



Educational Service Quality and Perceived Institutional Culture in Islamic Higher Education: A Quality Governance Perspective on Student Satisfaction and Loyalty

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Abstract:

In Islamic higher education, students encounter formal quality assurance chiefly through recurring academic and administrative experiences. This study investigated whether educational service quality and perceived institutional culture were associated with student satisfaction and loyalty, and whether satisfaction accounted for part of either association with loyalty. Survey data from 250 undergraduate Islamic Religious Education students at three Islamic higher education institutions in Yogyakarta, Indonesia, were analyzed using partial least squares structural equation modeling. The measurement model satisfied the stated reliability and validity criteria. Service quality was associated with both satisfaction and loyalty. Satisfaction, in turn, accounted for part of the association between service quality and loyalty. Perceived institutional culture showed a different pattern: it was directly associated with loyalty but not with satisfaction, and its indirect association with loyalty was not significant. Taken together, the findings point to a service-related pathway involving satisfaction and a separate culture-loyalty association. For quality governance, this distinction suggests that student feedback should inform traceable service improvements, while institutional values should be examined through their enactment in teaching, administration, communication, and leadership.

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Introduction (مقدمة)

Quality assurance has limited managerial value when reduced to periodic accreditation. Maintaining educational standards requires continuing coordination across teaching, academic administration, student support, leadership, and institutional responses to feedback. Quality

governance refers here to that coordinating work: linking assurance procedures, service systems, leadership practices, organizational values, and feedback. It is used as an interpretive lens, not as a construct in the statistical model. This understanding reflects the view that quality improvement depends on sustained alignment among institutional purposes, people, and processes, as well as consistency between formal structures and everyday practice (Bendermacher et al., 2017; Harvey & Stensaker, 2008; Huisman, 2025; Krooi et al., 2024).

From the students' perspective, quality governance becomes visible in two closely related settings: the services they receive and the conduct through which institutional values are expressed. Established service-quality models describe the former in terms of reliability, responsiveness, assurance, empathy, tangibility, and experienced performance (Cronin & Taylor, 1992; Parasuraman et al., 1988). Higher education research locates these judgments in teaching, academic support, administration, facilities, and lecturer-student interaction and relates them to satisfaction and loyalty (Supriyanto et al., 2025; Teeroovengadum et al., 2019; Toscano-Hernández et al., 2024). Culture is inferred less directly. Students do not observe an institution's shared assumptions, values, and practices in their entirety; they recognize selected expressions in teaching, assessment, communication, administration, leadership, and institutional routines (Denison & Mishra, 1995; Schein, 2010). Perceived institutional culture captures this recognition through students' assessments of professionalism, integrity, innovation, value-based leadership, and enacted institutional values. In Islamic higher education, the same experiences give students grounds to judge both how well institutional services function and whether fairness, care, responsibility, and religious-ethical commitments are evident in practice.

Student satisfaction and loyalty provide related but non-equivalent views of the student-institution relationship. Satisfaction summarizes students' evaluations of their educational experience, whereas loyalty encompasses intentions to continue, recommend the institution, speak positively about it, and maintain an institutional connection (Brown & Mazzarol, 2009; Helgesen & Nettet, 2007). Meta-analytic evidence identifies satisfaction as an important correlate of loyalty while also showing that loyalty reflects a wider set of institutional and relational considerations (de Oliveira Santini et al., 2017, 2024). Service quality may therefore relate to loyalty both directly and indirectly through satisfaction. Perceived culture may follow a different pattern if students recognize institutional values without translating that recognition into a more favorable overall evaluation of day-to-day educational experience.

These two research traditions have rarely been brought together in the same model. Service-quality studies generally begin with students' evaluations of educational performance and trace them to satisfaction or loyalty, whereas culture research more often looks inward at organizational processes, staff practices, and shared values. The quality-governance perspective makes a different comparison possible. Service quality reflects how institutional systems are experienced in students' routine encounters, while perceived institutional culture indicates whether institutional values are visible in those encounters. Quality governance is not modeled as a separate variable; it provides the lens for reading these domains as distinct but connected forms of evidence. What this study adds is a student-level comparison of educational service quality and perceived institutional culture, including their direct and satisfaction-mediated relationships with loyalty. The comparison is particularly relevant in Islamic higher education, where professional service standards and religious-ethical commitments are expected to coexist in institutional practice.

Seven hypotheses specify the proposed model. Educational service quality is expected to be positively associated with student satisfaction (H1) and student loyalty (H2), while perceived institutional culture is expected to be positively associated with satisfaction (H3) and loyalty (H4). Student satisfaction is expected to be positively associated with loyalty (H5). The model further proposes an indirect relationship between educational service quality and loyalty through

satisfaction (H6) and an indirect relationship between perceived institutional culture and loyalty through satisfaction (H7).

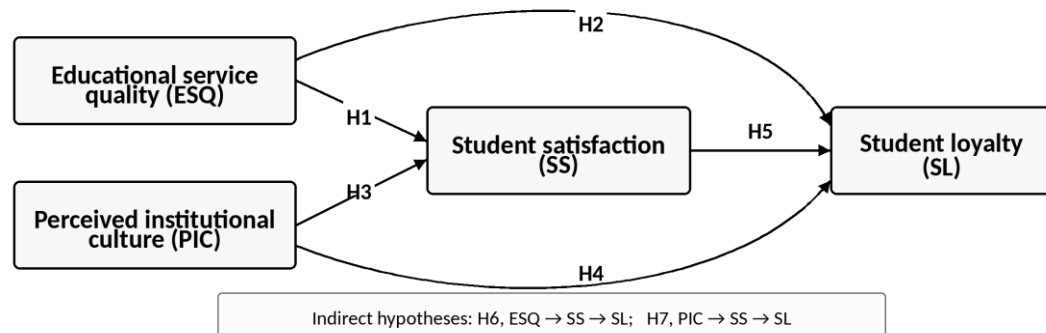


Figure 1. Conceptual model of educational service quality, perceived institutional culture, satisfaction, and loyalty

Method (منهج)

Research design, setting, and participants

A cross-sectional survey examined associations among educational service quality, perceived institutional culture, student satisfaction, and student loyalty. Data were collected through Google Forms in June-July 2024 from Islamic Religious Education undergraduates at three Islamic higher education institutions in Yogyakarta, Indonesia. As all perceptions were measured once, the design estimates associations rather than temporal or causal relationships.

The three institutions were selected because each offered an undergraduate Islamic Religious Education program and held Unggul (Excellent) institutional accreditation when the data were collected. These shared features provided a common academic and accreditation baseline, although the campuses were not assumed to be identical. The study was designed to examine the proposed relationships within these settings rather than to represent Islamic higher education across Yogyakarta or Indonesia. Eligible respondents were active students in semesters 3–7, giving them prior experience of teaching, academic administration, student support, and institutional routines. The questionnaire was circulated through student messaging groups at each institution. Because participation was voluntary, recruitment remained convenience-based and individual selection probabilities could not be determined.

Responses were obtained from 250 eligible students: 100 from institution A (40%) and 75 each from institutions B and C (30% each). The institutions were anonymized, and no response was removed. These numbers describe the achieved sample rather than each institution's proportion of the underlying student population. The responses were combined because the analysis focused on relationships across the full sample rather than comparisons among campuses. A shared academic program and accreditation status did not rule out differences in governance routines, resources, leadership practices, student composition, or the enactment of institutional values. Such differences may have shaped students' perceptions and the estimated relationships. Because measurement invariance and institution-specific paths were not examined, the pooled coefficients should not be taken to mean that the relationships were identical across the three institutions. The sample was adequate for estimating the specified PLS-SEM model (Hair et al., 2019), but this adequacy does not establish population representativeness.

Measures and instrument development

The questionnaire comprised 37 items rated from 1 (strongly disagree) to 5 (strongly agree).

Educational service quality was measured with 22 items covering teaching competence, academic reliability, administrative responsiveness, empathy, academic support, and value-oriented practice. Eight perceived institutional-culture items addressed professionalism, integrity, innovation, value-based leadership, and enacted institutional values. Satisfaction and loyalty used three and four items, respectively. All constructs were reflective because their indicators manifested the underlying perceptions expected to covary.

Table 1 summarizes each construct, its sources, and a representative item. The English examples preserve the meaning of the administered Indonesian items.

Table 1. Measurement constructs

Construct	Content represented	Items	Representative item	Primary sources
Educational service quality	Teaching competence, academic reliability, administrative responsiveness, empathy, academic support, and value-oriented practice	22	"Lecturers demonstrate a high level of teaching competence in accordance with Islamic principles."	Abdullah (2006); Cronin and Taylor (1992); Teeroovengadum et al. (2019)
Perceived institutional culture	Professionalism, integrity, innovation, value-based leadership, and enactment of institutional values	8	"University leaders consistently enact the institution's established values."	Denison and Mishra (1995); Schein (2010)
Student satisfaction	Perceived learning value, academic experience, and overall satisfaction	3	"The university's services meet my expectations as an Islamic Religious Education student."	Brown and Mazzarol (2009); Elliott and Shin (2002)
Student loyalty	Intention to continue, recommendation, positive word-of-mouth, and institutional attachment	4	"I am willing to recommend this university to prospective students."	Helgesen and Nasset (2007); de Oliveira Santini et al. (2017)

Source: Author's instrument development based on adapted measures.

Translation into Indonesian and contextual adaptation were completed before fieldwork.

Three academic validators with expertise in educational management, Islamic education, and research methodology then examined the items for relevance, clarity, and fit with Islamic higher education. The resulting questionnaire was piloted with 40 Islamic Religious Education students outside the final sample. Item-total relationships and preliminary internal consistency were checked in SPSS; all items were retained. The full measurement model was later reevaluated with the main sample, so pilot evidence did not stand in for the PLS-SEM assessment.

Data collection and ethics

The invitation and questionnaire link were distributed through student messaging groups. Before responding, students were informed of the study purpose, the academic use of their answers, and the voluntary nature of participation. No personally identifying information was collected. Responses were analyzed in aggregate, and data access was restricted to academic purposes to protect confidentiality and anonymity.

Data analysis

PLS-SEM was conducted in SmartPLS 4. The reflective measurement model was evaluated before the structural relationships. Cronbach's alpha and composite reliability values above 0.70 were treated as evidence of internal consistency (Hair et al., 2019; Nunnally & Bernstein, 1994). Convergent validity was examined using indicator loadings and average variance extracted (AVE), with 0.50 as the AVE criterion (Fornell & Larcker, 1981). Discriminant validity was assessed with the heterotrait-monotrait ratio (HTMT), using 0.85 as the reference threshold (Henseler et al., 2015). Inner variance inflation factors (VIF) were inspected for predictor collinearity and were not treated as a definitive test of common method bias (Hair et al., 2019; Kock, 2015).

In the structural model, educational service quality and perceived institutional culture predicted satisfaction, while those two constructs and satisfaction predicted loyalty. Direct and indirect coefficients were tested using nonparametric bootstrapping with 5,000 resamples; the resulting t statistics and p values are reported. R² summarized the explained variance of the endogenous constructs. Blindfolding and out-of-sample predictive assessment were not performed, so Q² and PLSpredict are not reported. Throughout the analysis, coefficients are interpreted as model-based associations rather than causal effects.

Result (نتائج)

Measurement assessment

Reliability was high across the four constructs. Cronbach's alpha ranged from 0.873 to 0.977 and composite reliability from 0.923 to 0.979. AVE values ranged from 0.682 to 0.826, with indicator loadings between 0.724 and 0.971, providing evidence of convergent validity.

The 22-item educational service quality scale yielded a Cronbach's alpha of 0.977 and composite reliability of 0.979. Such high coefficients warrant caution: they may arise from the number of items, some overlap in their content, or both. We therefore reviewed the loading pattern together with the service domains represented by the items. Loadings ranged from 0.724 to 0.905, while the indicators covered reliability, responsiveness, assurance, empathy, and tangibility. The full set was retained to preserve this breadth rather than simply to maximize reliability. Even so, a subsequent validation study should determine whether fewer items could represent the same domains without unnecessary duplication.

Table 2. Reliability and convergent validity

Construct	Items	Cronbach's α	Composite reliability	AVE	Loading range
Educational service quality	22	0.977	0.979	0.682	0.724–0.905
Perceived institutional culture	8	0.944	0.953	0.718	0.801–0.911
Student satisfaction	3	0.873	0.923	0.801	0.794–0.946
Student loyalty	4	0.924	0.949	0.826	0.727–0.971

Source: Author's calculation based on survey data.

HTMT ratios ranged from 0.068 to 0.565, all below the 0.85 criterion. The highest ratios involved educational service quality with student satisfaction (0.565) and student loyalty (0.499). The pattern supports discriminant validity among the four reflective constructs.

Table 3. HTMT matrix

Construct	ESQ	PIC	SS	SL
Educational service quality (ESQ)	—			
Perceived institutional culture (PIC)	0.086	—		
Student satisfaction (SS)	0.565	0.068	—	
Student loyalty (SL)	0.499	0.209	0.458	—

Source: Author's calculation based on survey data.

Structural model and hypothesis testing

Inner VIF values ranged from 1.006 to 1.377, indicating limited predictor collinearity. Educational service quality was positively associated with student satisfaction ($\beta = 0.520$, $t = 7.434$, $p < 0.001$) and student loyalty ($\beta = 0.347$, $t = 4.144$, $p < 0.001$), supporting H1 and H2. Perceived institutional culture was not significantly associated with satisfaction ($\beta = 0.017$, $t = 0.234$, $p = 0.815$), so H3 was not supported, but it showed a positive association with loyalty ($\beta = 0.156$, $t = 2.836$, $p = 0.005$), supporting H4. Student satisfaction was positively associated with loyalty ($\beta = 0.222$, $t = 3.237$, $p = 0.001$), supporting H5.

Table 4. Direct and indirect structural relationships

Hypothesized path	β	t	p	VIF	Decision
H1: ESQ $\rightarrow$ SS	0.520	7.434	<0.001	1.006	Supported
H2: ESQ $\rightarrow$ SL	0.347	4.144	<0.001	1.377	Supported
H3: PIC $\rightarrow$ SS	0.017	0.234	0.815	1.006	Not supported
H4: PIC $\rightarrow$ SL	0.156	2.836	0.005	1.006	Supported
H5: SS $\rightarrow$ SL	0.222	3.237	0.001	1.373	Supported
H6: ESQ $\rightarrow$ SS $\rightarrow$ SL	0.115	2.729	0.006	—	Supported

Hypothesized path	β	t	p	VIF	Decision
H7: PIC $\rightarrow$ SS $\rightarrow$ SL	0.004	0.218	0.828	—	Not supported

Source: Author's calculation based on survey data. ESQ = educational service quality; PIC = perceived institutional culture; SS = student satisfaction; SL = student loyalty.

Indirect effects, magnitude, and explanatory power

The indirect relationship between educational service quality and loyalty through satisfaction was positive and significant ($\beta = 0.115$, $t = 2.729$, $p = 0.006$), supporting H6. Because the corresponding direct relationship between educational service quality and loyalty remained significant, the observed pattern is consistent with partial statistical mediation. The indirect relationship between perceived institutional culture and loyalty through satisfaction was not significant ($\beta = 0.004$, $t = 0.218$, $p = 0.828$); H7 was therefore not supported.

Educational service quality showed the largest standardized coefficients in the estimated model. Its association with student satisfaction was $\beta = 0.520$. For student loyalty, the direct component of 0.347 and the indirect component of 0.115 gave an approximate total of 0.462, with the indirect component representing about one quarter of that value. Perceived institutional culture followed a different pattern. Its approximate total association with loyalty was 0.160 and came almost entirely from the direct path, as the indirect component through satisfaction was negligible and nonsignificant ($\beta = 0.004$). Satisfaction itself remained positively associated with loyalty ($\beta = 0.222$). For practical interpretation, these estimates place greater emphasis on educational service quality than on perceived institutional culture.

Explained variance was similar for the two outcomes, at 27.2% for student satisfaction and 28.7% for student loyalty. In each case, the model accounted for slightly more than one quarter of the observed variance.



Discussion (مناقشة)

Educational service quality, satisfaction, and loyalty

Among the relationships tested, educational service quality showed the clearest association with students' overall evaluation of their educational experience. Its coefficient for satisfaction was the largest in the model, and a direct association with loyalty remained after satisfaction was included. This pattern echoes evidence linking students' judgments of teaching, administrative responsiveness, support, facilities, and interpersonal treatment with satisfaction and loyalty (Annamdevula & Bellamkonda, 2016; Borishade et al., 2021; Teeroovengadum et al., 2019). Recent studies from Indonesia and other national contexts report similar associations (Amiri et al., 2025; Hossain et al., 2025; Nguyen et al., 2024; Seitova et al., 2024; Supriyanto et al., 2025; Surya Bahadur et al., 2024). Students have repeated opportunities to judge lecturer competence, the clarity of academic information, response time, academic support, facilities, and respectful treatment. The immediacy and frequency of these encounters may explain why service quality was more closely connected to satisfaction than perceived culture.

In Islamic higher education, these encounters also show students whether institutional commitments are enacted in ordinary practice. Claims of fairness, care, responsibility, and religious-ethical conduct gain credibility when they are visible in academic and administrative interactions. Viewed in this way, service quality is more than an operational judgment; it is one of the settings in which institutional promises are confirmed or questioned.

Perceived institutional culture and student outcomes

Perceived institutional culture produced a different pattern from service quality. Its association with loyalty was positive but smaller, whereas its association with satisfaction was effectively absent. This contrasts with Brown and Mazzarol (2009), who found that institutional image contributed to satisfaction and, through satisfaction, to loyalty. Image is not the same as culture, but both extend beyond students' immediate encounters with educational services, making the absence of a culture-satisfaction relationship noteworthy. In another respect, the result accords with Burhanuddin et al. (2024), who reported an association between organizational culture and students' academic behavior in Indonesian universities. Although they examined a different outcome, their findings suggest that culture may appear more clearly in how students orient themselves toward an institution than in how they evaluate their educational experience.

H3 was not supported: students who recognized professionalism, ethical conduct, and shared institutional values did not necessarily evaluate their educational experience more favorably. The two judgments draw on different evidence. Satisfaction is shaped largely by recurring encounters with teaching, administration, support, communication, and facilities, whereas culture is inferred from broader patterns in how an institution behaves. From a social identity perspective, those patterns can signal what the institution stands for and whether students see it as part of who they are (Ashforth & Mael, 1989; Mael & Ashforth, 1992). Perceived culture does not itself measure identification or attachment, but it may provide the basis on which they develop. This possibility is consistent with higher education research linking institutional identification to student attitudes and behavior (Wilkins et al., 2016). It also offers a plausible reading of the present result: culture was associated with willingness to recommend or maintain a connection with the institution, but not with satisfaction.

The Islamic higher education setting gives this pattern a more specific meaning. Students may treat fairness, care, responsibility, integrity, and religious-ethical conduct as expected features of an Islamic institution. Meeting these expectations need not raise satisfaction, which remains sensitive to the quality of teaching and everyday services. Consistent enactment of the same values may nonetheless affirm the institution's Islamic identity and strengthen students' sense of value congruence, belonging, or attachment. A student could therefore remain willing to recommend or maintain a connection with the institution even when some aspects of its services are disappointing. Because identification, belonging, value congruence, and attachment were not measured, this explanation remains provisional.

The role of satisfaction in indirect relationships

H7 was also not supported. The near-zero association between perceived institutional culture and satisfaction ($\beta = 0.017$) left little scope for an indirect relationship with loyalty; the mediated coefficient was correspondingly small and nonsignificant ($\beta = 0.004$). Culture nevertheless retained a positive direct association with loyalty ($\beta = 0.156$). Within the estimated model, its association with loyalty therefore did not depend on satisfaction. The identity-based account outlined above offers one possible explanation, but the direct coefficient alone cannot identify the underlying mechanism. Service quality followed a different pattern: both its direct and indirect associations with loyalty were significant, echoing earlier research that places satisfaction between service evaluations and loyalty (Annamdevula & Bellamkonda, 2016; de Oliveira Santini et al., 2017, 2024). Because the data are cross-sectional, however, this sequence should not be interpreted as demonstrably causal.

That contrast also matters for quality assurance. If an institution relies only on satisfaction scores, it may miss whether institutional values are consistently visible across teaching, assessment, administration, communication, and leadership. Culture indicators pose a different

question: not simply whether students are satisfied, but whether the institution's stated values are enacted in the practices they encounter.

Implications for quality governance

For internal quality assurance, the findings point to two related but distinct streams of evidence. Service-quality feedback should be tied to identifiable processes, responsible units, and documented follow-up, allowing student evaluations to be traced to changes in teaching, procedures, communication, facilities, and support. This use of feedback aligns with internal quality-assurance approaches that connect institutional purposes, people, processes, and continuous improvement (Krooi et al., 2024).

Universities also need to examine whether institutional values are visible in the conduct students encounter across teaching, assessment, administration, communication, and leadership. Feedback systems should therefore do more than record periodic satisfaction scores. Connecting recurring student feedback to documented service changes would help institutions respond to shifting expectations while preserving the ethical commitments that distinguish Islamic higher education. Quality governance can coordinate these tasks without treating service quality and culture as the same construct.



Conclusion (خاتمة)

When considered together, educational service quality and perceived institutional culture did not point to a single pattern of student loyalty. Service quality was associated with loyalty directly and indirectly through satisfaction. Perceived culture, by contrast, was associated with loyalty directly but not through satisfaction. This contrast suggests that students distinguish their experience of everyday educational performance from their recognition of the values expressed in institutional practice. The theoretical value of the model lies in separating these related but non-interchangeable sources of student response. From a quality-governance perspective, satisfaction remains useful evidence about service experience, but it does not capture the full range of students' responses to institutional values.

The two forms of evidence need not be collapsed into one score to inform the same improvement process. Senior leaders set the broad terms of that process by defining service standards, identifying how institutional values should be expressed in practice, and deciding which recurring problems require policy attention or additional resources. Once those priorities are established, quality assurance units can trace each issue to the relevant program or unit and record the responsible party, agreed deadline, action taken, and follow-up result. Responsibility for the local response rests with academic managers, who can adjust teaching or administrative practices, arrange staff development, and explain the changes to students. A later survey or internal review can establish whether the issue persists and whether further action is needed. In this arrangement, service performance and institutional values remain analytically distinct but enter the same continuing process of review, action, and accountability.

The design places clear limits on this interpretation. Convenience sampling restricts generalizability, while the cross-sectional data provide no basis for establishing temporal order or causality. Responses from the three universities were analyzed together, so institutional differences were not modeled, and detailed demographic distributions were unavailable. Reliance on a single self-report questionnaire also leaves open the possibility of common method variance. In addition, quality governance served as an interpretive perspective rather than a measured construct. Probability-based sampling and longitudinal data would provide a stronger

basis for examining whether the same relationships persist across institutions and over time. Measurement invariance testing, followed where appropriate by multigroup or multilevel analysis, could identify institutional differences. Predictive assessment and qualitative inquiry could further explain how students recognize institutional values and why those perceptions become associated with loyalty.

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Bibliography (مراجع)

- Abdullah, F. (2006). Measuring service quality in higher education: HEdPERF versus SERVPERF. *Marketing Intelligence & Planning*, 24(1), 31–47. <https://doi.org/10.1108/02634500610641543>
- Amiri, M., Shahir-Roudi, E., Shahsavar, H., & Khosravi, A. (2025). Evaluation of educational services quality and its impact on students' satisfaction and loyalty based on academic quality improvement program (AQIP) model. *BMC Medical Education*, 25, 1351. <https://doi.org/10.1186/s12909-025-07988-w>
- Annamdevula, S., & Bellamkonda, R. S. (2016). The effects of service quality on student loyalty: The mediating role of student satisfaction. *Journal of Modelling in Management*, 11(2), 446–462. <https://doi.org/10.1108/JM2-04-2014-0031>
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14(1), 20–39. <https://doi.org/10.5465/amr.1989.4278999>
- Bendermacher, G. W. G., oude Egbrink, M. G. A., Wolfhagen, I. H. A. P., & Dolmans, D. H. J. M. (2017). Unravelling quality culture in higher education: A realist review. *Higher Education*, 73(1), 39–60. <https://doi.org/10.1007/s10734-015-9979-2>
- Borishade, T. T., Ogunnaike, O. O., Salau, O., Motilewa, B. D., & Dirisu, J. I. (2021). Assessing the relationship among service quality, student satisfaction and loyalty: The Nigerian higher education experience. *Heliyon*, 7(7), e07590. <https://doi.org/10.1016/j.heliyon.2021.e07590>
- Brown, R. M., & Mazzarol, T. W. (2009). The importance of institutional image to student satisfaction and loyalty within higher education. *Higher Education*, 58(1), 81–95. <https://doi.org/10.1007/s10734-008-9183-8>
- Burhanuddin, B., Ben, F., Supriyanto, A., Sunandar, A., Sunarni, S., & Sumarsono, R. B. (2024). Effects of university organizational culture on student academic behavior in Indonesia. *International Journal of Educational Management*, 38(2), 549–567. <https://doi.org/10.1108/IJEM-11-2023-0553>
- Cronin, J. J., Jr., & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing*, 56(3), 55–68. <https://doi.org/10.1177/002224299205600304>
- de Oliveira Santini, F., da Silva Rocha, L., Gattermann Perin, M., Ladeira, W. J., Akhtar, S., Rasul, T., & Hoffmann Sampaio, C. (2024). Factors influencing student loyalty in higher education: A meta-analytic generalization. *Journal of Marketing for Higher Education*. <https://doi.org/10.1080/08841241.2024.2393617>

- de Oliveira Santini, F., Ladeira, W. J., Hoffmann Sampaio, C., & da Silva Costa, G. (2017). Student satisfaction in higher education: A meta-analytic study. *Journal of Marketing for Higher Education*, 27(1), 1–18. <https://doi.org/10.1080/08841241.2017.1311980>
- Denison, D. R., & Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science*, 6(2), 204–223. <https://doi.org/10.1287/orsc.6.2.204>
- Elliott, K. M., & Shin, D. (2002). Student satisfaction: An alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management*, 24(2), 197–209. <https://doi.org/10.1080/1360080022000013518>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Harvey, L., & Stensaker, B. (2008). Quality culture: Understandings, boundaries and linkages. *European Journal of Education*, 43(4), 427–442. <https://doi.org/10.1111/j.1465-3435.2008.00367.x>
- Helgesen, Ø., & Nettet, E. (2007). What accounts for students' loyalty? Some field study evidence. *International Journal of Educational Management*, 21(2), 126–143. <https://doi.org/10.1108/09513540710729926>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hossain, M. A., Wu, R., Kalam, A., Al Masud, A., Islam, T., & Nur Habib, S. (2025). The impact of higher education service quality on institutional image and student satisfaction: The role of institutional image as mediator. *International Social Science Journal*, 75(256), 439–456. <https://doi.org/10.1111/issj.12562>
- Huisman, J. (2025). A critical review of the quality of research on quality culture in higher education. *Assessment & Evaluation in Higher Education*, 50(7), 1040–1051. <https://doi.org/10.1080/02602938.2025.2506669>
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of E-Collaboration*, 11(4), 1–10. <https://doi.org/10.4018/ijec.2015100101>
- Krooi, M., Whittingham, J., & Beausaert, S. (2024). Introducing the 3P conceptual model of internal quality assurance in higher education: A systematic literature review. *Studies in Educational Evaluation*, 82, 101360. <https://doi.org/10.1016/j.stueduc.2024.101360>
- Mael, F., & Ashforth, B. E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, 13(2), 103–123. <https://doi.org/10.1002/job.4030130202>
- Nguyen, H. V., Vu, T. D., Saleem, M., & Yaseen, A. (2024). The influence of service quality on student satisfaction and student loyalty in Vietnam: The moderating role of the university image. *Journal of Trade Science*, 12(1), 37–59. <https://doi.org/10.1108/JTS-12-2023-0032>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- 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.
- Schein, E. H. (2010). *Organizational culture and leadership* (4th ed.). Jossey-Bass.
- Seitova, M., Temirbekova, Z., Kazykhankyzy, L., Khalmatova, Z., & Çelik, H. E. (2024). Perceived service quality and student satisfaction: A case study at Khoja Akhmet Yassawi University, Kazakhstan. *Frontiers in Education*, 9, 1492432. <https://doi.org/10.3389/educ.2024.1492432>
- Supriyanto, A., Burhanuddin, B., Sunarni, S., Rochmawati, R., Ratri, D. K., & Bhayangkara, A. N. (2025). Academic service quality, student satisfaction and loyalty: A study at higher

- education legal entities in Indonesia. *The TQM Journal*, 37(5), 1364–1384. <https://doi.org/10.1108/TQM-10-2023-0334>
- Surya Bahadur, G. C., Gurung, S. K., Poudel, R. L., Yadav, U. S., Bhattacharjee, A., & Dhungana, B. R. (2024). The effect of higher education service quality on satisfaction among business students in India and Nepal. *Cogent Education*, 11(1), 2393521. <https://doi.org/10.1080/2331186X.2024.2393521>
- Teeroovengadum, V., Nunkoo, R., Grönroos, C., Kamalanabhan, T. J., & Seebaluck, A. K. (2019). Higher education service quality, student satisfaction and loyalty: Validating the HESQUAL scale and testing an improved structural model. *Quality Assurance in Education*, 27(4), 427–445. <https://doi.org/10.1108/QAE-01-2019-0003>
- Toscano-Hernández, A. E., Álvarez-González, L. I., Sanzo-Pérez, M. J., & Esparza Rodríguez, S. A. (2024). Service quality in higher education: A systematic literature review, 2007–2023. *Estudios Gerenciales*, 40(170), 13–30. <https://doi.org/10.18046/j.estger.2024.170.6244>
- Wilkins, S., Butt, M. M., Kratochvil, D., & Balakrishnan, M. S. (2016). The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education. *Studies in Higher Education*, 41(12), 2232–2252. <https://doi.org/10.1080/03075079.2015.1034258>