
SERVICE QUALITY, LECTURER PERFORMANCE, AND CADET SATISFACTION: ACADEMIC CULTURE AS A PREDICTOR AND MODERATOR IN SORONG MERCHANT MARINE POLYTECHNIC

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Abstract

This study examines the effects of service quality, lecturer performance, and academic culture on cadet satisfaction and tests the moderating role of academic culture in a residential maritime vocational education setting. A quantitative explanatory design with a census approach was employed. Data were collected from 200 Diploma III cadets at Sorong Merchant Marine Polytechnic and analysed using PLS-SEM in SmartPLS 4.1.5 with 5,000 bootstrap subsamples. Lecturer performance ($\beta = 0.529$; $p < 0.001$) and academic culture ($\beta = 0.503$; $p < 0.001$) had positive and significant effects on cadet satisfaction, whereas service quality was not significant ($\beta = -0.067$; $p = 0.667$). Neither interaction between academic culture and service quality nor between academic culture and lecturer performance was significant. The model explained 95.5% of the variance in cadet satisfaction ($R^2 = 0.955$). The findings indicate that in a highly disciplined residential learning environment, academic culture operates more convincingly as a structural predictor than as a moderator. Managerially, cadet satisfaction should be strengthened through lecturer pedagogical competence, high-quality learning interactions, academic integrity, and the internalisation of maritime professional values.

Keywords: academic culture; cadet satisfaction; lecturer performance; service quality; social exchange theory

INTRODUCTION

Maritime vocational higher education is responsible not only for transferring knowledge but also for developing technical competence, discipline, professional ethics, safety culture, and employability. These responsibilities are more extensive in residential institutions because cadets interact with the institution throughout the day through classes, mentoring, dormitory life, meals, healthcare, administration, laboratories, and simulators. Cadet satisfaction therefore

represents a comprehensive evaluation of both academic and non-academic educational experiences.

At Sorong Merchant Marine Polytechnic, the importance of cadet satisfaction is reinforced by institutional dynamics. Internal records indicate that 96 of 133 cadets in the fifteenth cohort completed their programme in 2024, representing approximately 72.2%. New cadet intake also decreased from 200 in the sixteenth cohort to 98 in the seventeenth cohort. These figures do not establish dissatisfaction as the primary



cause, but they underline the need for a systematic examination of the factors shaping cadets' educational experience.

Social Exchange Theory (SET) conceptualises the cadet-institution relationship as an exchange of benefits and sacrifices (Homans, 1958; Blau, 1964; Emerson, 1976). Cadets invest money, time, effort, commitment, and compliance with institutional rules. In return, the institution provides services, instruction, mentoring, facilities, and an academic environment. Satisfaction is more likely when perceived benefits are commensurate with or exceed those sacrifices (Cropanzano & Mitchell, 2005). Expectation Confirmation Theory complements this perspective by framing satisfaction as a comparison between prior expectations and perceived performance (Oliver, 1980).

Previous research generally identifies service quality and lecturer performance as determinants of student satisfaction (Teeroovengadum et al., 2016; Guo et al., 2024; Veytia-Bucheli et al., 2022). Most studies, however, have been conducted in conventional higher education. The residential, highly disciplined, character-building nature of maritime education may produce different relationships. Academic culture has also commonly been treated as a learning environment or an independent variable, while its simultaneous role as a direct predictor and moderator has rarely been tested.

This study addresses three gaps. First, it addresses a contextual gap by testing a model in a residential maritime vocational institution. Second, it addresses a modelling gap by examining academic culture as both a direct predictor and a moderator. Third, it extends SET to an educational exchange that includes academic

services, residential life, discipline, and professional identity formation. The study therefore examines the effects of service quality, lecturer performance, and academic culture on cadet satisfaction and tests whether academic culture moderates the effects of service quality and lecturer performance.

LITERATURE REVIEW

Social Exchange Theory and Cadet Satisfaction

SET proposes that relationships persist when actors perceive a reasonable balance between benefits and costs. In higher education, benefits include teaching quality, academic support, facilities, social interaction, credentials, and career preparation. Cadet satisfaction represents an evaluative and reciprocal response to those benefits. In a residential institution, the exchange is particularly intensive because the institution organises not only learning but also substantial parts of cadets' daily lives.

Service Quality and Cadet Satisfaction

Service quality reflects an institution's ability to meet user needs through tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1985). In maritime education, it includes academic and administrative services, laboratories, simulators, accommodation, meals, healthcare, and fee information. High service quality increases the benefits received by cadets and should therefore increase satisfaction.

H1: Service quality has a positive and significant effect on cadet satisfaction.

Lecturer Performance and Cadet Satisfaction

Lecturer performance encompasses subject mastery, pedagogy, communication, discipline, fairness in

assessment, mentoring, and professional role modelling (Gibson et al., 2020). In maritime education, lecturers also transmit safety culture and connect theory with professional practice. Lecturer performance is a core benefit in the educational exchange because it directly shapes the cadet learning experience.

H2: Lecturer performance has a positive and significant effect on cadet satisfaction.

Academic Culture as a Predictor and Moderator

Academic culture refers to the values, norms, habits, and behaviours governing academic activity, including discipline, independent learning, scholarly interaction, participation, integrity, value internalisation, and academic ethics (Kuh & Whitt, 1988). It differs from organisational culture, which covers the organisation as a whole, and from the academic environment, which places greater emphasis on physical, social, and institutional conditions (Schein, 2017). A constructive academic culture may directly enhance satisfaction by creating order, fairness, identity, and social support.

H3: Academic culture has a positive and significant effect on cadet satisfaction.

As a moderator, academic culture may alter the strength of the effects of service quality and lecturer performance on satisfaction. A strong culture may help cadets interpret and use services and teaching more positively. In a highly standardised institution, however, limited variation in culture may make its direct effect more visible than its interaction effects (Baron & Kenny, 1986; Sharma et al., 1981).

H4: Academic culture moderates the effect of service quality on cadet satisfaction.

H5: Academic culture moderates the effect of lecturer performance on cadet satisfaction.

METHOD

A quantitative explanatory design was employed. The population comprised 208 active Diploma III cadets in semesters II and IV who resided on campus and participated in ongoing learning activities at Sorong Merchant Marine Polytechnic. Total sampling was used because the population was bounded and all members met the inclusion criteria. Two hundred complete questionnaires were analysed, yielding a response rate of 96.2%.

Data were collected through a structured five-point Likert questionnaire ranging from 1 (strongly disagree) to 5 (strongly agree). Service quality was measured using 10 items adapted from SERVQUAL. Lecturer performance was measured with 10 items covering professional competence, pedagogy, communication, discipline, assessment, motivation, and role modelling. Academic culture was measured with 10 items covering discipline, independent learning, interaction, participation, integrity, value internalisation, and ethics. Cadet satisfaction was measured with 10 items covering learning, academic services, dormitory facilities, meals and healthcare, relationships, institutional care, fee fairness, pride, employability, and recommendation.

PLS-SEM was performed using SmartPLS 4.1.5. The measurement model was assessed using outer loadings, average variance extracted (AVE), Cronbach's alpha, composite reliability, and the heterotrait-monotrait

ratio (HTMT). The structural model was assessed using path coefficients, t statistics, p values, R^2 , adjusted R^2 , Q^2 , and interaction effects. Statistical significance was evaluated with 5,000 bootstrap subsamples at the 5% level.

RESULTS

The sample consisted of 168 male cadets (84%) and 32 female cadets (16%),

Table 1. Convergent validity and construct reliability

Construct	AVE	Cronbach α	ρ_c	Loading range
Kualitas layanan / Service quality (X1)	0.911	0.989	0.990	0.914–0.971
Kinerja dosen / Lecturer performance (X2)	0.900	0.988	0.989	0.914–0.963
Kepuasan taruna / Cadet satisfaction (Y)	0.919	0.990	0.991	0.945–0.971
Budaya akademik / Academic culture (Z)	0.889	0.986	0.988	0.924–0.961

Source: Primary data processed with SmartPLS 4.1.5, 2026.

All outer loadings ranged from 0.914 to 0.971. AVE values ranged from 0.889 to 0.919, Cronbach's alpha from 0.986 to 0.990, and composite reliability from 0.988 to 0.991. Convergent validity and internal consistency were therefore satisfactory. HTMT values among the principal constructs, however, exceeded 0.90, with the highest value (0.978) observed between academic culture and cadet satisfaction. Discriminant validity was therefore not fully established, indicating substantial empirical proximity among respondents' perceptions. Structural results should

reflecting the gender composition commonly found in maritime vocational education. All observations included in the analysis were complete responses from eligible cadets.

Measurement Model

consequently be interpreted with caution.

Structural Model

Cadet satisfaction had an R^2 of 0.955 and an adjusted R^2 of 0.954, meaning that service quality, lecturer performance, academic culture, and the two interaction terms jointly explained 95.5% of its variance. Q^2 was 0.940, indicating very high predictive relevance. The exceptionally high R^2 should nevertheless be considered alongside construct overlap, possible common method variance, and elevated VIF values for several predictors and interaction terms.

Table 2. Hypothesis testing results

Hypothesis	Path	β	t	p	Decision
H1	$X1 \rightarrow Y$	-0.067	0.431	0.667	Tidak didukung / Not supported
H2	$X2 \rightarrow Y$	0.529	4.365	<0.001	Didukung / Supported
H3	$Z \rightarrow Y$	0.503	3.785	<0.001	Didukung / Supported
H4	$X1 \times Z \rightarrow Y$	-0.202	1.414	0.158	Tidak didukung / Not supported
H5	$X2 \times Z \rightarrow Y$	0.188	1.352	0.177	Tidak didukung / Not supported

Source: Primary data processed with SmartPLS 4.1.5, 2026. $X1$ = service quality; $X2$ = lecturer performance; Z = academic culture; Y = cadet satisfaction.

DISCUSSION

Service quality did not have a significant effect on cadet satisfaction. This differs from many findings in conventional higher education but is plausible in a residential system. Academic and non-academic services may be viewed as mandatory baseline provisions rather than differentiating benefits. When services operate as hygiene factors, improvements do not automatically generate higher satisfaction unless they are accompanied by meaningful teaching and academic relationships. The small negative coefficient does not imply that service quality is unimportant; rather, it indicates that its unique contribution is not significant after lecturer performance and academic culture are controlled.

Lecturer performance was the strongest predictor of cadet satisfaction. Clear teaching, practical relevance, fair assessment, discipline, motivation, feedback, and professional role modelling are central benefits received by cadets. From an SET perspective, lecturers are the most visible institutional actors reciprocating cadets' investments of time, effort, and financial resources. This result is consistent with studies identifying teaching quality and lecturer-student interaction as major determinants of satisfaction (Veytia-Bucheli et al., 2022; Wilkins & Balakrishnan, 2021).

Academic culture had a positive and significant direct effect. Discipline, integrity, independent learning, mutual respect, and professional values provide order and collective identity. In a

residential setting, academic culture is continuously experienced and therefore becomes part of the educational benefit rather than merely an external context. This finding extends SET by showing that benefits can be normative and relational, not solely material or service-based.

Neither moderation effect was significant. Academic culture did not meaningfully alter the relationship between service quality and satisfaction or between lecturer performance and satisfaction. Under Sharma et al.'s (1981) classification, academic culture is best interpreted as a predictor moderator: it has a direct effect on the dependent variable without a significant interaction effect. Homogeneous residential experience and standardised rules may reduce the variation required to produce statistical moderation.

Managerially, the institution should prioritise lecturer development in pedagogy, practice-oriented learning, feedback, ethical role modelling, and industry relevance. Academic culture should be strengthened through integrity policies, scholarly dialogue, structured independent learning, healthy senior-junior relationships, and consistent rules. Service quality must still be maintained as a foundation, particularly in accommodation, healthcare, meals, laboratories, simulators, fee transparency, and administrative responsiveness.

CONCLUSION

Lecturer performance and academic culture had positive and significant effects on cadet satisfaction, whereas service quality had no significant direct effect. Academic culture did not moderate the effects of service quality or lecturer performance. It therefore functions primarily as a structural

predictor that directly shapes cadets' educational experience.

The study extends SET to residential maritime vocational education by demonstrating that satisfaction derives not only from service exchanges but also from instructional interactions and normative benefits embedded in academic culture. Practically, lecturer development and academic culture should be treated as strategic priorities while basic service standards are maintained.

The study is limited by its cross-sectional, single-source design, incomplete discriminant validity, and single-institution setting. Future studies should use longitudinal or multi-source designs, refine indicators to sharpen construct boundaries, test measurement invariance, and compare multiple maritime vocational institutions.

References

- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Blau, P. M. (1964). *Exchange and power in social life*. John Wiley & Sons.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874-900. <https://doi.org/10.1177/0149206305279602>
- Emerson, R. M. (1976). Social exchange theory. *Annual Review of Sociology*, 2, 335-362. <https://doi.org/10.1146/annurev.soc.02.080176.002003>



- Gibson, J. L., Ivancevich, J. M., Donnelly, J. H., & Konopaske, R. (2020). *Organizations: Behavior, structure, processes* (15th ed.). McGraw-Hill.
- Guo, T., Li, T., & Qi, Z. (2024). Perceived school service quality and vocational students' learning satisfaction: Mediating role of conceptions of vocational education. *PLOS ONE*, 19(8), e0307392. <https://doi.org/10.1371/journal.pone.0307392>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). SAGE Publications.
- 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, 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Homans, G. C. (1958). Social behavior as exchange. *American Journal of Sociology*, 63(6), 597-606. <https://doi.org/10.1086/222355>
- Kuh, G. D., & Whitt, E. J. (1988). *The invisible tapestry: Culture in American colleges and universities* (ASHE-ERIC Higher Education Report No. 1). Association for the Study of Higher Education.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460-469. <https://doi.org/10.1177/002224378001700405>
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41-50. <https://doi.org/10.1177/002224298504900403>
- Schein, E. H. (2017). *Organizational culture and leadership* (5th ed.). Wiley.
- Sharma, S., Durand, R. M., & Gur-Arie, O. (1981). Identification and analysis of moderator variables. *Journal of Marketing Research*, 18(3), 291-300. <https://doi.org/10.1177/002224378101800303>
- Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D* (2nd ed.). Alfabeta.
- Sultan, P., & Wong, H. Y. (2010). Service quality in higher education: A review and research agenda. *International Journal of Quality and Service Sciences*, 2(2), 259-272. <https://doi.org/10.1108/17566691011057393>
- Suroyo, Kurniatun, T. C., & Herningsih. (2022). Pengaruh kualitas pelayanan akademik dan kedisiplinan dosen terhadap kepuasan dan prestasi belajar taruna Politeknik Pelayaran Sorong. *Edukatif: Jurnal Ilmu Pendidikan*, 4(2). <https://doi.org/10.31004/edukatif.v4i2.2471>
- Teeroovengadum, V., Kamalanabhan, T. J., & Seebaluck, A. K. (2016). Measuring service quality in higher education: Development of a hierarchical model (HESQUAL). *Quality Assurance in Education*, 24(2), 244-258. <https://doi.org/10.1108/QAE-06-2014-0028>
- Uluputty, N. F., & Junaidin. (2019). Pengaruh kualitas pelayanan, budaya akademik dan kinerja dosen

- terhadap kepuasan mahasiswa. POINT: Jurnal Ekonomi dan Manajemen, 1(2), 1-11.
- Veytia-Bucheli, M. G., Gómez-Galán, J., & Vergara, D. (2022). Teaching performance and student satisfaction in higher education. *Education Sciences*, 12(10), 714. <https://doi.org/10.3390/educsci12100714>
- Wilkins, S., & Balakrishnan, M. S. (2021). Assessing student satisfaction in transnational higher education. *International Journal of Educational Management*, 35(7), 1417-1432. <https://doi.org/10.1108/IJEM-08-2020-0389>