



DETERMINANTS OF SERVICE QUALITY PERCEPTIONS AMONG SCHOOL LEAVERS IN SRI LANKAN OPEN AND DISTANCE LEARNING (ODL) CENTRES

M.B. Sakalasooriya*

Regional Educational Services Division, The Open University of Sri Lanka, Sri Lanka

The growing demand for Open and Distance Learning (ODL) in Sri Lanka has broadened access to higher education, yet research on students' perceptions of service quality in regional ODL settings remains limited. This study examines key factors influencing service quality perceptions among school leavers at ODL centres in four districts: Matale, Monaragala, Badulla, and Kegalle.

A 21-item questionnaire, based on the HEdPERF model and refined through expert review, was administered using a “five-point Likert scale”. Sample adequacy was confirmed ($KMO > 0.70$, communalities), justifying factor analysis despite the modest sample size. The study extends the HEdPERF model by validating its applicability in regional ODL contexts, emphasizing institutional prestige as an emergent dimension, reflecting the contextual importance of reputation in Sri Lankan ODL settings. A cross-sectional design yielded 162 valid responses (from 200), following the exclusion of multivariate outliers. Participants (aged 18–25, 60% female) primarily represented rural school leavers from middle-income backgrounds. Exploratory Factor Analysis (EFA) identified five reliable dimensions explaining 70.67% of variance, retaining 16 items after removing low-loading variables. Confirmatory Factor Analysis (CFA) confirmed strong model fit: ($\chi^2(94) = 138.751$, $p = .002$; $\chi^2/df = 1.476$; CFI = 0.953; RMSEA = 0.055; GFI = 0.902, meeting recommended thresholds). Composite Reliability ranged from 0.741 to 0.891; AVE values exceeded 0.502, and discriminant validity was supported by the Fornell-Larcker criterion.

The study validates a multidimensional model of service quality in regional ODL institutions, identifying five dimensions: Environmental and Academic Accessibility, Financial Accessibility, Institutional Staff Support, Institutional Prestige, and Student Support Services. Student Support was strongly linked to engagement and well-being; Financial Accessibility to inclusivity; and Institutional Prestige to trust and affiliation. Students assessed institutional quality through affordability, access, image, and support systems. These findings offer strategic insights for enhancing satisfaction, retention, and competitiveness. Limitations include a small, regionally confined sample and cross-sectional design limiting causal inference.

Keywords: Open and Distance Learning (ODL), Service Quality, Student Perception, Factor Analysis

**Corresponding Author: mahindass@gmail.com*



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INTRODUCTION

The growing demand for accessible and flexible higher education in developing nations has intensified the expansion of Open and Distance Learning (ODL). In Sri Lanka, ODL centres have become vital alternatives to conventional universities, especially for school leavers facing geographic, economic, or social constraints (Antoninis et al., 2023). As competition among institutions increases, service quality emerges as a pivotal determinant of student satisfaction, retention, and institutional reputation.

Higher education today is increasingly conceptualized as a service delivery process, wherein institutional quality is evaluated based on learner interactions with administrative systems, learning support, affordability, infrastructure, and brand credibility (Mwabu & Kalei, 2024). While the HEdPERF model (Higher Education Performance) offers a structured framework for assessing multidimensional service quality in higher education, its application to regional ODL settings in Sri Lanka remains underexplored (Sakalasooriya, 2025).

Importantly, recent studies in other developing contexts highlight similar issues. *Das & Biswas (2018)* examined ICT-enabled learner support challenges in India's rural ODL centres, while *Materu (2007)* reported structural disparities in Sub-Saharan African distance education institutions due to poor student support and regional inequities. These studies underscore the global relevance of localized service quality assessments.

Problem statement & Objectives:

While literature focuses on urban universities, this study addresses the empirical gap in service quality within Sri Lanka's rural regional ODL centers. It aims to identify and validate the latent factor structure of service quality perceptions among school leavers using Confirmatory Factor Analysis (CFA), ultimately linking these dimensions to overall institutional perception for evidence-based policymaking. Framework & Hypotheses: Grounded in an adapted HEdPERF model, the research tests whether centre attributes (H1), financial expectations (H2), personal support (H3), student services (H4), and institutional aspects (H5) significantly influence quality perceptions and institutional trust. Significance: The findings will enable administrators to design targeted interventions—improving student support, financial accessibility, and institutional credibility—to enhance retention and competitiveness in the regional ODL sector.

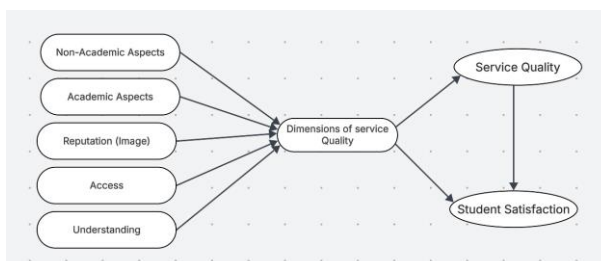


Figure 1. Conceptual Framework

Source: Adapted from Firdaus, A. (2006).

METHODOLOGY

This study utilized a quantitative, cross-sectional survey design to evaluate service quality perceptions among school leavers at Open and Distance Learning (ODL) centres across four diverse Sri Lankan districts: Matale, Monaragala, Badulla, and Kegalle. These regions were purposively selected to represent rural and semi-urban areas where access to traditional campus-based education is limited. Using stratified random sampling, 300 paper-based questionnaires were distributed, resulting in 162 valid responses (54 % response rate) after removing multivariate outliers using Mahalanobis distance ($p < .001$). This final sample meets the 5:1 to 10:1 participant-to-item ratio recommended by Hair et al. (2019) for robust factor analysis.

The 21-item instrument was adapted from established models such as Hill et al. (2003) and Joseph and Joseph (1997) HEdPERF Abdullah (2006) to measure five conceptual dimensions: centre attributes, financial expectations, personal support, student services, and institutional aspects. Responses were captured using a “five-point Likert scale”. To ensure methodological rigour, the instrument underwent expert review by 15 specialists and a pilot study involving 30 school leavers, followed by a back-translation procedure into Sinhala and Tamil to ensure linguistic equivalence. Finally, data suitability was confirmed through the Kaiser–Meyer–Olkin (KMO) measure and Bartlett’s Test of Sphericity, while univariate normality was established, with skewness and kurtosis values remaining within ± 1.5 .

RESULTS AND DISCUSSION

The study analyzed data from 162 respondents, the majority of whom were female (64.2%) and aged between 18 and 20 years (51.2%). Most respondents were from the Matale district (Table 1), and a strong preference for state universities was observed (82.1%). The data demonstrated acceptable normality following the removal of 14 outliers. Exploratory Factor Analysis (EFA) confirmed sampling adequacy ($KMO = 0.737$, $p < .001$) as Nkansah (2018) and identified five key factors explaining 70.67% of the total variance.

The extracted factors were labelled Accessibility and Environment, Affordability and Flexibility, Student Support Services, Institutional Prestige and Impact, and Administrative and Staff Support. Of the original 21 measurement items, 16 were

retained, all exhibiting strong factor loadings (> 0.70). These results confirm a robust factor structure and support the validity of the measurement model employed in the study.

Table 1. Demographic Information of Respondents

Category	Subgroup	Freq	%	Category	Subgroup	Freq	%
District	Matale	64	39.5	Gender	Male	58	35.8
	Monaragala	30	18.5		Female	104	64.2
	Badulla	25	15.4	Distance to district Capital (km)	1-5	62	38.7
	Kegalle	43	26.5		6-10	33	20.4
Age	18-20	83	51.2		10-20	35	21.6
	21-23	59	36.4		Over 20	32	19.8
	Over 24	20	12.6	Preferred Univ. Type	State	133	82.1
Education Level	Completed AL	139	85.8		Other	29	17.4
	Following Dip/ Degree	23	13.6				

Table 2. Rotated Component Matrix for Institutional Experience Quality

Item	Component 1	Component 2	Component 3	Component 4	Component 5
Ease of Access (Accessibility)	0.813				
Availability of Facilities	0.871				
Cleanliness of the Environment	0.905				
Flexibility of Programs	0.870				
Affordability of Programs		0.770			
Lower Tuition Fees		0.815			
Ease of Payment Methods		0.786			
Academic Counseling			0.831		
Updates on Exams and Results			0.747		
Feedback for Student Well-being			0.841		
Impact of State Universities				0.823	
Prestige of the University				0.777	
Facilities and Appearance of the University				0.728	
Support of the Academic Staff					0.845
Support of the Management Staff					0.705
Support of Security and Cleaning Staff					0.759

Extraction Method: Principal Component Analysis. Rotation converged in 6 iterations.^a

The high factor loadings (all above 0.70), the cumulative variance exceeding 70%, and the clean factor structure with no significant cross-loadings provide strong evidence of the construct validity, convergent validity, and discriminant clarity of the dimensions. Thus, the EFA results validate the multidimensionality of the student institutional experience in the higher education context (Table 3).

Table 3. Total Variance Explained by Extracted Components

Component	Eigenvalue	% of Variance	Cumulative %
1	3.795	23.717	23.717
2	3.069	19.183	42.899
3	1.803	11.266	54.166
4	1.517	9.479	63.644
5	1.123	7.021	70.665

Instrument Validity Testing

Measurement validity was assessed using a two-step procedure (Anderson & Gerbing, 1988) comprising Exploratory Factor Analysis (EFA) followed by Confirmatory Factor Analysis (CFA). As presented in Table 4, convergent validity was established through standardized factor loadings exceeding 0.50 (Ho, 2006), Composite Reliability (CR) values of 0.741 or higher, and Average Variance Extracted (AVE) values equal to or greater than 0.502, indicating satisfactory internal consistency across all constructs.

Discriminant validity was confirmed using the Fornell–Larcker criterion (Fornell & Larcker, 1981), whereby the square root of each construct's AVE exceeded its correlations with other constructs. In addition, Maximum Shared Variance ($MSV \leq 0.310$) remained below the corresponding AVE values, and MaxR(H) values ranging from 0.764 to 0.912 further ruled out concerns of multicollinearity (Hancock & Mueller, 2001). Collectively, these results demonstrate that the latent dimensions of the model are reliable and suitable for subsequent structural analysis.

Table 4. Internal Validity of latent constructs

Factor	Abbreviation	α	CR	AVE	MSV	MaxR(H)
Environmental and Academic Accessibility	ENV_ACC	0.890	0.891	0.673	0.012	0.912
Financial Accessibility	FIN_ACC	0.772	0.784	0.553	0.310	0.818
Institutional Staff Support	STAFF_SUP	0.737	0.741	0.502	0.310	0.764
Institutional Prestige and Perception	IMG	0.740	0.745	0.513	0.206	0.779
Student Support and Engagement	STD_SERV	0.763	0.769	0.528	0.128	0.780

CONCLUSIONS AND RECOMMENDATIONS

The findings confirm that service quality in regional Open and Distance Learning (ODL) centers is best explained by five key dimensions: accessibility, affordability, staff support, institutional prestige, and student engagement. Consistent with the HEDPERF framework, these dimensions exert a significant influence on students' overall perceptions of service quality.

To enhance inclusivity and competitiveness within Sri Lanka's non-traditional higher education sector, institutions should focus on improving staff responsiveness, strengthening institutional branding, and upgrading academic and student support services. Embedding this validated multidimensional model within formal quality assurance systems will promote student-centered improvements, leading to higher satisfaction levels and improved student retention.

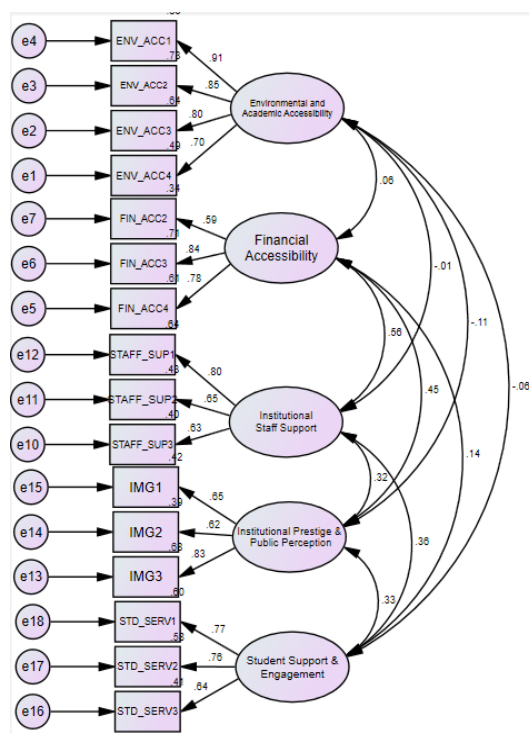


Figure 2. Measurement model

The study's limitations include a small, geographically restricted sample (162 responses) that limits generalizability. Additionally, the CFA design identifies associations rather than causality; future SEM research is recommended. Finally, a marginal NFI (0.891) suggests the model fit could be improved through larger samples or alternative specifications.

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