



## Perceived Service Quality in Indonesian Higher Education: A Test of EDUQUAL Model

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### Abstract

This study aims to evaluate educational service quality at a state university in Indonesia by applying the EDUQUAL model, a framework explicitly tailored for higher education. By integrating the Customer Satisfaction Index (CSI) and Importance-Performance Analysis (IPA), this research assesses overall student satisfaction and delineates specific improvement priorities. A quantitative descriptive approach was employed, surveying 337 undergraduate students. Data were gathered through a structured questionnaire covering five EDUQUAL dimensions: Learning Outcomes, Responsiveness, Physical Facilities, Personality Development, and Academic. Construct validity and reliability were rigorously confirmed via Confirmatory Factor Analysis (CFA). The empirical results yielded a CSI score of 71%, reflecting a satisfactory level of perceived service quality among students. Nevertheless, the IPA matrix revealed that Responsiveness and Physical Facilities are critical priorities requiring immediate institutional intervention to resolve communication delays and infrastructure deficits. Academic and Learning Outcomes dimensions performed optimally and warrant maintenance. Ultimately, this study demonstrates that integrating EDUQUAL with CSI and IPA provides actionable insights for strategic decision-making in university management.

### How to Cite

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## INTRODUCTION

Higher education plays a strategic role in shaping the quality of human resources, particularly by equipping students with competencies aligned with global demands. Universities are expected not only to produce academically competent graduates but also to deliver superior and satisfying educational services (Nasution et al., 2023). In this context, service quality becomes a critical indicator in determining student satisfaction as primary consumers of higher education services (Baharsyah & Nurhasan, 2023; Krisana Kitchroen, 2004).

Student satisfaction reflects a subjective evaluation of the quality of services received throughout the learning process (Umriana & Pranatami, 2022). According to Khosravi et al. (2013), student satisfaction has a direct impact on student retention, loyalty, and institutional image. Satisfaction levels also influence prospective students' decisions to enroll through word-of-mouth marketing (Asti & Ayuningtyas, 2020; Pranandha & Kusumadewi, 2022).

In the context of global competition in higher education, institutions must assess service quality comprehensively. Previous studies have shown that improvements in service dimensions, such as physical facilities and staff responsiveness, can significantly enhance students' positive perceptions of their institutions (Baharsyah & Nurhasan, 2023; Fitriani, 2018).

The number of higher education institutions in Indonesia has fluctuated in recent years, largely due to declining interest from prospective students in institutions perceived as failing to deliver quality education services. This trend underscores the urgency of evaluating the education service systems in universities, including Universitas Negeri Semarang (UNNES), which serves as the focus of this study. Conventionally, service quality in higher education has often been measured using the SERVQUAL model, which emphasizes five core dimensions: tangibles, reliability, responsiveness, assurance, and empathy. However, this model is considered less con-

textual when applied to educational settings, particularly in developing countries, as it does not fully capture the complexity of students' learning experiences (Brady & Cronin, 2001; Suhendra & Nurdianti, 2019).

As an alternative, Mahapatra and Khan (2007) introduced the EDUQUAL model, which is specifically designed for the higher education sector. This model comprises five dimensions: learning outcomes, responsiveness, physical facilities, personality development, and academic services. Various studies have shown that the EDUQUAL dimensions are more accurate in identifying educational service aspects that significantly influence student satisfaction (Hardianto et al., 2017; Kusumawati, 2024).

To date, Universitas Negeri Semarang (UNNES) still employs the SERVQUAL model in its service evaluations, as stated by the Secretary of the UNNES Quality Assurance Office. This circumstance has prompted the author to critically assess the relevance of the SERVQUAL model and propose a more contextually appropriate alternative, namely the EDUQUAL model. Based on the 2024 student satisfaction survey, the overall satisfaction level among UNNES students remains in the "moderately satisfied" category, particularly in the dimensions of responsiveness and physical facilities, both of which highlight areas in need of improvement.

Moreover, most studies on student satisfaction have focused on individual service dimensions without integrating analytical tools such as the Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA) simultaneously. Yet, combining satisfaction measurement (CSI) with priority mapping (IPA) can provide a more comprehensive and strategic foundation for decision-making. Therefore, this study aims to fill that gap by examining the suitability of the EDUQUAL model while integrating these two evaluation methods to yield more practical and actionable insights for improving service quality in higher education.

To measure student satisfaction, two

commonly used methods are the Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA). CSI is used to assess satisfaction levels by comparing expectations with actual performance (Reza Amri et al., 2020), while IPA maps service attributes based on their level of importance and performance, which are then classified into priority quadrants (Kesumajayansyah & Yuwono, 2014).

The combination of these two methods has proven effective in identifying areas for service improvement in a more focused manner (Ansori et al., 2018). Moreover, this approach is highly valuable for strategic decision-making in enhancing the quality of services provided by higher education institutions.

This study aims to: (1) evaluate the suitability of the EDUQUAL dimensions as a measurement tool for service quality in higher education; (2) assess student satisfaction levels regarding educational services at UNNES; and (3) identify priority sub-dimensions that require improvement. By employing Confirmatory Factor Analysis (CFA), the Customer Satisfaction Index (CSI), and Importance Performance Analysis (IPA), this study seeks to offer empirical contributions to the development of a more contextual and applicable evaluation model for educational service quality in higher education.

## METHODS

This study employs a quantitative descriptive approach, which is appropriate for illustrating and analyzing phenomena based on numerical and statistical data, particularly in measuring student satisfaction with the quality of educational services at Universitas Negeri Semarang. The quantitative method also enables the testing of the reliability and validity of the EDUQUAL dimensions through precise and objective statistical analysis.

The research design used is a survey, with data collected through closed-ended questionnaires. The model applied to measure service quality is EDUQUAL, which comprises five core dimensions: Learning Outcome,

Responsiveness, Physical Facilities, Personality Development, and Academic. Each dimension is assessed using indicators developed from established theories and previous research findings.

The population in this study consisted of all active undergraduate students of Universitas Negeri Semarang (UNNES) from the 2022 cohort, totaling 10,212 students. The decision to focus exclusively on the 2022 cohort was driven by strong empirical considerations. As senior students who have been actively engaged in the campus ecosystem for four academic years, this cohort has experienced the full spectrum of institutional services, ranging from the admission process, the transition of learning infrastructure, to advanced academic advising and thesis supervision. Selecting active senior students rather than alumni mitigates recall bias and ensures that the evaluation reflects the current state of sustainable service quality and recent institutional policies, rather than outdated service frameworks.

Furthermore, the study deliberately limits the respondents to undergraduate students, excluding lecturers, administrative staff, and the general public. This limitation is theoretically grounded in the specific architecture of the EDUQUAL model (Mahapatra & Khan, 2007), which positions students as the primary consumers (primary customers) of higher education services. Evaluating internal stakeholder satisfaction (e.g., lecturers and staff) would require an entirely different theoretical framework, such as internal service quality (ISQ) models, which falls outside the scope of this research.

To ensure that the sample accurately represented all faculties, the sampling technique used was proportionate random sampling. In its online execution, this technique was rigorously administered. First, the population quota was calculated proportionally based on the total number of students in each of the faculties at UNNES. Subsequently, randomized email and integrated academic portal (Sikadu) message blasts were distributed using a computer-generated random number sequence based

on student identification numbers (NIM). The online survey system was programmed to automatically close the acceptance of responses for a specific faculty once its calculated proportional quota was met. This technological control ensures that the final sample is both genuinely random and perfectly proportional to the faculty distribution, effectively eliminating self-selection bias commonly found in conventional online surveys.

The target population for this study was strictly defined as active undergraduate students (S1) of the 2022 cohort at Universitas Negeri Semarang (UNNES), totaling 10,212 students. Postgraduate (master's and doctoral) and diploma/vocational students were explicitly excluded from this study to maintain sample homogeneity in evaluating standard academic services. The selection of the 2022 cohort was intentional, as these senior students were deemed to have sufficient, comprehensive experience with campus services to provide reliable evaluations through the questionnaire.

To determine the minimum sample size scientifically, the Isaac and Michael formula

was employed, utilizing a 95% confidence level and a specific sampling error rate of 5%. Based on the calculation for a defined population of 10,212, the exact theoretical formulation yielded a minimum sample requirement of 336.5. To ensure statistical robustness and prevent under-representation, this figure was mathematically rounded up, establishing the definitive final sample size of exactly 337 students.

Furthermore, to guarantee that this sample accurately mirrors the population's demographic structure, the study implemented a proportionate stratified random sampling technique, strictly avoiding convenience-based selection. The total sample of 337 was mathematically distributed across UNNES's faculties based on the exact population weight of the 2022 cohort in each respective faculty. For instance, if a specific faculty constitutes 15% of the total 2022 cohort population, it was allocated exactly 15% of the total sample. The precise breakdown of this proportional sample distribution across all faculties is detailed systematically in Table 1.

**Table 1.** Proportional Sample Distribution

| No    | Faculty | Population (N) | Proportion (%) | Sample Target (n) |
|-------|---------|----------------|----------------|-------------------|
| 1     | FIPP    | 1.200          | 11.75          | 40                |
| 2     | FBS     | 1.300          | 12.73          | 43                |
| 3     | FISIP   | 1.100          | 10.77          | 36                |
| 4     | FMIPA   | 1.000          | 9.79           | 33                |
| 5     | FT      | 1.500          | 14.69          | 50                |
| 6     | FIK     | 800            | 7.83           | 26                |
| 7     | FEB     | 1.800          | 17.63          | 59                |
| 8     | FH      | 1.100          | 10.77          | 36                |
| 9     | FK      | 412            | 4.03           | 14                |
| Total |         | 10.212         | 100            | 337               |

Source: Processed Primary Data (2025)

The instrument used in this study was a questionnaire employing a 4-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (4). The questionnaire was divided into two sections: one measuring the

performance level of services and the other assessing the importance level of those services. Each section was constructed based on 28 indicators derived from the five EDUQUAL dimensions.

The questionnaire items were developed by referring to the framework proposed by Mahapatra and Khan (Mahapatra & Khan, 2007) and were adapted to the specific context of services at UNNES. Prior to large-scale distribution, a pilot test was conducted involving 30 respondents to assess the instrument's validity and reliability.

Primary data were collected by distributing structured questionnaires via an online platform (Google Forms). To rigorously enforce the proportionate random sampling design, the distribution process was not merely left to open-access convenience. Instead, the survey links were distributed through targeted institutional emails and the university's academic portal, specifically addressed to randomly pre-selected students from the 2022 cohort based on their NIM.

Furthermore, to ensure strict adherence to the proportional quota assigned to each of the nine faculties (as previously detailed in Table 1), real-time quota control mechanisms were implemented. The research team monitored the incoming responses daily and utilized a sorting logic based on the respondents' faculty affiliation. Once a specific faculty stratum reached its calculated exact quota, the submission access for that particular group was immediately closed or capped. This targeted distribution and quota-capping protocol effectively prevented over-representation or under-representation, ensuring that the final empirical dataset strictly accommodated the proportionate stratified random sampling requirements.

This method was chosen for its efficiency and ability to reach students across various locations quickly. Additionally, data collected through online questionnaires facilitated easier tabulation, processing, and analysis using statistical software tools.

According to Suryabrata (2016), a validity test aims to determine the extent to which an instrument is capable of measuring what it is intended to measure. In this study, the validity test was conducted using SPSS version 27.0, as recommended by Janna and

Herianto (2021). An instrument is considered valid if the calculated correlation coefficient ( $r$ -calculated) is greater than the critical value from the  $r$ -table ( $r$ -table); conversely, it is deemed invalid if  $r$ -calculated  $<$   $r$ -table. The test was conducted with 30 respondents, with an  $r$ -table value of 0.361 ( $N = 28$ , 5% significance level). Validity testing was applied to all five EDUQUAL dimensions-Learning Outcomes, Responsiveness, Physical Facilities, Personality Development, and Academic-to assess both performance and importance levels.

The results indicated that all items across the five EDUQUAL dimensions had  $r$ -calculated values exceeding 0.361 for both performance and importance, thus confirming their validity. Subsequently, a reliability test was conducted to assess the internal consistency of the instrument, revealing that all dimensions yielded Cronbach's Alpha values above 0.7. This confirms that the instrument is reliable and appropriate for use in the study. Therefore, the research instrument meets the standards of validity and reliability, making it suitable for accurately and consistently measuring student satisfaction.

## RESULTS AND DISCUSSION

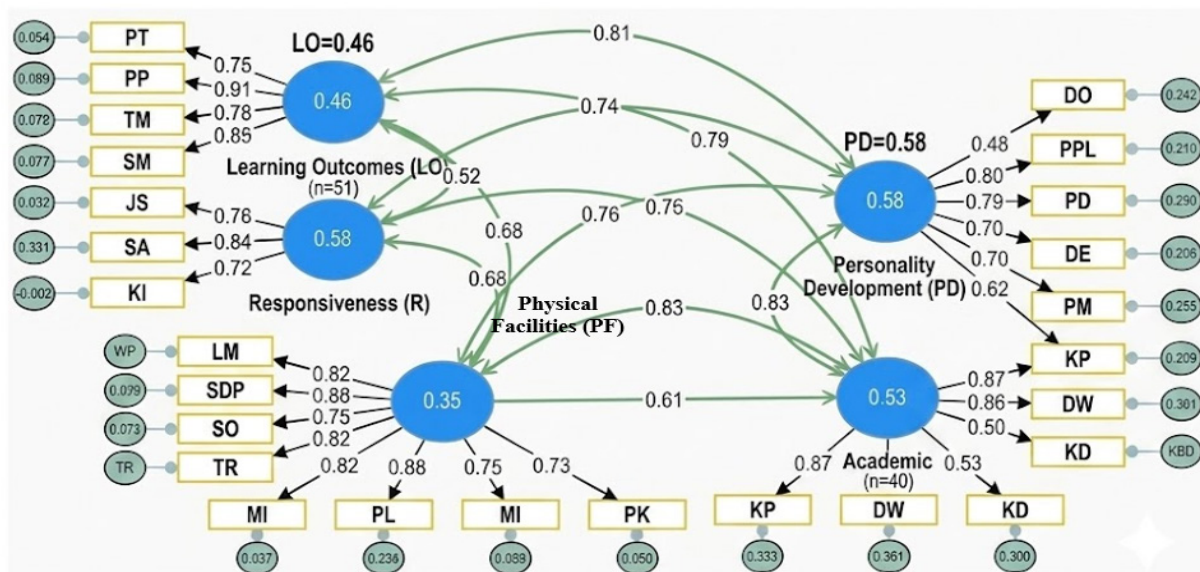
### Goodness of Fit EDUQUAL Model

The respondents in this study consisted of 337 undergraduate students from the 2022 cohort across 9 faculties at Universitas Negeri Semarang. Demographically, the respondents' profiles were analyzed based on gender, age, and faculty representation. As detailed in Table 2, the sample was composed of 135 male students (40.06%) and 202 female students (59.94%). Regarding age distribution, given the specific selection of the 2022 academic cohort, the majority of respondents were 22 years old (48.96%), followed closely by those aged 21 years old (44.51%). This age profile strictly reflects the expected maturity level of senior undergraduate students, ensuring that their evaluations of the institutional services are based on adequate campus experience.

**Table 2.** Demographic Characteristics of Respondents

| Demographic Category | Classification | Frequency (n) | Percentage |
|----------------------|----------------|---------------|------------|
| Gender               | Male           | 135           | 40.06%     |
|                      | Female         | 202           | 59.94%     |
| Age                  | 20 Years Old   | 12            | 3.56%      |
|                      | 21 Years Old   | 150           | 44.51%     |
|                      | 22 Years Old   | 165           | 48.96%     |
|                      | >22 Years Old  | 10            | 2.97%      |

Source: Processed Primary Data (2025)

**Figure 1.** Empirical Result of the EDUQUAL CB-SEM Analysis

The measurement instrument in this study was theoretically anchored exclusively to the EDUQUAL framework, a scale originally developed by Mahapatra and Khan (2007) and further contextualized by Annamdevula (2014) to specifically evaluate service quality in higher education. It is imperative to clarify that the Customer Satisfaction Index (CSI) and Importance-Performance Analysis (IPA) are not measurement constructs, but analytical tools applied post-data collection to compute satisfaction scores and prioritize service improvements based on the respondents' perceived performance and expectation ratings.

To construct the instrument blueprint, an initial pool of 57 items was generated and adapted from established higher education service quality literature. These items were systematically categorized into the five

core EDUQUAL dimensions: Learning Outcomes, Responsiveness, Physical Facilities, Personality Development, and Academic. The complete operationalization of these variables, including their sub-indicators and theoretical sources, is detailed in the Instrument Blueprint.

Prior to the structural and descriptive analysis, a Confirmatory Factor Analysis (CFA) was executed to rigorously assess construct validity and purify the measurement scale. During this iterative refinement process, items that failed to explain sufficient variance were eliminated. The CFA results indicated that 28 robust indicators were retained across the five dimensions. All retained indicators demonstrated outer loading values  $\geq 0.6$  (Gefen & Straub, 2005), thereby fully satisfying the strict threshold for construct validity. This

validated 28-indicator model formed the definitive basis for the subsequent CSI and IPA calculations.

Based on the results of the Goodness of Fit (GoF) analysis, the EDUQUAL model is considered suitable for measuring service quality in higher education. According to Wardhani et al. (2020), a model can still be deemed acceptable even if one or two fit indices fall within the marginal category. Tjiptono and Chandra (2016) emphasize that service quality functions as a tool to evaluate the extent to which the services provided meet customer expectations. Similarly, Winasih and Hakim (2021) argue that measuring service quality in higher education is crucial, as it directly impacts student satisfaction and the institution's credibility.

**Table 3.** Data Analysis *Goodness Of Fit* Model EDUQUAL

|           | Estimated Model | Explanation |
|-----------|-----------------|-------------|
| ChiSqr/df | 4.95            | Not Fit     |
| FMSEA     | 0.108           | Not Fit     |
| NFI       | 0.697           | Not Fit     |
| TLI       | 0.721           | Not Fit     |
| CFI       | 0.741           | Not Fit     |
| SRMR      | 0.071           | Fit         |

Source: Processed Primary Data (2025)

The EDUQUAL dimensions, developed as an extension of the SERVQUAL model, are specifically designed to assess service quality within the context of higher education. In this study, the EDUQUAL model was validated through Confirmatory Factor Analysis (CFA), which included tests of convergent validity, discriminant validity, and reliability across five subdimensions: Learning Outcomes, Responsiveness, Physical Facilities, Personality Development, and Academic. The results of the Confirmatory Factor Analysis (CFA) showed that 37 out of 57 items were found to be valid and reliable for measuring service quality. This measurement aimed to evaluate the level of student satisfaction. In line with the Expectancy Disconfirmation Theory, students' expectations regarding service quality were compared to the actual performance delivered by Universitas Negeri Semarang.

#### Customer Satisfaction Index (CSI)

The measurement of student satisfaction aims to assess the extent to which Universitas Negeri Semarang has met students' expectations through the quality of its services. This study employed the Customer Satisfaction Index (CSI) method to quantitatively evaluate the level of satisfaction. According to Pangastuti (2021), CSI is a widely used tool for measuring customer satisfaction based on perceived service quality.

**Table 4.** Result from Data Analysis Customer Satisfaction Indeks (CSI)

| Sub-Dimension           | No. Item                       | Mean Satisfaction Score | Mean Importance Score |
|-------------------------|--------------------------------|-------------------------|-----------------------|
| Learning Outcomes       | L2, L4, L5, L6, L7, L9, & L12  | 3.39 – 3.60             | 3.49 – 3.63           |
| Responsiveness          | R13, R15, R16, R17, R18, & R21 | 3.43 – 3.49             | 3.49 – 3.67           |
| Physical Facilities     | F24, F26, F27, F30, & F36      | 3.50 – 3.53             | 3.44 – 3.56           |
| Personality Development | P37, P39, P40, P42, P44, & P45 | 3.49 – 3.57             | 3.51 – 3.63           |
| Academic                | A48, A49, A50, A51, & A57      | 3.49 – 3.67             | 3.51 – 3.77           |

Source: Processed Primary Data (2025)

In this study, the Customer Satisfaction Index (CSI) score was calculated based on the alignment between students' perceptions of importance and performance across all EDUQUAL dimensions. The results showed that the CSI score for Universitas Negeri Semarang was 71%, which falls into the "Satisfied" category according to the index scale used. Although this indicates that students generally perceive the university's services as meeting their expectations, it also suggests that further improvements are necessary to reach the "Very Satisfied" category.

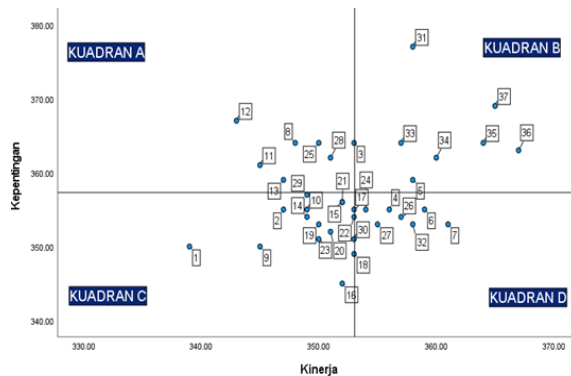
The highest average scores were found in the Academic subdimension, with performance scores ranging from 3.49 to 3.67 and importance scores between 3.51 and 3.77. Satisfaction is achieved when expectations are met, resulting in a sense of contentment and fulfillment—this principle also applies to student satisfaction. As stated by Alfianto and Suryawardana (2021), student satisfaction is highly influenced by the quality of services provided by the institution.

### Importance Performance Analysis (IPA)

The prioritization of service quality improvements at Universitas Negeri Semarang was based on the Importance Performance Analysis (IPA) approach. This method identifies key areas for improvement by comparing the average scores of importance and performance for various service attributes, visualized through a Cartesian diagram divided into four quadrants. According to Agustika et al. (2019), IPA helps differentiate between service attributes that are performing well and those that require improvement. In this study, IPA was used to determine which items within the EDUQUAL dimensions need to be enhanced or maintained in order to improve student satisfaction with university services.

The chart and its interpretation illustrate the position of each service attribute based on students' perceptions of importance and performance. This analysis assists in identifying priority areas for improvement, as well as aspects that already meet student expectations,

as depicted below:



**Figure 2.** Diagram Cartesius

First, Quadrant A (High Priority for Improvement): Seven items fall into this quadrant—mainly from the responsiveness, learning outcomes, and personality development subdimensions. Identified issues include: limited use of modern educational technology by lecturers, delays in disseminating academic information, unclear service procedures, low staff responsiveness, limited exposure to real-world work experience, and inadequate facilities for high-achieving students. Second, Quadrant B (Maintain Performance): This quadrant includes seven items, primarily from the academic and learning outcomes subdimensions. Students expressed satisfaction with the relevance of course structures, access to academic guidance, the learning evaluation process, the variety of teaching methods, and lecturers' subject-matter competence.

Third, Quadrant C (Low Priority): Sixteen items fall into this quadrant, reflecting both low importance and low performance. Dissatisfaction was reported with outdated laboratory facilities, inadequate academic infrastructure, limited library resources, inflexible communication channels, and inconsistent class scheduling. Finally, Quadrant D (Overperformance): Although perceived as less important by students, seven items in this quadrant exhibited high performance scores. Students appreciated access to digital learning materials, practical examples provided by lecturers, support for field activities, campus discipline, and opportunities to participate in

student organizations.

### **Evaluation of the EDUQUAL Model in Higher Education**

The empirical results of this study robustly confirm the suitability and psychometric adequacy of the EDUQUAL model for evaluating service quality within the higher education sector, specifically in the context of UNNES. While the generic SERVQUAL framework predominantly captures functional quality through broad, industry-agnostic dimensions such as tangibles and empathy, EDUQUAL offers a fundamentally more nuanced and context-specific architecture. It intricately aligns with the complex, co-creative nature of academic services by explicitly measuring both functional and technical quality, such as intellectual development and academic delivery (Mahapatra & Khan, 2007; Suhendra & Nurdianti, 2019).

The empirical testing demonstrated that the five distinct dimensions (Learning Outcomes, Responsiveness, Physical Facilities, Personality Development, and Academic) comprehensively reflect the multifaceted realities of modern student perceptions. This robustness is strictly evidenced by the Confirmatory Factor Analysis (CFA), which successfully purified the measurement model. The retained indicators not only satisfied the stringent outer loading thresholds for construct validity but also proved that the dimensions operate as distinct yet interrelated pillars without conceptual overlapping.

Furthermore, validating this framework within an Indonesian state university provides a critical theoretical extension. State universities operate under unique institutional pressures, balancing large-scale public mandates with the demand for academic excellence. The successful application of the model in this environment strengthens previous assertions (Hardianto et al., 2017; Kusumawati, 2024) that EDUQUAL accurately encapsulates the precise service aspects that drive student satisfaction. Beyond evaluating short-term satisfaction, the rigorous validation of this measure-

ment model equips institutional management with a highly reliable diagnostic instrument. By accurately identifying which dimensions perform optimally, universities can formulate strategic policies aimed at establishing sustainable service quality, thereby laying the essential groundwork for fostering long-term, value-based student loyalty in an increasingly competitive higher education landscape.

### **The Methodological Gap: Integrating EDUQUAL, CSI, and IPA**

Previous empirical studies on higher education student satisfaction have predominantly focused on fragmented or individual service dimensions, often failing to integrate multi-dimensional analytical tools simultaneously (Ansori et al., 2018). This fragmented approach typically diagnoses a problem but falls short of offering a structured, actionable mechanism for resolution. The current study successfully addresses this methodological gap by constructing a tripartite methodological synergy: implementing the EDUQUAL measurement framework as the theoretical baseline, and subsequently integrating two powerful analytical tools, the CSI and IPA.

Within this integrated paradigm, each component serves a distinct yet complementary strategic function. While EDUQUAL provides the rigorous theoretical construct necessary for comprehensively capturing the complex dimensions of educational service quality, CSI serves to quantitatively assess the macroscopic satisfaction levels, grounded firmly in the Expectancy Disconfirmation Theory (Reza Amri et al., 2020). However, quantifying satisfaction is merely the diagnostic starting point. To achieve true managerial relevance, IPA acts as the strategic translational tool, mapping these evaluated attributes into precise priority quadrants (Kesumajayansyah & Yuwono, 2014).

This tripartite integration represents a significant methodological advancement for higher education management. It deliberately shifts the institutional focus from a purely evaluative stance, simply measuring "what"

the quality level is, to a prescriptive, strategic orientation that dictates "how" to objectively allocate limited institutional resources. By precisely identifying which service dimensions require immediate intervention and which demand maintenance, university management can avoid arbitrary or politically driven budget allocations. Ultimately, this evidence-based diagnostic foundation is imperative for cultivating Sustainable Service Quality (SSQ), ensuring that institutional improvements are not merely reactive, but actively foster long-term, value-based loyalty among the student body.

### **Assessing Satisfaction Levels and Improvement Priorities**

The empirical assessment using the CSI revealed a satisfaction level of 71%, positioning the institution within the 'Satisfied' category. However, interpreting this figure strictly through the lens of Expectancy Disconfirmation Theory reveals a precarious managerial reality: while basic expectations are met, the failure to reach the 'excellent' threshold indicates that the institution operates merely within the students' zone of tolerance. In a highly competitive higher education ecosystem, mere satisfaction is insufficient to guarantee long-term, value-based loyalty among students.

The IPA matrix distinctly delineates the root causes of this performance gap. Two critical dimensions (Responsiveness and Physical Facilities) emerged in Quadrant A (high importance, low performance), signaling an urgent mandate for institutional intervention. Students specifically highlighted bureaucratic delays in academic communication, low staff responsiveness, and outdated infrastructure as major grievances. From a strategic management perspective, these are not isolated administrative failures; they are structural bottlenecks that fundamentally hinder the establishment of Sustainable Service Quality (SSQ) within the university ecosystem. If left unaddressed, these functional deficits will progressively erode student retention, institutional trust, and the university's public image (Khosravi et al., 2013; Umriana & Pranatami,

2022).

Conversely, attributes within the Academic and Learning Outcomes dimensions were firmly positioned in Quadrant B, indicating robust core strengths. This finding corroborates previous studies asserting that pedagogical competence, high-quality teaching, and curriculum relevance remain the fundamental drivers of positive academic experiences (Baharsyah & Nurhasan, 2023). The fact that the institution excels in these core academic dimensions is a significant asset. Nevertheless, this high technical quality (the 'what' of education) is being undermined by subpar functional quality (the 'how' of service delivery, as seen in Quadrant A). To create a holistic educational ecosystem, institutional excellence must encompass both domains equally.

Finally, the identification of overperformed but marginally important attributes in Quadrant D provides a crucial strategic pivot for university management. It necessitates an agile resource reallocation paradigm, where institutional investments, both financial and human, are systematically redirected from the low-impact areas in Quadrant D to aggressively mitigate the high-priority deficits in Quadrant A. This evidence-based reallocation is essential not only for optimizing short-term satisfaction but also for cultivating a responsive, sustainable, and student-centered academic environment.

## **CONCLUSION**

This study concludes that the EDUQUAL model is more appropriate and contextually relevant than SERVQUAL for measuring service quality in higher education, as it better reflects the academic environment. The five core dimensions—Learning Outcome, Responsiveness, Physical Facilities, Personality Development, and Academic-effectively capture students' perceptions of the services they receive.

The analysis shows that student satisfaction falls into the "satisfied" category, with Responsiveness and Physical Facilities

identified as priority areas for improvement based on the Importance Performance Analysis (IPA) results. These findings highlight the need for strategic and continuous improvements in campus services and infrastructure.

UNNES is advised to simplify service procedures, strengthen student-staff communication, and develop technology-based service systems. Enhancing academic facilities should also be prioritized to create a more conducive learning environment. Regular service evaluations are essential to ensure improvements align with students' actual needs.

For future research, it is recommended to broaden the scope of respondents and compare the EDUQUAL model with alternative approaches, including more in-depth empirical testing such as hypothesis testing, to further validate the model within the context of Indonesian higher education.

## REFERENCES

- Agustika, G. N. S., Wulandari, I. G. A. A., & Jayanta, I. N. L. (2019). Importance-Performance Analysis Sebagai Alat Evaluasi Kualitas Pelayanan Pendidikan Tinggi (Studi Kasus FIP Universitas Pendidikan Ganesha). *Journal of Education Research and Evaluation*, 1(4), 300. <https://doi.org/10.23887/jere.v1i4.13652>
- Alfianto, N., & Suryawardana, E. (2021). *The Influence of the Dimensions of Higher Education Service Quality on Student Satisfaction*. *At-Taqaddum*, 13(2), 171-183. <http://dx.doi.org/10.21580/at.v13i2.8280>
- Annamdevula, S. & Bellamkonda, R. S. (2016). Effect of student perceived service quality on student satisfaction , loyalty and motivation in Indian universities Development of HiEduQual. *Journal of Modelling in Management*, 11(2), 488-517. <https://doi.org/10.1108/JM2-01-2014-0010>
- Ansori, I., Trimurtini, T., Sari, E. F., & Widhiastri, F. (2018). Kesiapan Laboratorium Terpadu Jurusan Pendidikan Guru Sekolah Dasar Universitas Negeri Semarang Untuk E-Learning. *PRIMARY: Jurnal Pendidikan Guru Sekolah Dasar*, 7(2), 275-279. <https://doi.org/10.33578/>
- Asti, E., & Ayuningtyas, E. (2020). Pengaruh Kualitas Pelayanan, Kualitas Produk Dan Harga Terhadap Kepuasan Konsumen. *EKOMABIS: Jurnal Ekonomi Manajemen Bisnis*, 1(1), 1-14. <https://doi.org/10.37366/ekomabis.v1i01.2>
- Baharsyah, S., & Nurhasan. (2023). Pengaruh Kualitas Pelayanan dan Promosi Terhadap Keputusan Mahasiswa Memilih Kuliah di UMS. *Jurnal Ilmiah Manajemen Dan Bisnis*, 1(3), 286-299. <https://doi.org/10.24034/jimbis.v2i1.5767>
- Brady, M. K., & Cronin, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing*, 65(3), 34-49. <https://doi.org/10.1509/jmkg.65.3.34.18334>
- Fitriani, N. (2018). Peran Kualitas Pelayanan Dan Kepuasan Pelanggan Dalam Pembentukan Word of Mouth Mahasiswa Perguruan Tinggi Swasta Di Jakarta. *Jurnal Manajemen Indonesia*, 18(1), 40-51. <https://doi.org/10.25124/jmi.v18i1.1258>
- Gefen, D., & Straub, D. (2005). A Practical Guide To Factorial Validity Using PLS-Graph: Tutorial And Annotated Example. *Communications of the Association for Information Systems*, 16, 91-109. <https://doi.org/10.17705/1cais.01605>
- Hardianto, R. K., Rozaq, A., Yunida, R., & Padli. (2017). Pengukuran Pengaruh Kualitas Pelayanan Pendidikan Berbasis EDUQUAL Terhadap Kepuasan dan Loyalitas Pelanggan. *Jurnal POSITIF*, 3(1), 25-34. <https://doi.org/10.31961/positif.v3i1.365>
- Janna, N. M., & Herianto. (2021). Artikel Statistik yang Benar. *Jurnal Darul Dakwah Wal-Irsyad (DDI)*, 18210047, 1-12.
- Kesumajayansyah, H., & Yuwono, M. A. B. (2014). Peningkatan Kualitas Pelayanan Di Sf Digital Photo. *Sinergi*, 18(1), 39-46.
- Khosravi, A. A., Poushaneh, K., Roozegar, A., & Sohrabifard, N. (2013). Determination of Factors Affecting Student Satisfaction of Islamic Azad University. *Procedia - Social and Behavioral Sciences*, 84, 579-583. <https://doi.org/10.1016/j.probs.2013.06.001>

- doi.org/10.1016/j.sbspro.2013.06.607
- Kitchroen, K. (2004). Literature Review: Service Quality in Educational Institutions. *ABAC Journal*, 24(2), 14–25.
- Kusumawati, I. (2024). *Pengaruh Kualitas Pelayanan Akademik dan Fasilitas Belajar Terhadap Kepuasan Mahasiswa Program Studi Manajemen Pendidikan Islam Institut Agama Islam Negeri Ponorogo Tahun Akademik 2023/2024*.
- Mahapatra, S. S., & Khan, M. S. (2007). A neural network approach for assessing quality in technical education: An empirical study. *International Journal of Productivity and Quality Management*, 2(3), 287–306. <https://doi.org/10.1504/IJPQM.2007.012451>
- Nasution, D., Sinaga, A. H., Samudera, I., & Hulu, I. P. (2023). Analysis of Customer Satisfaction Index Method on the Perception of Universitas Prima Indonesia'S New Building By Its Students. *Jurnal Sistem Informasi Dan Ilmu Komputer Prima (JUSIKOM PRIMA)*, 7(1), 204–217. <https://doi.org/10.34012/jurnalsisteminformasidanilmukomputer.v7i1.4056>
- Pangastuti, H. (2021). Pengukuran Kepuasan Konsumen Pada Kantin Institut Teknologi Sumatera Menggunakan Importance-Performance Analysis. *Jurnal Teknologi Pangan Dan Kesehatan (The Journal of Food Technology and Health)*, 1(1), 8–15. <https://doi.org/10.36441/jtepakes.v1i1.165>
- Pranandha, K. E. S., & Kusumadewi, N. M. W. (2022). Peran Word Of Mouth Memediasi Pengaruh Kualitas Produk Terhadap Keputusan Pembelian Konsumen. *E-Jurnal Manajemen*, 11(3), 443-463. <https://doi.org/10.24843/EJMUNUD.2022.v11.i03.p02>
- Reza Amri, H., Ridho Taufiq Subagio, & Kusnadi. (2020). Penerapan Metode CSI untuk Pengukuran Tingkat Kepuasan Layanan Manajemen. *Jurnal Sistem Cerdas*, 3(3), 241–252. <https://doi.org/10.37396/jsc.v3i3.86>
- Suhendra, S., & Nurdianti, R. R. S. (2019). Penggunaan Metode Servqual dalam Pengukuran Kualitas Layanan Pendidikan. *Indonesian Journal of Primary Education*, 2(2), 72. <https://doi.org/10.17509/ijpe.v2i2.15103>
- Suryabrata, S. (2016). *Metodologi Penelitian (Edisi 2)*. Jakarta: PT Raja Grafindo Persada.
- Tjiptono, F., & Chandra, G. (2016). *Service, Quality & Satisfaction (Ed. IV)*. Yogyakarta: C.V ANDI OFFSET.
- Umriana, A., & Pranatami, D. A. (2022). Indeks Kepuasan Mahasiswa Terhadap Layanan Akademik Dan Non Akademik Uin Walisongo Semarang. *Jurnal Penjaminan Mutu*, 8(1), 95–103. <https://doi.org/10.25078/jpm.v8i1.767>
- Wardhani, N. W. S., Nugroho, W. H., Fernandes, A. A. R., & Solimun. (2020). Structural equation modeling (SEM) analysis with warpls approach based on theory of planned behavior (TPB). *Mathematics and Statistics*, 8(3), 311–322. <https://doi.org/10.13189/ms.2020.080310>
- Winasih, T., & Hakim, L. (2021). Peran Kepuasan Sebagai Variabel Mediasi Kualitas Layanan dan Kepercayaan Nasabah terhadap Loyalitas Nasabah Bank Syariah. *IQTISHADIA Jurnal Ekonomi & Perbankan Syariah*, 8(2), 205–221. <https://doi.org/10.19105/iqtishadia.v8i2.4152>