels (Sirhan et al., 2016; Murtiningsih & Wahyudi, 2021). In practice, this means that institutional policies aimed at strengthening student attachment and commitment—through community-building activities, recognition, and transparent communication—may further enhance satisfaction and retention rates.

Interestingly, the findings indicate that both educational quality and educational services are nearly equally important in shaping the student experience at STIE AMKOP Makassar. This supports the "dual focus" strategy for institutional development: while academic quality remains the foundation of any educational institution, service quality and support mechanisms are essential for translating academic engagement into long-term loyalty and satisfaction (Qomariah, 2012; Budiastuti et al., 2022). The high Adjusted R Square values (63.9% for loyalty and 65.0% for satisfaction) further underscore that the proposed model captures the key determinants of positive student outcomes in this context.

From a practical perspective, these results provide actionable insights for educational leaders and policymakers. Investment in continuous improvement of teaching quality—such as professional development for faculty, curriculum updates, and pedagogical innovation—should be matched by sustained efforts to enhance support services, campus facilities, and administrative responsiveness. Institutions that achieve this balance are more likely to foster not only student satisfaction but also loyalty, which is vital for institutional sustainability in a competitive landscape.

Finally, these findings contribute to the literature by empirically validating the mediating effect of student loyalty in the relationship between educational quality, service quality, and satisfaction—an area that has been relatively underexplored, especially in the context of Indonesian private higher education. Future research could expand on this model by including additional variables such as institutional image, perceived value, or trust, and by applying the model in different educational or cultural settings to test its generalizability.

In conclusion, this study provides strong evidence that both educational and service quality are indispensable for achieving student loyalty and satisfaction. These factors should be prioritized equally by higher education institutions seeking to enhance their competitive edge and fulfill their mission of delivering meaningful, student-centered learning experiences.

Conclusion

1261

This study has empirically demonstrated that both educational quality and educational services significantly influence student loyalty and satisfaction among undergraduate students at STIE AMKOP Makassar. The findings show that improvements in educational quality and services lead to greater student loyalty, which in turn enhances student satisfaction. Furthermore, the results highlight that both dimensions—academic excellence and service support—should be considered strategic priorities for higher education institutions aiming to retain students and foster positive educational experiences.

The mediating role of student loyalty in the relationship between educational quality, educational services, and satisfaction underscores the importance of fostering a sense of belonging and commitment among students. In practice, institutions are encouraged to invest in continuous improvement in both teaching quality and the quality of support services to maintain competitiveness and meet the evolving expectations of students.

These findings contribute to the literature by confirming that a dual focus on quality of education and quality of service is essential for promoting loyalty and satisfaction within higher education, especially in the context of private universities in Indonesia. Future research could expand upon this model by including additional mediating variables, or by examining other educational settings and cultural contexts to enhance the generalizability of the results.

References

Adnan, M., & Subagiyo. (2020). Pengaruh Kualitas Pelayanan, Citra Merek dan Persepsi Harga Terhadap Loyalitas dan Kepuasan Mahasiswa Sebagai Variabel Intervening pada Universitas Satya Negara Indonesia Jakarta. *Jurnal Satya Mandiri: Manajemen & Bisnis, Magister Manajemen Universitas Satya Negara Indonesia*, 6(2).

Arnita Niroha Halawa, & Dety Mulyanti. (2023). Faktor-Faktor Yang Mempengaruhi Peningkatan Kualitas Mutu Instansi Pendidikan Dan Pembelajaran. *Inspirasi Dunia: Jurnal Riset Pendidikan Dan Bahasa*, 2(2), 57–64. https://doi.org/10.58192/insdun.v2i2.757

Azis, A. (2020). Pengaruh kualitas pelayanan terhadap kepuasan pelanggan. *Insight Management Journal*, 1(1), 21–25. https://doi.org/10.47065/imj.v1i1.13

Egziabher, T. B. G., & Edwards, S. (2013). Pengaruh Motivasi Kerja dan Kominten Organisasi Terhadap Kinerja. *Africa's Potential for the Ecological Intensification of Agriculture*, 53(9), 1689–1699.

Elistia, E., Jovita Nathania, Rojuaniah, Lista Meria, & Mitsalina Tantri. (2023). Perceived Quality, Trust, Satisfaction on Student Loyalty in Private Universities. *Journal of Business and Behavioural Entrepreneurship*, 6(2), 51–68. https://doi.org/10.21009/jobbe.006.2.05

Fadlilah, A. (2019). Pengaruh Faktor-Faktor Pembentuk Loyalitas Mahasiswa Fakultas Ekonomi Universitas Negeri Semarang.

I Nyoman Rinala, I. M. Y. (2013). Kepuasan Dan Loyalitas Mahasiswa Pada Sekolah Tinggi Pariwisata Nusa Dua Bali. *E-Journal Program Pascasarjana Universitas Pendidikan Ganesha*, 4, 1–12.

Kamal, M., Kurniawan, T. A., Satya, U., Indonesia, N., Tracking, M. B., Tracking, M. B., & Maja, P. M. (2021). Jurnal Ilmiah Fakultas Teknik LIMIT'S Vol.17 No 2 September 2021. *Jurnal Ilmiah Fakultas Teknik LIMIT'S*, 17(2), 43–49.

Mulyawan, A. (2016). Pengaruh Kualitas Layanan Akademik Terhadap Kepuasan Mahasiswa Serta Implikasinya Pada Loyalitas Mahasiswa (Studi Pada Sekolah Tinggi Manajemen Informatika Dan Komputer Di Kota Bandung). *Bisnis & Entrepreneurship*, 10(2), 119–131.

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

Patilima, S. (2022). Peran Kepala Sekolah dalam Memberikan Motivator. *Prosiding Seminar Nasional Pendidikan Dasar*, 0(0), 228–236. http://ejurnal.pps.ung.ac.id/index.php/PSNPD/article/view/1069

Publikasi, K., & Pattiwaellapia, O. S. (2020). Bagaimana Kualitas Pelayanan dan Fasilitas Belajar dapat Mempengaruhi Loyalitas Mahasiswa dengan Mediasi Kepuasan Mahasiswa? *Business Innovation and Entrepreneurship Journal*, 2(4), 252–262. https://doi.org/10.35899/biej.v2i4.156

Rosita, E., Hidayat, W., & Yuliani, W. (2021). Uji Validitas Dan Reliabilitas Kuesioner Perilaku Prososial. *FOKUS (Kajian Bimbingan & Konseling Dalam Pendidikan)*, 4(4), 279. https://doi.org/10.22460/fokus.v4i4.7413

Saadah, A. A., Fakhriyana, D., & Hersugondo, H. (2024). Identifikasi Pola Perilaku Remaja Dengan Path Analysis. *Jurnal Gaussian*, 12(4), 499–508. https://doi.org/10.14710/j.gauss.12.4.499-508

Sibarani, R. (2023). Pengaruh Kualitas Pelayanan Terhadap Loyalitas Mahasiswa Dengan Kepuasan Sebagai Variabel Intervening. *Prosiding*, 3, 10–17. https://doi.org/10.59134/prosidng.v3i.288

Sirhan, F., Wahyu, W., & Agung, S. (2016). Pengaruh Kualitas Pelayanan Terhadap Kepuasan Dan Loyalitas Mahasiswa (Studi pada Mahasiswa Strata I Fakultas Ilmu Sosial dan Ilmu Politik Universitas Merdeka Malang). *Jurnal Bisnis Dan Manajemen*, 3(1), 120–134. https://media.neliti.com/media/publications/75420-ID-pengaruh-kualitas-pelayanan-terhadap-kep.pdf

Ujud, S., Nur, T. D., Yusuf, Y., Saibi, N., & Ramli, M. R. (2023). Penerapan Model Pembelajaran Discovery Learning Untuk Meningkatkan Hasil Belajar Siswa Sma Negeri 10 Kota Ternate Kelas X Pada Materi Pencemaran Lingkungan. *Jurnal Bioedukasi*, 6(2), 337–347. https://doi.org/10.33387/bioedu.v6i2.7305

Wahyuningsih, S. E. (2007). Tingkat Loyalitas Mahasiswa Atas Jasa Pendidikan di Perguruan Tinggi. *Lembaran Ilmu Kependidikan*, 36(2), 131–137.

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