Evaluating Academic Service Quality at Universitas Sains Al-Qur'an Wonosobo: A SERVQUAL-Based Analysis of Student Satisfaction and Improvement Priorities

Ria Fatmawati[a], Ali Murfi[b]

[a]SMK Takhassus Al-Qur'an Wonosobo, Indonesia; [b]Higher Education Management Study Program, Universitas Gadjah Mada, Indonesia

Abstract

Purpose – This study examines the quality of academic services at Universitas Sains Al-Qur'an (UNSIQ) Wonosobo, focusing on student satisfaction and identifying key service gaps based on the SERVQUAL model. The study aims to provide actionable recommendations for improving service quality by analyzing the gaps between student expectations and actual service delivery.

Methods/Design/Approach – A quantitative approach was adopted, using a survey distributed to 952 students across six faculties. The SERVQUAL model informed the design of the questionnaire, which measured the importance and satisfaction of academic services through a 5-point Likert scale. Importance-Performance Analysis (IPA) was applied to identify priority areas for improvement. Data validity and reliability were tested using SPSS.

Findings – Significant gaps were found in UNSIQ's academic services, particularly in the Tangibles dimension, where the largest gap (1.71) was in internet access. Other dimensions such as Reliability and Responsiveness also showed noticeable gaps. The findings indicate the urgent need for improvement in digital infrastructure to enhance student satisfaction.

Originality/Value – This study adds to the literature on service quality in higher education by applying the SERVQUAL model in the context of an Indonesian university. The findings align with international studies on the importance of infrastructure and service quality in shaping student satisfaction and institutional loyalty. The study also provides actionable recommendations for UNSIQ, which can serve as a reference for similar institutions seeking to improve service quality.

Practical Implications – The research suggests that UNSIQ should prioritize enhancing both physical and digital infrastructure to better meet student expectations. Implementing regular feedback mechanisms could further align services with student needs, thereby increasing satisfaction and loyalty.

Keywords Academic service quality, student satisfaction, SERVQUAL, higher education, Importance-Performance Analysis (IPA)

Paper type Research paper

1.   Introduction

Higher education institutions play a pivotal role in preparing individuals to be competitive in the global labor market. In Indonesia, the government mandates through Law No. 12 of 2012 that higher education institutions develop competent human resources by offering structured academic programs at various levels, including diploma, undergraduate, master's, and doctoral degrees. However, despite the rapid expansion of higher education institutions across the country—reaching 4,585 institutions in the 2017/2018 academic year—the quality of education provided remains a significant concern (*Rekap Nasional Semester 2017/2018 Genap*, 2018). Not all institutions can ensure consistent academic service quality, particularly those in regional or developing areas, such as Universitas Sains Al-Qur'an (UNSIQ) in Wonosobo.

Service quality in higher education is a critical factor influencing student satisfaction, loyalty, and institutional competitiveness (Sultan & Wong, 2018). In an increasingly globalized education landscape, universities must offer not only high-quality academic programs but also effective academic services that meet students' expectations. Research has demonstrated that student satisfaction is closely tied to the perceived quality of academic services, including infrastructure, digital resources, and student-faculty interactions (Ali & Ragavan, 2016; Gruber et al., 2010). Failure to meet these expectations can negatively impact student retention, institutional image, and overall competitiveness.

In Indonesia, challenges specific to infrastructure and service quality are prevalent, particularly in universities outside major urban centers. For example, UNSIQ, located in a more rural area, has faced criticism regarding inadequate physical infrastructure, including internet access and classroom facilities, which has led to student dissatisfaction. This reflects a broader issue in the Indonesian higher education sector, where institutions in less developed regions often struggle to provide the same level of service quality as their counterparts in major cities. Furthermore, the lack of adequate digital infrastructure becomes particularly pressing as universities aim to adapt to new modes of learning, especially in the wake of global demands for hybrid and technology-enhanced learning environments.

Given these challenges, it is imperative for institutions like UNSIQ to continuously evaluate and improve the quality of their academic services. This study addresses this need by applying the SERVQUAL model, which measures service quality across five key dimensions: Tangibles, Reliability, Responsiveness, Assurance, and Empathy (Parasuraman et al., 1988). By focusing on the gaps between student expectations and actual service delivery, this research seeks to provide actionable insights and strategic recommendations for improving academic services at UNSIQ.

The importance of this study lies not only in its immediate practical implications for UNSIQ but also in its contribution to the broader discourse on higher education service quality in Indonesia. Unlike many studies that focus on urban or more established institutions, this research sheds light on the unique challenges faced by regional universities in maintaining service quality. Additionally, the findings of this study will offer a model for other similar institutions in Indonesia that face comparable infrastructural and service quality issues, providing them with a roadmap for enhancing student satisfaction and institutional competitiveness.

Therefore, this research aims to evaluate the academic service quality at UNSIQ Wonosobo using the SERVQUAL model, with a particular focus on student satisfaction and identifying areas for improvement. By providing an in-depth analysis of student perceptions, this study will contribute to improving UNSIQ's academic services, ensuring that they meet student expectations and enhance the institution's overall performance in a competitive educational landscape.

2.   Theoretical Framework

2.1   Academic Service Quality in Higher Education

Academic service quality is a crucial determinant of student satisfaction and loyalty (Gruber et al., 2010). Research emphasizes that student satisfaction is often shaped by their experiences with academic services, including classroom facilities, internet access, and interpersonal interactions with faculty (Gruber et al., 2010). There is also a need for institutions to focus on improving both academic and non-academic services to build a strong university brand and retain students (Sultan & Wong, 2010).

The SERVQUAL model provides a widely accepted framework for measuring service quality across five dimensions: Tangibles, Reliability, Responsiveness, Assurance, and Empathy (Parasuraman et al., 1988). Numerous studies have applied SERVQUAL in the context of higher education, including the development of a hierarchical model (HESQUAL) to measure service quality in higher education (Teeroovengadum et al., 2016). This model emphasizes the need for continuous assessment and improvement of various service dimensions to meet student expectations (Teeroovengadum et al., 2016).

Moreover, studies highlight that perceived service quality not only influences student satisfaction but also affects the university's brand image and students' behavioral intentions (Sultan & Wong, 2018). Thus, improving service quality becomes essential for institutions to enhance both the academic experience and their competitive positioning in the higher education sector (Sultan & Wong, 2018).

2.2   Student Satisfaction and Loyalty

Student satisfaction is a direct reflection of their evaluation of the quality of services provided (Teeroovengadum et al., 2016). Research found that the satisfaction of international students in Malaysian public universities was significantly influenced by the quality of academic services, which in turn enhanced student loyalty (Teeroovengadum et al., 2016). Similar findings indicate that satisfaction and trust mediate the relationship between service quality and behavioral outcomes, such as students' willingness to recommend the institution to others (Sultan & Wong, 2018).

It has been added that satisfied students are more likely to stay loyal to the institution, continue their studies, and participate in alumni activities (Watjatrakul, 2014). Therefore, ensuring high service quality is not only important for improving student satisfaction but also for building long-term loyalty, which contributes to the institution's growth and sustainability (Watjatrakul, 2014).

2.3   Importance-Performance Analysis (IPA)

Importance-Performance Analysis (IPA) is a strategic tool that helps institutions identify which areas of service are most critical for improvement based on student perceptions of importance and performance (Martilla & James, 1977). In higher education, IPA can be used to prioritize the allocation of resources toward the services that are most valued by students (Martilla & James, 1977). The use of IPA in this study provides UNSIQ with a clear roadmap for improving its academic services by focusing on the most significant service gaps, particularly in infrastructure and digital resources

3.   Methods

2.1   Research Design

This study adopts a quantitative approach aimed at measuring the satisfaction and importance levels of students regarding academic services at Universitas Sains Al-Qur'an (UNSIQ) Wonosobo. This design was chosen because it allows the collection of numerical data that can be statistically analyzed to identify patterns and relationships between variables (Creswell & Creswell, 2018). A survey method was employed using a questionnaire designed based on the SERVQUAL model, which is widely recognized for measuring service quality across various sectors, including higher education (Parasuraman et al., 1988).

3.2   Sample and Participants

The study participants consist of active undergraduate students from the 2015, 2016, and 2017 cohorts at UNSIQ. This population was selected because these students have had significant experience with UNSIQ's academic services. The total target population for this study is 5,341 students across six faculties.

The sample was drawn using the Quota Sampling technique to ensure proportional representation from each faculty (Etikan et al., 2016). Although the number of students varies across faculties, the sample was proportioned accordingly to provide a comprehensive analysis. However, we acknowledge that the smaller number of students from the Faculty of Communication and Social Politics, as well as the Faculty of Language and Literature, might influence the results of comparative analyses. Thus, additional analyses using appropriate statistical methods will be applied to ensure the validity of the results, even with an uneven sample distribution. The following table outlines the sample distribution.

Tabel 1. Sample Distribution of Participants by Faculty and Cohort

Faculty	Number of Students (2015-2017)	Sample Proportion	Sample Size
Education and Teacher Training	1,505	20%	310
Communication and Social Politics	250	40%	100
Islamic Law	622	20%	125
Economics	979	20%	196
Language and Literature	126	40%	50
Engineering and Computer Science	859	20%	171
Total	5,341	-	952

3.3   Data Collection

Data were collected using an online questionnaire distributed via Google Forms to the students selected as the sample. The questionnaire consists of three sections: (1) respondent's consent to participate, (2) respondent's demographic information, and (3) statements measuring students' satisfaction and importance levels concerning academic services.

A five-point Likert scale was used to measure the two main variables: satisfaction and importance levels (Likert, 1932). The questionnaire is based on the SERVQUAL model, which evaluates five dimensions of academic service quality: Tangibles, Reliability, Responsiveness, Assurance, and Empathy (Parasuraman et al., 1988). Secondary data supporting this study were obtained from official UNSIQ documents and relevant literature reviews.

3.4 Data Analysis

The data analysis process in this study followed several key stages. First, a validity and reliability test was conducted using SPSS software. Validity was examined by correlating each item with the overall score to ensure that each question measured what it was intended to. Reliability was assessed using the Cronbach's Alpha technique, which is widely used to determine the consistency of the instrument (Field, 2018).

Next, a descriptive analysis was performed to assess students' satisfaction and the perceived importance of various academic services. The results were expressed as means and further analyzed using Importance-Performance Analysis (IPA), a method designed to highlight service areas that require improvement (Martilla & James, 1977). This step offers insights to guide the institution in allocating resources more effectively.

Lastly, comparisons between faculties were conducted to identify any differences in satisfaction and perceived importance levels. To ensure the correct statistical approach, normality and homogeneity tests were carried out. If the data met the criteria for normal distribution and homogeneity, ANOVA was applied to evaluate the differences between faculties. However, if these conditions were not satisfied, non-parametric tests, such as the Kruskal-Wallis and Mann-Whitney tests, were used to determine significant differences in academic service satisfaction and importance across the faculties (Field, 2018).

3.5 Research Ethics

This study was approved by the Research Ethics Committee of Universitas Sains Al-Qur'an Wonosobo. Student participation was voluntary, and confidentiality was ensured. The data collected were used solely for academic and research purposes and were processed anonymously to protect participant privacy (Resnik, 2018).

4.   Results

4.1 Instrument Validity and Reliability Tests

The questionnaire used in this study consists of 52 items measuring the five main dimensions of academic services: Tangibles, Reliability, Responsiveness, Assurance, and Empathy.

- Validity Test: The results of the validity test showed that all question items had a calculated r-value greater than the r-table (0.38), indicating that all items were valid and capable of accurately measuring the variables.
- Reliability Test: The reliability test, using Cronbach's Alpha, demonstrated high reliability across all dimensions (ranging from 0.86 to 0.96), indicating that the instrument was consistent in measuring the variables under study.

Table 1. Instrument Validity and Reliability Results

Dimension	Number of Items	Cronbach's Alpha	Explanation
Tangibles	17	0.91	Reliable

Dimension	Number of Items	Cronbach's Alpha	Explanation
Reliability	10	0.86	Reliable
Responsiveness	10	0.92	Reliable
Assurance	8	0.89	Reliable
Empathy	7	0.88	Reliable

4.2   Respondent Profile

A total of 658 students from six faculties participated in this study, with the distribution reflecting the diversity of faculties and academic cohorts. The uneven distribution of respondents across faculties was accounted for in the statistical analysis, with non-parametric techniques used when necessary.

Table 2. Respondent Distribution by Faculty

Faculty	2015 Cohort	2016 Cohort	2017 Cohort	Total Respondents
Education and Teacher Training (FITK)	86	60	57	203
Communication and Social Politics (FKSP)	13	12	26	51
Islamic Law (FSH)	32	31	69	132
Economics (FE)	39	42	32	113
Language and Literature (FBS)	24	13	7	44
Engineering and Computer Science (FASTIKOM)	48	38	29	115
Total	242	196	220	658

4.3   Analysis of Satisfaction and Importance Levels of Academic Services

University-Level Analysis: Overall, there is a significant gap between students' satisfaction and importance levels regarding academic services, particularly in the Tangibles dimension (gap of 1.04), which involves physical facilities such as campus infrastructure and internet access. Internet access services had the highest gap of 1.71, indicating an urgent need for service improvement.

Table 3. Average Satisfaction, Importance, and Gap at the University Level

Dimension	Average Satisfaction	Average Importance	Gap
Tangibles	331	435	1.04
Reliability	343	434	0.91
Responsiveness	352	434	0.83
Assurance	347	418	0.70
Empathy	335	418	0.83

Faculty-Level Analysis: The Faculty of Economics (FE) showed the largest gap in the Tangibles dimension (gap of 1.35), particularly regarding classroom conditions and facilities. The Faculty of Education and Teacher Training (FITK) had the largest gap in the Empathy dimension, reflecting shortcomings in personal interactions between students and academic staff.

Table 4. Average Satisfaction, Importance, and Gap at the Faculty Level

Faculty	Average Satisfaction	Average Importance	Gap
Economics (FE)	330	446	1.16
Education and Teacher Training (FITK)	339	431	0.92
Islamic Law (FSH)	336	417	0.81

4.4 Analysis of Differences Between Faculties

The results of the Kruskal-Wallis test showed significant differences in satisfaction and importance levels between faculties. The Faculty of Economics (FE) and the Faculty of Education and Teacher Training (FITK) showed the most notable gaps, indicating that services in these faculties need immediate improvement to meet student expectations.

Table 5. Kruskal-Wallis Test Results

Faculty	Satisfaction Level	Importance Level	p-value
Economics (FE)	330	446	<0.05
Education and Teacher Training (FITK)	339	431	<0.05
Islamic Law (FSH)	336	417	<0.05

5. Discussion

This study investigates the satisfaction and importance levels of academic services at Universitas Sains Al-Qur'an (UNSIQ) Wonosobo using the SERVQUAL model to assess key dimensions such as Tangibles, Reliability, Responsiveness, Assurance, and Empathy. The significant service gaps identified, particularly in the Tangibles dimension (gap of 1.04), which includes physical infrastructure and internet access, point to critical areas requiring improvement. The largest gap within this dimension, internet access (gap of 1.71), suggests that addressing digital infrastructure should be a top priority to enhance the student experience.

The findings align with prior studies that emphasize the relationship between service quality and student satisfaction (Teeroovengadum et al., 2016). For instance, research found that quality academic services significantly impact student satisfaction and institutional loyalty (Teeroovengadum et al., 2016). This is consistent with our findings, which reveal that improving UNSIQ's infrastructure, particularly in the Tangibles dimension, could lead to increased satisfaction and loyalty among students. Similarly, it has been emphasized that perceived service quality has a direct influence on university brand performance, image, and student behavioral intentions, reinforcing the importance of service quality improvements for student retention and institutional reputation (Sultan & Wong, 2018).

However, the higher gap in UNSIQ's Tangibles dimension diverges from findings in other contexts where Assurance and Responsiveness typically show larger gaps (Nasution, 2015). This suggests that UNSIQ's challenges may be more infrastructural, which contrasts with studies like those of Gruber et al. (2010), who found that student satisfaction in higher education contexts, particularly in Germany, was more influenced by non-physical aspects such as interpersonal relationships and institutional trust. The focus on improving physical facilities at UNSIQ highlights an urgent need for digital transformation in line with the growing global demands for technology-enhanced learning environments.

In terms of practical implications, institutions such as UNSIQ should prioritize the enhancement of both physical and digital infrastructures (Sultan & Wong, 2018). This is

supported by research that stresses the role of service quality in shaping university brand performance (Sultan & Wong, 2018). Moreover, aligning service delivery with student expectations through a hierarchical approach to service quality, as recommended by Teeroovengadum, Kamalanabhan, and Seebaluck (2016), can further ensure that improvement efforts target the most critical service gaps (Teeroovengadum et al., 2016). The application of Importance-Performance Analysis (IPA) has proven effective in this study, as it identifies the most urgent service areas requiring resource allocation (Martilla & James, 1977).

From a strategic standpoint, the implementation of regular feedback mechanisms to better gauge student needs could also enhance responsiveness and reliability, leading to improvements in overall service quality (Teeroovengadum et al., 2016). This approach is consistent with the broader literature on the importance of student-centered service delivery in higher education (Sultan & Wong, 2018).

Finally, this research highlights the importance of continuous quality assurance and strategic investments in infrastructure to meet evolving student needs. As noted by previous researchers (Khoo et al., 2017; Watjatrakul, 2014), maintaining high service quality is essential for ensuring student satisfaction, loyalty, and institutional competitiveness in an increasingly globalized educational landscape.

5.   Conclusion

In conclusion, this study provides a comprehensive evaluation of academic service quality at Universitas Sains Al-Qur'an (UNSIQ) Wonosobo using the SERVQUAL model to assess key dimensions such as Tangibles, Reliability, Responsiveness, Assurance, and Empathy. The findings reveal significant gaps, particularly in the Tangibles dimension, which includes infrastructure and internet access. The largest gap was found in internet access (gap of 1.71), highlighting the urgent need for UNSIQ to improve its digital infrastructure to enhance the overall student experience.

This research confirms the importance of physical and digital infrastructure in influencing student satisfaction. The results suggest that UNSIQ's challenges are particularly related to infrastructural deficiencies, which are critical for ensuring student satisfaction and institutional competitiveness in a global educational landscape.

Strategically, UNSIQ should focus on addressing the deficiencies in physical facilities and internet access, as these areas are most critical for improving service quality. The use of Importance-Performance Analysis (IPA) has proven effective in this context, guiding resource allocation toward the most essential service areas. Additionally, establishing regular feedback mechanisms to gauge student satisfaction and service performance will further support UNSIQ's efforts to enhance service quality.

While this study offers significant insights into academic service quality at UNSIQ, it is not without limitations. The uneven distribution of respondents across faculties may limit the generalizability of the findings, and the reliance on self-reported data introduces potential bias. Future research should aim for a more balanced representation of faculties and explore qualitative methods to gain deeper insights into specific issues affecting student satisfaction. Longitudinal studies tracking the impact of improvements over time could also provide valuable data on the long-term effects of service quality enhancements on student satisfaction and institutional performance.

In summary, this study underscores the importance of continuous quality assurance and strategic improvements in academic services to meet student expectations. By prioritizing infrastructure and digital resources, UNSIQ can align its services with both student needs and institutional goals, contributing to a higher quality of education and better student outcomes.

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Declarations

Author contribution statement
Ria Fatmawati: Conceptualization, Writing - Original Draft, Writing - Review & Editing, Project Administration. **Ali Murfi:** Methodology, Investigation, Writing - Review & Editing, Formal Analysis, Resources, Data Curation, Visualization.

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Data availability statement
The data that support the findings of this study are available from the corresponding author upon reasonable request.

Declaration of interest statement
No potential conflict of interest was reported by the authors.

Additional information
Correspondence and requests for materials should be addressed to the **Corresponding Author**, Ria Fatmawati, at ✉ fatmawatiria87@gmail.com

ORCID
Ria Fatmawati ⓘD -
Ali Murfi ⓘD https://orcid.org/0000-0001-5879-6476

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