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RESEARCH ARTICLE

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## ASSESSING MULTIDIMENSIONAL SERVICE QUALITY GAPS IN HIGHER EDUCATION: EMPIRICAL INSIGHTS FROM A PRIVATE UNIVERSITY OF ODISHA

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### ABSTRACT

This research seeks to evaluate the service quality delivered by a private university in Odisha from students' perspectives, using the SERVQUAL framework as the primary measurement instrument. The study adopted a cross-sectional, exploratory research design and utilised a mixed-methods approach for data collection. Initially, the SERVQUAL scale items were tested through a pilot survey to ensure validity and reliability. Subsequently, a structured questionnaire was administered to 180 students selected through stratified random sampling. In addition to the survey, focus group discussions were conducted with selected class representatives to enrich and triangulate the quantitative findings. Of the distributed questionnaires, 132 usable responses were obtained, yielding a response rate of 73.3 per cent. The data analysis commenced with descriptive statistics, including the computation of means and standard deviations for each SERVQUAL item relating to students' expectations and perceptions. The core analysis concentrated on identifying service quality gaps through one-sample t-tests, independent-samples t-tests, and ANOVA. A gap assessment was carried out at three levels: individual-item analysis, dimension-wise (construct-level) analysis, and overall service quality measurement. The findings revealed that students' perceptions of overall service quality were significantly lower than their expectations, with a mean gap score of -1.611. Furthermore, students enrolled in Under Graduate programmes demonstrated significantly different perceptions compared to those in degree and postgraduate programmes. The most pronounced gaps were observed in the dimensions of Reliability and Responsiveness. Based on these findings, comprehensive recommendations have been proposed to assist the private university in Odisha in addressing the identified deficiencies and enhancing overall service quality.

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## INTRODUCTION

Over the past twenty years, higher education in Odisha has experienced remarkable growth. Until 2010, the state had only 25 universities, along with approximately 1,076 colleges and 259 standalone institutions. By December 2024, the total number of universities had increased to 37, including 11 private universities. Despite this numerical growth, enrolment patterns indicate that public universities continue to accommodate a larger share of students. Public universities collectively enrol around 1.20 lakh students, whereas private universities account for approximately 0.40 lakh students. In contrast, colleges and other tertiary institutions enrol nearly 8.85 lakh students, reflecting their dominant role in the state's higher education landscape (AISHE Report, 2024). This rapid expansion has intensified competition among higher education institutions. In such an increasingly competitive environment, the quality of services delivered by institutions becomes a critical determinant of institutional success and sustainability. Assessing service quality gains greater relevance when the primary stakeholders, e.g. students, actively participate in the evaluation process, as their

perceptions and expectations ultimately shape institutional reputation and performance. The rapid proliferation of universities has significantly broadened students' choices, leading them to make personal judgments about the quality and effectiveness of educational services based on their expectations and actual experiences. In a competitive service environment, an institution's success largely depends on how well it understands and manages students' perceptions of service quality, as perceived quality strongly influences perceived value and overall satisfaction. With the increasing reliance on student-funded models in private higher education, which often involve higher tuition fees, the systematic assessment of service quality has become more crucial than ever. Evaluating service quality commonly involves applying the SERVQUAL model, which measures the magnitude and direction of the gap between students' expectations of services and their actual perceptions of the services received. There is scant research on service quality in private universities in Odisha in recent years. This raises important questions: To what degree do the educational services provided by private universities in Odisha fulfil students' expectations? How do these perceptions shape the institution's overall image from students' perspectives? Against this backdrop, the present

study seeks to assess the service quality delivered by a Private University in Odisha using the SERVQUAL framework, with the objective of identifying gaps and suggesting measures for continuous quality enhancement. Accordingly, this study evaluates the quality of services delivered by a Private University in Odisha, located in the southern part of the state, using the SERVQUAL framework from the perspective of students. The assessment is grounded in students' perceptions of service performance across the model's established dimensions. The specific objectives of the study are as follows:

1. To assess the level of service quality perceived by students across the five SERVQUAL dimensions i.e. tangibility, reliability, responsiveness, assurance, and empathy.
2. To examine whether perceptions of service quality differ on the basis of gender, particularly with respect to the five SERVQUAL dimensions.
3. To identify areas requiring improvement in service delivery related to faculty and academic support systems, as evaluated through the SERVQUAL dimensions.
4. To evaluate the need for enhancement in service quality in relation to academic programmes, including curriculum delivery, academic administration, and related institutional services.
5. To propose actionable recommendations aimed at strengthening overall service quality and enhancing student satisfaction within the Private University of Odisha.

Through these objectives, the study seeks to provide a structured and evidence-based evaluation of institutional service performance and to contribute to continuous quality improvement initiatives.

## LITERATURE REVIEW

**Service and service quality:** Grönroos (1990) conceptualized service as a process comprising one or more largely intangible activities that occur through interactions between customers and service personnel, physical resources, goods, or operational systems, with the objective of addressing customer needs or problems. Defining quality, however, has long been a subject of academic debate, with no single universally accepted interpretation. The concept becomes even more intricate in the context of services, as evaluating service quality is inherently more challenging than assessing the quality of tangible products (Parasuraman et al., 1985). Unlike product quality, which can be objectively measured by observable attributes such as performance, features, and durability, service quality is largely intangible (Allred et al., 2000; Lovelock et al., 2006). Consequently, scholarly discussions tend to frame service quality in terms of customers' perceptions, attitudes, and subjective evaluations (Rajasekhar et al., 2009; Allred et al., 2000). Zeithaml (1987, cited in Allred et al., 2000) described service quality as a consumer's overall assessment of an organization's excellence or superiority, shaped by the comparison between prior expectations and actual service performance. These perspectives collectively highlight that service quality is fundamentally grounded in customers' expectations and their perceptions of how effectively services are delivered. Parasuraman et al. (1991, cited in Allred et al., 2000) further emphasised that meeting or exceeding expectations consistently requires organisations to first identify and thoroughly understand what customers expect.

Mishra et al. (2021) re-examined the applicability of the SERVPERF model in the context of digital education, particularly in light of the rapid expansion of online learning environments following the COVID-19 pandemic. Their study highlighted the importance of performance-based measurement approaches for evaluating service quality on virtual learning platforms, where traditional physical service dimensions may not fully capture students' experiences. By focusing on perceived performance rather than expectation-perception gaps, the authors underscored the model's practicality in assessing the effectiveness, accessibility, responsiveness, and technological reliability of digital learning systems. In a more specialised context, Bagur-Femenias et al. (2023) proposed the BS

QUAL model as a tailored framework for evaluating service quality in business schools. This model was developed to better reflect the dynamic expectations of contemporary students, integrating academic performance indicators with institutional service dimensions. The authors argued that business schools operate in an increasingly competitive and globalised environment, necessitating refined measurement tools that align educational outcomes, stakeholder expectations, and strategic institutional objectives. Their contribution provides an updated perspective on service quality assessment, particularly suited to management education institutions seeking continuous improvement and competitive differentiation.

**Methodology in measuring service quality:** Researchers continue to debate the most appropriate method for measuring service quality. Some argue that service quality should be assessed solely on the basis of consumers' perceptions after experiencing a service (service performance). Others maintain that quality should be evaluated from the customer's viewpoint by comparing expectations with actual service received. The central issue in this debate is whether customer expectations should be incorporated into assessments of perceived service quality. Two principal approaches have emerged from this discussion: disconfirmation models and performance-only models. Disconfirmation models are grounded in the disconfirmation paradigm (Bitner, 1990; Bolton & Drew, 1991, cited in Robledo, 2001). Disconfirmation theory, widely used to explain satisfaction and service quality (Johnston, 1995, cited in Kong & Muthusamy, 2010), suggests that a customer's satisfaction or dissatisfaction with a service encounter depends on the extent and direction of the gap between expectations and actual performance. These expectations are formed prior to purchase or consumption (Walker, 1995). Evaluations lie on a continuum from positive disconfirmation (performance exceeds expectations) to negative disconfirmation (performance falls short of expectations), with confirmation occurring when performance matches expectations. Under this framework, quality is conceptualised as the difference between perceptions and expectations ( $C = P - E$ ), meaning that service quality is viewed positively only when performance meets or surpasses expectations. One of the most influential instruments developed from this theory is the SERVQUAL model (Parasuraman et al., 1985).

Performance-only models represent a second approach and stem largely from critiques and refinements of Parasuraman et al.'s (1988) gap theory. This perspective measures service quality based exclusively on customers' perceptions of performance, without considering expectations. A prominent example is the SERVPERF model proposed by Cronin and Taylor (1992). The present study adopts the SERVQUAL approach rather than SERVPERF. This choice is driven by the competitive nature of the higher education sector, where prospective students are frequently exposed to extensive information through advertisements and promotional materials, shaping their expectations before they experience the service. Consequently, evaluating the gap between expectations and perceived performance provides a more meaningful assessment of service quality than focusing solely on perceptions of performance. The identity of the university examined in this study has been intentionally withheld to maintain institutional confidentiality and to encourage candid responses from participants. Disclosing the name of the institution could potentially lead to reputational concerns or influence stakeholders' perceptions of the findings. Therefore, in line with standard research ethics and to ensure objectivity and neutrality in reporting the results, the university is referred to generically as a "private university in Odisha."

**Study Hypotheses:** Drawing on disconfirmation theory and the service quality gap model, the fulfilment of customer or student expectations is influenced by both controllable and uncontrollable factors. Marketer- or service provider-controlled elements include pricing strategies, advertising, and promotional promises. In contrast, factors such as personal needs, word of mouth, and competing services offered by other institutions are largely beyond the provider's direct control. In an ideal situation, customer expectations and perceptions would align perfectly. To examine whether such

alignment exists, five hypotheses were formulated. The null hypotheses are stated as follows:

- H01:  $\mu_{\text{per Tangibles}} - \mu_{\text{exp Tangibles}} = 0$
- H02:  $\mu_{\text{per Reliability}} - \mu_{\text{exp Reliability}} = 0$
- H03:  $\mu_{\text{per Responsiveness}} - \mu_{\text{exp Responsiveness}} = 0$
- H04:  $\mu_{\text{per Assurance}} - \mu_{\text{exp Assurance}} = 0$
- H05:  $\mu_{\text{per Empathy}} - \mu_{\text{exp Empathy}} = 0$

Where:

$\mu$  = mean; per = perception; exp = expectation.

Each null hypothesis will be rejected if the corresponding p-value is less than 0.05, indicating a statistically significant difference between students' perceptions and expectations of service quality. Such differences suggest service quality gaps within the respective dimensions.

## RESEARCH METHODOLOGY

The private university in Odisha selected for this study provides a broad spectrum of academic programmes, including undergraduate, postgraduate, and doctoral degrees. Its academic offerings span disciplines such as Engineering, Management, Science, Agricultural Science, and Health Science. In addition to these core academic functions, the University, along with associated service providers, delivers several support and auxiliary services. These include catering facilities, medical care, residential accommodation, and postal and banking services. The investigation adopted a cross-sectional design and was carried out during the second semester of the 2025 academic session. At the time of the study, the University College had an approximate population of 4,511 students, supported by 123 academic staff members and 331 administrative personnel.

**Research Instrument:** The survey instrument for this study was developed using the SERVQUAL framework, a widely recognized tool for assessing service quality. Originally proposed by Parasuraman et al. (1988), SERVQUAL comprises 22 items that evaluate service attributes across five dimensions. Owing to its extensive application and validation in both public and private service settings (Galloway, 1998, cited in Kebriyai&Fayzollah, 2008), the model was considered appropriate for the present research. The questionnaire included statements measuring both expectations and perceptions, organized under five dimensions: (a) tangibles, (b) reliability, (c) responsiveness, (d) assurance, and (e) empathy. Some items were slightly adapted to reflect the specific context of the study area. A pilot test of the preliminary instrument was conducted with a convenience sample of 40 students to assess clarity and comprehension. Reliability analysis using Cronbach's alpha yielded a coefficient of 0.682, which is close to the commonly accepted threshold of 0.700 (Nunnally & Bernstein, 1994). One item under the reliability dimension originally phrased as "University should be dependable" was found to reduce internal consistency. Rather than removing the item, it was revised to "University should perform service right the first time" to improve clarity and reliability. The final version of the questionnaire spanned four pages and was organized into three sections. The first section gathered demographic details of the respondents. The second section contained 22 statements designed to measure students' expectations, while the third section presented a corresponding set of items to capture their perceptions. A seven-point Likert scale was used in both sections: for expectations, from "very important" to "very unimportant"; and for perceptions, from "strongly agree" to "strongly disagree," allowing respondents to indicate their service experiences. Participants were assured that ethical principles would be upheld, particularly with regard to confidentiality and anonymity. To enrich and validate the survey results, three focus group discussions were held with selected student informants. Each discussion was guided by the five dimensions of service quality. The first group consisted of five

postgraduate students, the second included seven undergraduate class representatives, and the third comprised seven representatives from PhD programmes. Each session lasted approximately 45 minutes.

**Sampling & Data Collection:** A stratified sampling approach was adopted to ensure representation from each programme, with at least five students randomly selected from every programme group. Out of 180 questionnaires distributed, 132 were completed and returned, yielding a response rate of 73.3 percent. The respondents comprised three categories of students: postgraduate (32), undergraduate (90), and PhD scholars (10). Most participants were second-year students (51 per cent), followed by first-year students (27 per cent) and third-year students (22 per cent). Male students constituted 65.9 per cent of the sample, while female students accounted for 34.1 per cent. A large proportion of respondents (85 per cent; 113 students) were in the 20–30-year age group; within this group, 62 per cent were male and 38 per cent were female. The unit of analysis for the study was students' responses concerning their perceptions of the services provided by the private university in Odisha. Service quality gaps were identified by comparing students' expectations of services with their actual experiences, with the gap representing the difference between anticipated and received service quality.

### Data Cleaning

**Missing response patterns:** An assessment of missing data was performed on the dataset using SPSS version 20. The analysis revealed that 7 cases (5.3 per cent) contained missing responses, affecting 6 continuous variables (13 per cent). To determine whether the missing values occurred randomly or followed a systematic pattern, Little's (1988) Missing Completely at Random (MCAR) test was applied. The test results indicated  $\chi^2 = 187.783$ ,  $df = 178$ ,  $p = 0.293$ , suggesting that the missing data were completely at random. Given this outcome, it was considered appropriate to address the missing values using the Expectation Maximization (EM) algorithm, a widely recommended imputation technique (Schlomer et al., 2010), implemented through SPSS version 20.

**Normality Status of Data:** Skewness and kurtosis statistics were examined to assess the normality of each observed variable. For expected service quality, skewness values were within  $\pm 1.31$  and kurtosis values within  $\pm 1.89$ . For perceived service quality, skewness values ranged from -0.54 to 0.54, and kurtosis values ranged from -1.19 to 1.19. These results indicate that none of the items measuring expected or perceived service quality exceeded the recommended cutoff limits of  $\pm 3.00$  for skewness and  $\pm 8.00$  for kurtosis (Kline, 1998). Accordingly, the assumption of univariate normality was satisfied.

**Reliability of the Instrument:** The reliability of the expected and perceived service quality scales was evaluated using Cronbach's alpha coefficient. This statistic measures internal consistency by examining the average intercorrelations among items representing a particular construct. The analysis indicated that all variables associated with their respective dimensions exceeded the recommended threshold of 0.700 (Nunnally & Bernstein, 1994). Cronbach's alpha for the five dimensions of perceived service quality was 0.87, while the corresponding value for expected service quality was 0.81, demonstrating strong internal consistency among items within each construct. The overall scale reliability was 0.92, surpassing the 0.90 criterion suggested by Nunnally (1978). These results indicate that the measurement instrument exhibited high reliability and minimal measurement error.

**Analytical Approach:** Data analysis was conducted using SPSS version 20. Descriptive statistics were used to compute the mean and standard deviation for each SERVQUAL item relating to both service expectations and service perceptions. To examine the gap between expectations and perceptions at the item level, mean differences were analyzed using a one-sample t-test, following the item-by-item SERVQUAL approach. This procedure addressed the study's first objective. An independent samples t-test was employed to compare

mean scores between male and female students across the five service quality dimensions, using a construct-by-construct approach. This analysis was appropriate for addressing the second and third objectives. Scores for each dimension were calculated by aggregating the responses to all items within the respective dimension. To address the fourth objective, a one-way ANOVA was conducted to determine whether statistically significant differences existed in students' expectations and perceptions across academic programmes for the five SERVQUAL dimensions.

## EMPIRICAL RESULTS AND DISCUSSIONS

The findings of the one-sample t-tests are presented in Table 1. The item-by-item analysis indicates that students' perceptions were significantly lower than their expectations across all service quality items. The largest gap was observed for the statement "Faculties provided services at the time promised," with a gap score of -2.62. This was followed by "Faculties keep promises with students" (-2.241) and "Modern equipment and technology" (-2.164), indicating substantial dissatisfaction in these areas. In contrast, the smallest gap was found for the item "University performed service right the first time," which recorded a gap score of -0.434. Overall service quality analysis also revealed that perceptions were significantly lower than expectations, with an overall gap score of -1.611.

Table 2 presents the ranking of service quality dimensions based on students' ratings. Across both perceptions and expectations, Tangibles emerged as the most important dimension. This was followed by Assurance and Reliability, indicating that students place considerable emphasis on physical facilities and infrastructure, as well as on the confidence and dependability demonstrated by the institution. The results of the independent samples t-test presented in Table 3 indicate that there is no statistically significant difference in opinions regarding the service quality gap between male and female students. This finding suggests that both groups share similar perceptions of the gap between expected and received educational services at the University. Table 4 indicates that there is no statistically significant difference in the service quality gap between the two faculties, as perceived by students at the private university in Odisha. This suggests that students across both faculties share similar views regarding the gap between expected and actual service quality. The results of the one-way Analysis of Variance (ANOVA) presented in Table 5 indicate that there is no significant difference in perceived service quality among UG, PG and PhD students with respect to the Tangibles dimension. However, statistically significant differences were observed across programmes for the remaining four service quality dimensions, suggesting that students at different academic levels differ in their perceptions of these dimensions.

**Table 1. Means of student expectations, perceptions and gap score**

| Dimension               | Items   | Means              |                  | Service quality-Gap score | p-value |
|-------------------------|---|--------------------|------------------|---------------------------|---------|
|                         |   | Perceived services | Expected service |                           |         |
| Tangibles               | Modern equipment and technology.                                  | 4.61               | 6.77             | -2.164                    | .000*   |
|                         | Visually appealing physical facilities.                           | 4.47               | 6.00             | -1.530                    | .000*   |
| Reliability             | Employees well dressed and neat appearance                        | 5.05               | 6.23             | -1.195                    | .000*   |
|                         | Better Competitive Accommodation.                                 | 4.36               | 6.46             | -2.104                    | .000*   |
|                         | Faculties keep promises with students                             | 4.02               | 6.26             | -2.241                    | .000*   |
|                         | Faculties maintain error-free records.                            | 4.48               | 6.43             | -1.945                    | .000*   |
| Responsiveness          | Faculties provided services at time promised                      | 4.14               | 6.43             | -2.62                     | .000*   |
|                         | University performed service right at first time                  | 4.64               | 5.07             | -.434                     | .011*   |
|                         | University sympathetic and reassuring when students have problems | 5.08               | 6.44             | -1.357                    | .000*   |
|                         | Students informed about when services will be performed           | 4.21               | 6.32             | -2.108                    | .000*   |
|                         | Prompt services from non-academic staff                           | 4.36               | 5.73             | -1.374                    | .000*   |
| Assurance               | Academic staff willing to help students                           | 4.32               | 6.34             | -1.423                    | .000*   |
|                         | Non-academic staff readily helped student even when busy          | 4.10               | 5.42             | -1.322                    | .000*   |
|                         | Students trust non-academic staff.                                | 4.19               | 5.56             | -1.371                    | .000*   |
|                         | All Staff deals with students politely.                           | 4.63               | 6.33             | -1.701                    | .000*   |
| Empathy                 | Students feel safe while receiving services.                      | 4.40               | 6.25             | -1.848                    | .000*   |
|                         | All staff gets support from the university to do well their jobs  | 4.85               | 6.44             | -1.592                    | .000*   |
|                         | Students get personal attention from dispensary-staff             | 4.17               | 5.36             | -1.186                    | .000*   |
|                         | Academic staff give students individual attention                 | 4.63               | 5.98             | -1.351                    | .000*   |
| Overall service quality | Academic staff understands students' specific needs               | 4.58               | 6.38             | -1.804                    | .000*   |
|                         | All staff keeps students' interest at heart.                      | 4.73               | 6.16             | -1.425                    | .000*   |
|                         | University operating hours convenient to all students             | 4.15               | 5.98             | -1.826                    | .000*   |
|                         |   | 4.49               | 6.10             | -1.611                    | .000*   |

\*p<0.05

**Table 2. Meanscore and rankings of SERVQUAL dimension**

| Dimensions     | Means      |             | Ranking    |             |
|----------------|------------|-------------|------------|-------------|
|                | Perception | Expectation | Perception | Expectation |
| Tangible       | 4.61       | 6.36        | 1          | 1           |
| Reliability    | 4.47       | 6.12        | 3          | 3           |
| Responsiveness | 4.39       | 5.95        | 5          | 5           |
| Assurance      | 4.51       | 6.14        | 2          | 2           |
| Empathy        | 4.45       | 5.97        | 4          | 4           |

**Table 3. Students (gender-wise) view point about quality gaps in the Private University of Odisha's services**

| Dimensions     | Quality gap (M±SD) |            |            |         |     |
|----------------|--------------------|------------|------------|---------|-----|
|                | Male               | Female     | Difference | t-value | Sig |
| Tangible       | -1.69±1.37         | -1.87±1.32 | 0.18       | 0.73    | .46 |
| Reliability    | -1.34±1.12         | -1.45±1.25 | 0.10       | 0.49    | .62 |
| Responsiveness | -1.58±1.52         | -1.61±1.50 | 0.07       | 0.26    | .79 |
| Assurance      | -1.53±1.27         | -1.81±1.23 | 0.27       | 1.19    | .23 |
| Empathy        | -1.48±1.41         | -1.60±1.51 | 1.11       | 0.42    | .67 |

**Table 4. Students' view points on Service Quality gaps in the faculties**

| Dimensions     | Qualitygap (M+SD) |            | Difference | t-value | Sig |
|----------------|-------------------|------------|------------|---------|-----|
|                | UG                | PG         |            |         |     |
| Tangible       | -1.97±1.23        | -1.56±1.45 | 0.40       | -1.70   | .09 |
| Reliability    | -1.76±1.07        | -1.60±1.53 | 0.15       | -0.67   | .49 |
| Responsiveness | -1.73±1.39        | -1.42±1.62 | 0.31       | -1.18   | .24 |
| Assurance      | -1.68±1.06        | -1.61±1.43 | 0.06       | 0.30    | .76 |
| Empathy        | -1.45±1.47        | -1.61±1.44 | 0.16       | 0.62    | .53 |

**Table 5. One-way ANOVA: Analysis of Variance for Service Quality in Sub-scales by Programs**

| SERVQUAL       | Variance      | Sumof Squares | df  | MeanSquare | F     | Sig   |
|----------------|---------------|---------------|-----|------------|-------|-------|
|                | BetweenGroups | 9.368         | 2   | 4.684      | 2.612 | .077  |
| Tangible       | WithinGroups  | 231.319       | 129 | 1.793      |       |       |
|                | Total         | 240.687       | 131 |            |       |       |
|                | BetweenGroups | 22.738        | 2   | 11.369     | 7.038 | .001* |
| Reliability    | WithinGroups  | 208.389       | 129 | 1.615      |       |       |
|                | Total         | 231.127       | 131 |            |       |       |
|                | BetweenGroups | 22.258        | 2   | 11.129     | 5.184 | .007* |
| Responsiveness | WithinGroups  | 276.941       | 129 | 2.147      |       |       |
|                | Total         | 299.199       | 131 |            |       |       |
|                | BetweenGroups | 17.674        | 2   | 8.837      | 5.948 | .003* |
| Assurance      | WithinGroups  | 191.639       | 129 | 1.486      |       |       |
|                | Total         | 209.313       | 131 |            |       |       |
|                | BetweenGroups | 26.289        | 2   | 13.144     | 6.870 | .001* |
| Empathy        | WithinGroups  | 246.820       | 129 | 1.913      |       |       |

\*p&lt;0.05

**Table 6. Frequency and percentage of students according to programs responding about the quality gap in the educational degrees provided by the Private University of Odisha**

| Dimensions     | NegativeQualityGapn (%) |          |       | NoQualityGapn (%) |          |       | PositiveQualityGapn(%) |        |       |
|----------------|-------------------------|----------|-------|-------------------|----------|-------|------------------------|--------|-------|
|                | UG                      | PG       | PhD   | UG                | PG       | PhD   | UG                     | PG     | PhD   |
| Tangible       | 27(84.4)                | 79(88)   | 9(90) | 3(9.4)            | 8(9)     | 1(1)  | 2(6.2)                 | 3(3)   | 0(0)  |
| Reliability    | 19(59.4)                | 74(82.2) | 8(80) | 13(40.6)          | 12(13.3) | 2(20) | 0(0)                   | 4(4.5) | 0(0)  |
| Responsiveness | 20(63)                  | 67(74.4) | 9(90) | 9(28)             | 17(19)   | 0(0)  | 3(9)                   | 6(6.6) | 1(1)  |
| Assurance      | 24(75)                  | 78(87)   | 8(80) | 6(19)             | 11(12)   | 1(10) | 2(6)                   | 1(1)   | 1(10) |
| Empathy        | 16(50)                  | 69(77)   | 6(60) | 11(34.4)          | 19(21)   | 3(30) | 5(15.6)                | 2(2)   | 1(10) |

Given the observed differences in four dimensions of service quality as depicted in Table 5, the post hoc analysis had to be conducted to determine the variance among Programs. Results in Table 6 reveal that, across their programs, the majority of students agree that there was a negative quality gap in each of the five dimensions of educational services. In general, compared with UG, PG, and PhD students, a smaller percentage of postgraduate students stated that there was no quality gap in each of the five dimensions of educational services. Findings from the one-sample t-test (Table 1) reveal that overall perceptions of service quality are significantly lower than students' expectations, resulting in a gap score of  $-1.611$ . Despite this negative gap, the difference is relatively small considering that the average perception score across the five dimensions exceeds 4 on a 7-point scale (Table 2). This suggests that the educational services offered by private universities in Odisha are generally perceived positively and remain above the established cutoff point. It is noteworthy that the smallest service quality gap ( $-0.434$ ) was identified for the item "The university performed the service correctly the first time." This indicates that students are adequately informed and properly guided during their initial interaction with the university, particularly during orientation. The results presented in Table 2 show that Tangibles rank first, followed by Assurance and Reliability, in both students' expectations and their perceptions. This similarity in ranking suggests that private universities in Odisha have been relatively successful in meeting the initial expectations of their primary service recipients—students—across these dimensions. Conversely, if the rankings had differed substantially—for example, if Tangibles had been ranked highest in expectations but lowest in perceptions—it would have indicated a significant shortfall in the quality of services delivered by the institution. Such a mismatch would reflect the university's inability to meet students' anticipated standards in that particular dimension.

The results presented in Tables 3 and 4 indicate that there are no significant differences in the service quality gap by students' gender or by the faculty providing the academic services. This suggests that the perceived service quality gap does not vary by gender nor differ across the faculties to which their academic programs belong. One possible explanation for this finding is that private universities in Odisha offer academic programs that share several common elements, including courses taught by the same academic staff, the use of similar teaching and learning facilities, and standardised modes of instructional delivery. Consequently, students across different faculties and gender groups tend to experience comparable levels of service quality. The results presented in Table 5 indicate that students hold similar perceptions regarding the physical facilities, equipment, and the appearance of service personnel at the private university in Odisha. This finding suggests that students across different academic disciplines view the tangible aspects of service quality similarly. One possible explanation is that the university allocates its physical resources such as accommodation, canteen services, and teaching and learning facilities without significant differentiation among various programs, including undergraduate, postgraduate and PhD courses. However, variations in students' perceptions were observed across the remaining four dimensions of service quality. The findings presented in Table 6 indicate significant differences in perceptions between UG students and their counterparts regarding the institution's ability to deliver promised services accurately and on time, as well as the willingness of staff members to assist students and provide prompt service. This result may be attributed to the limited emphasis the private university in Odisha places on training its service personnel in customer care practices. In addition, the institution appears to have given insufficient attention to effectively implementing and communicating the principles of a "client service charter" among its staff. The distinct perceptions expressed by UG students may be

influenced by several factors. First, these students may have higher expectations for the quality of services provided by the university. Second, UG programs typically last about 3 years, which is comparatively long and allows students sufficient time to fully adapt to or gain extensive experience within the university's learning environment. Finally, this group may exhibit lower resilience than students enrolled in degree and postgraduate programs due to age-related factors.

### Recommendations

Although the results of the one-sample t-test indicate that the educational services provided by the private university in Odisha are perceived to be above the cutoff average score of 4 points, improvements are still required in certain areas. In particular, the university faculties should strengthen service delivery in the Reliability dimension, especially regarding the item "Faculties keep promises with students." Insights from the focus group discussions revealed that faculty members occasionally fail to fulfil commitments made to students within the promised timeframe. For example, participants noted delays in the issuance of examination progress reports to continuing students. To address this issue, the university should consider investing in advanced digital systems or software to facilitate faster processing and the timely release of examination results and academic progress reports. The study further recommends that the university invest more in customer service training for its staff to enhance their ability to interact with students professionally and courteously. Introducing appropriate incentives may also motivate staff members to provide prompt assistance and individualised attention to students, particularly those enrolled in undergraduate programs. In addition, it is important for university staff to adhere consistently to the "client service charter," which outlines the standards for delivering quality services within the institution. Finally, the university should consider developing and allocating specialised physical facilities and equipment tailored to the needs of different academic programs and levels of study. Since academic programs often have distinct requirements, providing program-specific resources will help create a more effective teaching and learning environment and better support students' academic needs.

### Areas for Further Research

In the present study, the SERVQUAL approach was primarily applied to examine the presence of Gap 5 and to propose strategies to minimise it. Future research within the higher education sector should extend the analysis to identify additional service quality gaps, as the service quality gap model recognises seven potential gaps. Examining these additional gaps would provide a more comprehensive understanding of service quality issues within educational institutions. Furthermore, the current study relied on questionnaires and focus group discussions as the main data collection methods. Future investigations may benefit from incorporating additional qualitative methods, such as in-depth interviews and direct observations, to gain deeper insights into the factors shaping students' expectations and perceptions of services in higher education institutions. In addition, subsequent research could explore the application of the SERVPERF model, proposed by J. Joseph Cronin and Steven A. Taylor (1992) and later discussed by Holly Landrum and colleagues (2009), which measures service quality solely on the basis of performance perceptions. Finally, further studies may also examine service quality from an internal perspective by considering academic and non-academic staff as internal customers. Such research could assess whether the SERVQUAL framework can be effectively generalised to evaluate service quality among university employees.

## CONCLUSION

This study assessed the multidimensional service quality gaps in a private university in Odisha using the SERVQUAL framework to compare students' expectations and perceptions of educational

services. The findings reveal that although students generally view the services provided by the university positively, their expectations consistently exceed their perceptions, resulting in an overall negative service quality gap. Among the five SERVQUAL dimensions, the largest gaps were observed in Reliability and Responsiveness, indicating that students expect greater consistency in service delivery, timely fulfilment of commitments, and more prompt assistance from academic and non-academic staff. The analysis also indicates that perceptions of service quality gaps do not significantly differ based on gender or faculty affiliation, suggesting a relatively uniform service experience across these groups. However, differences across academic programmes highlight the need for more tailored service strategies for students at different levels of study. Overall, the study underscores the importance of continuously monitoring service quality in higher education institutions. Addressing gaps in reliability, responsiveness, and student support services will be essential for enhancing student satisfaction and strengthening the competitive position of private universities in Odisha.

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