SERVICE QUALITY DIMENSIONS AFFECTING STUDENT SATISFACTION IN HIGHER EDUCATION

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INTRODUCTION

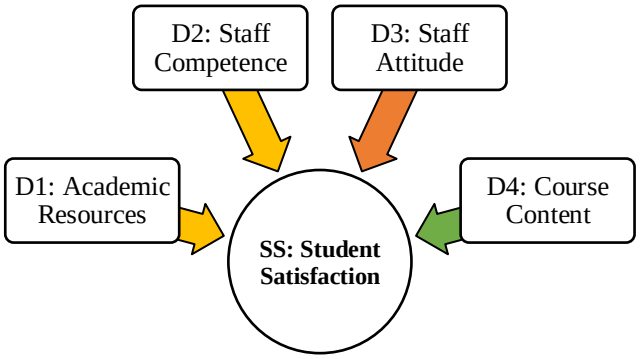
Higher education plays a vital role in the development of a country, as it equips individuals with the knowledge and skills necessary for societal progress and innovation (Nistor et al., 2018). Student satisfaction with a particular higher education programme; defined as the favorability of a student's subjective evaluation of the various outcomes and experiences associated with the programme (Hemsley-Brown et al., 2010), significantly influences programme outcomes such as student retention and graduate employment rates (DeShields et al., 2005; Schindler et al., 2015). In addition, among the outcome-based measures, student satisfaction emerges as a comprehensive indicator of the service quality of higher education (Clemes et al., 2008). Hence, exploring how various service quality dimensions impact student satisfaction in a higher education programme seems to be a recurring field of research in academic literature.

The state-governed engineering education system in Sri Lanka occupies a prominent role in the higher education landscape, attracting high-achieving students who excel in the General Certificate of Education Advanced Level Examination. While some previous studies have explored service quality dimensions influencing student satisfaction in various educational domains within Sri Lanka (Kajenthiran & Karunanithy, 2015; Weerasinghe & Fernando, 2018a, 2018b), there remains a conspicuous research gap. Specifically, there is a lack of research efforts aimed at identifying the service quality dimensions that impact student satisfaction within the Sri Lankan state-governed engineering education system.

In light of this, our study seeks to evaluate the influence of service quality dimensions, outlined by Owlia and Aspinwall (1998) (Figure 01), on student satisfaction within the Sri Lankan state-governed engineering education system. We explore the correlations of the four crucial service dimensions; D1: Academic Resources, D2: Staff Competence, D3: Staff Attitude, and D4: Course Content, with student satisfaction. To accomplish this, we conducted a case study within a selected Sri Lankan state-governed engineering program. Our primary objective is to gain a deeper understanding of how these service dimensions contribute to shaping student satisfaction within the Sri Lankan Engineering Educational System.

Figure 1

Theoretical Framework by Owlia and Aspinwall (1998).



METHODOLOGY

A quantitative research approach with random sampling was adopted for this study via a questionnaire prepared using Owlia and Aspinwall (1998); A framework for measuring the Quality of Engineering Education. The questionnaire consisted of 25 statements on a five-point Likert scale with 20 statements for subdimensions of service quality, 4 statements for major dimensions of service quality, and one statement to measure student satisfaction. It was administered to current students and alumni of the Department of Chemical and Process Engineering, University of Moratuwa, via an online survey, and 154 responses were collected (74 – alumni, 80 – undergraduates).

The data was initially subjected to Pearson's correlation analysis to explore potential relationships between individual quality dimensions and student satisfaction. Subsequently, a multiple regression analysis was performed to assess how each quality dimension influences student satisfaction.

RESULTS AND DISCUSSION

The results of Pearson's correlation analysis, shown in Table 1, indicated statistically significant positive correlations between all four service quality dimensions and student satisfaction ($p < 0.01$). According to the guidelines proposed by Zou et al. (2003) for the strength of Pearson's correlation coefficients, only Staff Attitude (D3) showed a weak positive correlation with student satisfaction. All other three dimensions demonstrated moderate positive correlations with student satisfaction.

Table 1

Pearson's correlations between student satisfaction and service quality dimensions

Dimension	Pearson's Correlations	Significance (p)
D1: Academic Resources	0.670	<0.001
D2: Staff Competence	0.694	<0.001
D3: Staff Attitude	0.456	<0.001
D4: Course Content	0.722	<0.001

Additionally, the results of the regression analysis revealed that the combination of the four recognized dimensions explained 65.5% of the variance in Student Satisfaction (SS). The three dimensions—Academic Resources (D1), Staff Competence (D2), and Course Content (D4)—

showed statistically significant impacts on Student Satisfaction (Table 2), underlining their significance in shaping students' overall satisfaction.

Table 2

Regression analysis of student satisfaction against the service quality dimensions.

Predictor/ Constant	Significance (p)
(Constant)	0.849
D1: Academic Resources	<0.001
D2: Staff Competence	<0.001
D3: Staff Attitude	0.990
D4: Course Content	<0.001

$$SS = 0.046 + 0.286\,D1 + 0.314\,D2 + 0.001\,D3 + 0.365\,D4$$

$$R^2 = 65.5\%\,, R^2(adj) = 64.7\%$$

Notably, Course Content (D4) displayed the strongest positive influence (B = 0.365), underlining the paramount importance of a relevant and engaging curriculum. This implies that the Sri Lankan engineering students demand to prioritize a strong curriculum over other physical and human resources available within the program.

Staff Competence (D2) exhibited the second-strongest impact (B = 0.314), underscoring the significance of continuously enhancing the theoretical and practical knowledge of academic staff as a critical aspect of the program's quality assurance plan. The results indicate that students place considerable importance on the competence of their instructors.

Academic Resources (D1) showed a moderate positive influence (B = 0.286), highlighting the need for a continuous commitment to improving the quality and availability of academic resources. This emphasizes the role that well-equipped facilities, libraries, and research materials play in enhancing the overall student experience.

The impact shown by Staff Attitude (D3) on student satisfaction was relatively weak (B = 0.001), and statistically insignificant. This result was also consistent and comparable with the original pilot study done by Owlia and Aspinwall (1998).

CONCLUSION AND IMPLICATIONS

In conclusion, even though in different levels of impact, three out of four crucial service dimensions proposed by Owlia and Aspinwall (1998), namely, academic resources, staff competence, and course content, can be identified explain majority of the variance in Student Satisfaction (SS) of Sri Lankan students in the engineering education system. Hence, these dimensions can be included in programme quality improvement plans and prioritized appropriately to improve the student-perceived quality of the programme.

In this analysis, it is essential to emphasize that none of the four dimensions under consideration exhibited "strong" correlations with student satisfaction. Consequently, it becomes imperative to evaluate additional well-established service quality dimensions within the Sri Lankan context. By incorporating these supplementary dimensions alongside the existing ones, it is plausible to anticipate the potential emergence of more substantial quality frameworks. This, in turn, may lead to the identification and prioritization of unexplored facets of quality within the Sri Lankan engineering education system. Such an approach holds promise for enhancing the overall quality of education in this context.

Further research is also suggested to evaluate the applicability of the same for other engineering specializations. We believe that the insights gained from such studies will serve as a cornerstone for establishing a robust quality framework to enhance engineering education

in Sri Lanka. Additionally, such research will have the potential to aid policymakers in discerning the primary requirements and priorities of the Sri Lankan engineering undergraduate community.

***Keywords*:** Engineering program, higher educational quality service quality dimensions, student satisfaction

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