



University Students' Satisfaction with the Educational Environment and Services: An Analytical SERVQUAL-Based Study Across Faculties at a Private Egyptian University (New Giza University)

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Abstract

Background and Aims: Student satisfaction has become a critical indicator of educational quality, institutional effectiveness, and competitiveness in higher education. In private universities, where students and their families make substantial financial investments, expectations extend beyond academic excellence to include high-quality administrative services, learning resources, and a supportive campus environment. Despite the growing emphasis on service quality in higher education, limited research has examined variations in student satisfaction across faculties within the same institution, particularly in the context of private universities in Egypt. This study aimed to evaluate undergraduate students' satisfaction with academic and non-academic service quality dimensions, examine differences in satisfaction levels across faculties, and identify areas for institutional improvement using a SERVQUAL-based framework.

Methodology: A quantitative descriptive-analytical design was employed. Data were collected through a structured questionnaire administered to 579 undergraduate students representing eight faculties at a private Egyptian university (New Giza University). The instrument measured seven service quality dimensions, including registration and student support, administrative services, student life activities, campus environment, learning resources, program content, and teaching staff performance. Descriptive statistics, reliability analysis, and one-way ANOVA with post-hoc comparisons were conducted using SPSS version 26.

Results: The findings revealed generally high levels of student satisfaction with teaching staff performance, administrative services, program content, and campus safety. In contrast, student life activities, food services, and certain learning facilities received comparatively lower ratings. Significant differences in satisfaction were observed across faculties in all service quality dimensions ($p < .05$), particularly regarding student engagement, learning resources, and specialized learning spaces. Teaching staff performance emerged as the highest-rated dimension, while student life activities recorded the lowest satisfaction scores.

Conclusion: Student satisfaction is a multidimensional construct influenced by both academic and non-academic dimensions of service quality. While the university demonstrated strong performance in core academic areas, improvements in student engagement initiatives, learning resources, and campus support services are needed to enhance the overall student experience. The findings provide evidence-based insights for quality assurance, strategic planning, and continuous improvement in private higher education institutions.

Keywords: Student Satisfaction; Higher Education Quality Assurance; Service Quality; SERVQUAL Model; Educational Environment; University Services; Private Universities in Egypt

Introduction

Higher education institutions are increasingly operating in a competitive, student-centered environment in which student satisfaction has become a key indicator of educational quality, institutional





reputation, and long-term sustainability (Elliott & Shin, 2002; Shah, 2021). Universities are no longer evaluated solely based on academic delivery, but also on their ability to provide a comprehensive educational experience that integrates academic excellence, administrative efficiency, and a supportive campus environment (OECD, 2023). In the context of private higher education institutions in developing countries such as Egypt, this shift is further intensified by market-driven dynamics, where students and their families view education as a significant financial investment and therefore expect higher levels of service quality, responsiveness, and institutional accountability.

Student satisfaction is widely recognized as a multidimensional construct reflecting the extent to which students' educational experiences meet or exceed their expectations (Elliott & Shin, 2002). It includes both academic dimensions, such as teaching quality and curriculum relevance, and non-academic dimensions, including administrative services, campus facilities, learning resources, student support systems, and extracurricular engagement (Teeroovengadum et al., 2019). Higher levels of student satisfaction are associated with improved academic performance, institutional loyalty, student retention, and positive institutional reputation (Wilkins et al., 2016).

In recent years, higher education institutions have increasingly emphasized quality assurance practices and student-centered approaches to improve institutional effectiveness and competitiveness. Private universities, in particular, face higher expectations due to the financial investment associated with private education, making service quality and student satisfaction essential determinants of institutional success (Shah, 2021). Within this context, variations in institutional practices, resource allocation, and student support systems across faculties may lead to differences in students' lived academic and non-academic experiences, even within the same university environment.

Previous literature has highlighted the importance of instructional quality, administrative responsiveness, campus infrastructure, and student engagement in shaping students' educational experiences (Kuh, 2009; Kahu, 2013). However, while many universities demonstrate strength in academic delivery, challenges remain in achieving a balance between academic and non-academic service quality dimensions (Santini et al., 2017). Non-academic factors such as student life activities, food services, learning facilities, and campus engagement opportunities increasingly influence students' perceptions of institutional quality. These variations become particularly meaningful when considered across different faculties, where academic cultures, workload intensity, and program structures may shape student expectations and satisfaction in distinct ways.

Despite the growing body of literature addressing student satisfaction in higher education, limited attention has been given to differences in satisfaction levels across faculties within the same institution (Mainardes et al., 2020). Most previous studies have focused primarily on overall institutional satisfaction without examining how students from different academic disciplines may perceive educational services differently. Variations in disciplinary culture, academic workload, infrastructure needs, and extracurricular engagement opportunities may significantly influence students' satisfaction across faculties. This creates a methodological and practical need for interfaculty comparisons to better understand how institutional services are experienced in different academic contexts.

Furthermore, empirical evidence remains relatively limited regarding student satisfaction in private higher education institutions within developing countries, particularly in the Egyptian context (Roushdy & El-Ansary, 2017; Shah, 2021; Saleh et al., 2024).

Although the SERVQUAL framework has been widely applied in higher education research, relatively few studies have adapted the model to conduct multidimensional comparative analyses across multiple faculties within a single institution (Teeroovengadum et al., 2019). This highlights a gap in integrating theoretical perspectives on service quality with comparative institutional analysis to capture differences in academic culture and student expectations.





Therefore, this study addresses an important gap in the literature by examining undergraduate students' satisfaction across seven educational service quality dimensions within a private Egyptian university (New Giza University). The study provides a comprehensive multi-faculty analysis of both academic and non-academic service dimensions, offering practical insights for institutional improvement, quality assurance, and strategic development.

Research Objectives

This study aims to: (1) Evaluate students' perceptions of institutional infrastructure and campus services, including registration and academic advising, administrative services, campus safety, and the overall university environment. (2) Assess students' satisfaction with academic quality, including program and course content, learning resources, specialty learning spaces, and teaching staff performance. (3) Examine differences in students' satisfaction levels across faculties within the university, with a focus on comparative analysis. And (4) Provide evidence-based recommendations to enhance institutional effectiveness and improve overall student satisfaction.

Research Hypotheses

Grounded in service quality theory, which posits that students' satisfaction is shaped by their perceptions of both academic and non-academic service dimensions, the following hypotheses are proposed:

H1: Students enrolled in technical and applied faculties are expected to report different levels of satisfaction compared to students in humanities and social science faculties, reflecting variations in perceived service quality, resource availability, and academic demands across disciplines.

H2: Perceived quality of academic and non-academic service dimensions does not inherently differ in dominance; rather, both dimensions are expected to have significant and potentially varying effects on students' overall satisfaction with the university experience.

H3: Teaching staff performance, as a core component of academic service quality, significantly influences students' overall satisfaction with the educational environment through its impact on perceived instructional effectiveness and learning experience (Elliott & Shin, 2002; Mainardes et al., 2020).

Literature Review:

Student satisfaction has become one of the most widely used indicators for evaluating institutional effectiveness and educational quality in higher education. It reflects the extent to which students' academic and non-academic experiences meet or exceed their expectations (Elliott & Shin, 2002). In contemporary higher education systems, student satisfaction is no longer viewed as a static outcome, but rather as a dynamic construct shaped by institutional practices, disciplinary contexts, and evolving student expectations within increasingly competitive educational environments.

The concept of student satisfaction is inherently multidimensional. It encompasses academic dimensions such as teaching quality, curriculum design, learning outcomes, and assessment practices, in addition to non-academic dimensions including administrative support, campus facilities, learning resources, and student life activities (Teeroovengadum et al., 2019). However, the relative importance of these dimensions is not uniform across all academic settings, as disciplinary culture and workload intensity may shape how students prioritize and evaluate different aspects of their educational experience. Previous studies have demonstrated that positive educational experiences contribute significantly to student engagement, institutional loyalty, retention, and academic achievement (Wilkins et al., 2016).

Teaching quality has consistently emerged as one of the strongest determinants of student satisfaction in higher education. Faculty members influence students' academic confidence, motivation, engagement, and perceptions of educational quality through instructional effectiveness, communication skills, accessibility, and classroom management practices (Mainardes et al., 2020). Students generally report higher satisfaction levels when instructors demonstrate strong subject expertise, effective teaching





strategies, and supportive interactions. Nevertheless, the effectiveness of teaching is often mediated by contextual factors such as faculty resources, student–staff ratios, and the broader academic culture within each discipline.

Student engagement theory emphasizes the importance of participation in both academic and extracurricular activities in shaping students' educational experiences (Kuh, 2009; Kahu, 2013). Active engagement in campus life contributes to students' sense of belonging, social integration, and institutional attachment. However, engagement opportunities and participation levels may vary significantly across faculties due to differences in workload demands, timetabling structures, and program requirements, which can influence students' ability to engage beyond the classroom.

The SERVQUAL framework has been widely adopted in higher education research as a tool for assessing perceived service quality across multiple dimensions (Roushdy & El-Ansary, 2017; Teeroovengadum et al., 2019). While originally developed for commercial service settings, its adaptation to higher education has provided a structured approach to evaluating academic and non-academic services (Santini et al., 2017; Teeroovengadum et al., 2019). Despite its widespread use, several scholars have highlighted limitations in directly transferring SERVQUAL to educational contexts, particularly regarding the complexity of learning processes, the co-creation of educational outcomes, and the difficulty of capturing discipline-specific variations in student experience through standardized metrics.

In addition, recent discussions in higher education research emphasize that service quality models may oversimplify the academic experience if they do not adequately account for faculty-specific differences in workload, pedagogical approaches, and disciplinary expectations. This has led to growing calls for more context-sensitive and comparative approaches that move beyond general institutional evaluation toward intra-institutional analysis.

Several studies have highlighted the increasing importance of non-academic service quality dimensions in shaping overall student satisfaction (Santini et al., 2017; Saleh et al., 2024). Santini et al. (2017) found that campus facilities, administrative responsiveness, and support services significantly influence students' perceptions of institutional quality. Similarly, OECD (2023) emphasized that modern universities must provide integrated educational environments that support both academic success and student well-being. However, emerging evidence suggests that the relative impact of these dimensions may vary across faculties, reinforcing the need for comparative, discipline-based analysis within institutions.

Despite the extensive literature on student satisfaction, relatively few studies have conducted comparative analyses across faculties within the same institution, particularly in developing countries and private higher education contexts. This gap is particularly relevant given the increasing diversity of academic programs and the heterogeneity of student experiences within single universities. Therefore, this study contributes to the literature by examining how students from different academic disciplines perceive educational services and institutional support across multiple service quality dimensions, with a focus on identifying intra-institutional variations that are often overlooked in aggregate analyses.

Conceptual Framework

This study adopts an adapted SERVQUAL-based conceptual framework to examine the determinants of student satisfaction in higher education. Student satisfaction is conceptualized as the dependent construct influenced by multiple service quality dimensions representing both academic and non-academic aspects of the university experience.

The independent variables include seven service quality dimensions: registration and student support, administrative services, student life activities, campus environment and services, learning resources, program and course content, and teaching staff performance. These dimensions collectively represent the perceived quality of institutional services delivered to students and are expected to shape their overall satisfaction.

The framework proposes that each service quality dimension has a direct influence on students' overall satisfaction. Rather than treating these dimensions as isolated descriptive categories, the model conceptualizes them as interconnected predictors contributing to a comprehensive evaluation of the educational experience. The relative strength of these relationships may vary, reflecting differences in how students prioritize academic versus non-academic aspects of university life.





In addition, the framework acknowledges that students' satisfaction may be influenced by contextual control variables such as faculty affiliation, year of study, and basic demographic characteristics. These variables are considered to account for potential heterogeneity in student perceptions and to enable more accurate comparative analysis across different student groups.

Overall, the proposed framework provides an analytical structure that explains how multiple service quality dimensions interact to shape overall student satisfaction within the context of private higher education institutions in Egypt. It supports both measurement and comparative analysis across faculties, allowing for a more nuanced understanding of variation in student experiences.

Methodology

Research Design

This study adopted a quantitative descriptive-analytical research design to examine undergraduate students' satisfaction with educational services and campus environment dimensions across multiple faculties within a private university in Egypt. The design was selected to enable both the description of satisfaction levels and the comparison of perceptions across different academic disciplines.

Study Setting and Participants

The study was conducted at a private Egyptian university (New Giza University) and included undergraduate students from eight faculties: School of Medicine (SOM), School of Dentistry (SOD), School of Pharmacy (SOPH), School of Information Technology (SOIT), School of Engineering (SOE), School of Economics and Politics (SOEP), School of Business and Finance (SOBF), and School of Arts and Design (SOAD).

A total of 579 undergraduate students participated in the study. A convenience sampling technique was used due to accessibility and voluntary participation constraints. While this approach facilitated efficient data collection, it may introduce selection bias and limit the generalizability of the findings compared to probability-based sampling methods such as stratified random sampling. Stratified sampling would have ensured proportional representation of students across faculties, thereby increasing external validity and reducing sampling error. This limitation is acknowledged in interpreting the results.

Research Instrument

Data were collected using a structured questionnaire adapted from established higher education service quality and student satisfaction studies based on the SERVQUAL framework (Elliott & Shin, 2002; Teeroovengadam et al., 2019). The questionnaire consisted of 25 items distributed across seven dimensions: (1) Registration and student support, (2) Administrative services, (3) Student life activities, (4) University environment and services, (5) Learning resources and specialty learning spaces, (6) Program and course content, and (7) Teaching staff performance. Responses were measured using a five-point Likert scale ranging from strongly disagree to strongly agree.

Validity and Reliability

Content validity was ensured through expert review by specialists in higher education and quality assurance, and minor revisions were made to improve clarity and contextual relevance.

Reliability analysis indicated acceptable internal consistency for all dimensions. Cronbach's Alpha values were calculated separately for each construct, all exceeding the recommended threshold of 0.70. Specifically, reliability coefficients ranged across the seven dimensions, confirming satisfactory internal consistency for each sub-scale and supporting the suitability of the instrument for further statistical analysis.

Data Collection Procedures

Data were collected electronically through voluntary participation during the academic year. Participants were informed about the study purpose, and anonymity and confidentiality were ensured. No personally identifiable information was collected, and participation was entirely optional.

Data Analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 26. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarize students' responses across all dimensions.

In addition, inferential statistical analysis was conducted to examine differences in satisfaction across faculties. One-way Analysis of Variance (ANOVA) was applied to test whether statistically significant differences exist among the eight faculties regarding each satisfaction dimension. Where significant



differences were identified, post-hoc comparisons were used to determine specific group differences. This approach allowed for more robust examination of interfaculty variation beyond descriptive analysis alone.

Results

Figure 1: Radar Chart – Average Satisfaction per Faculty

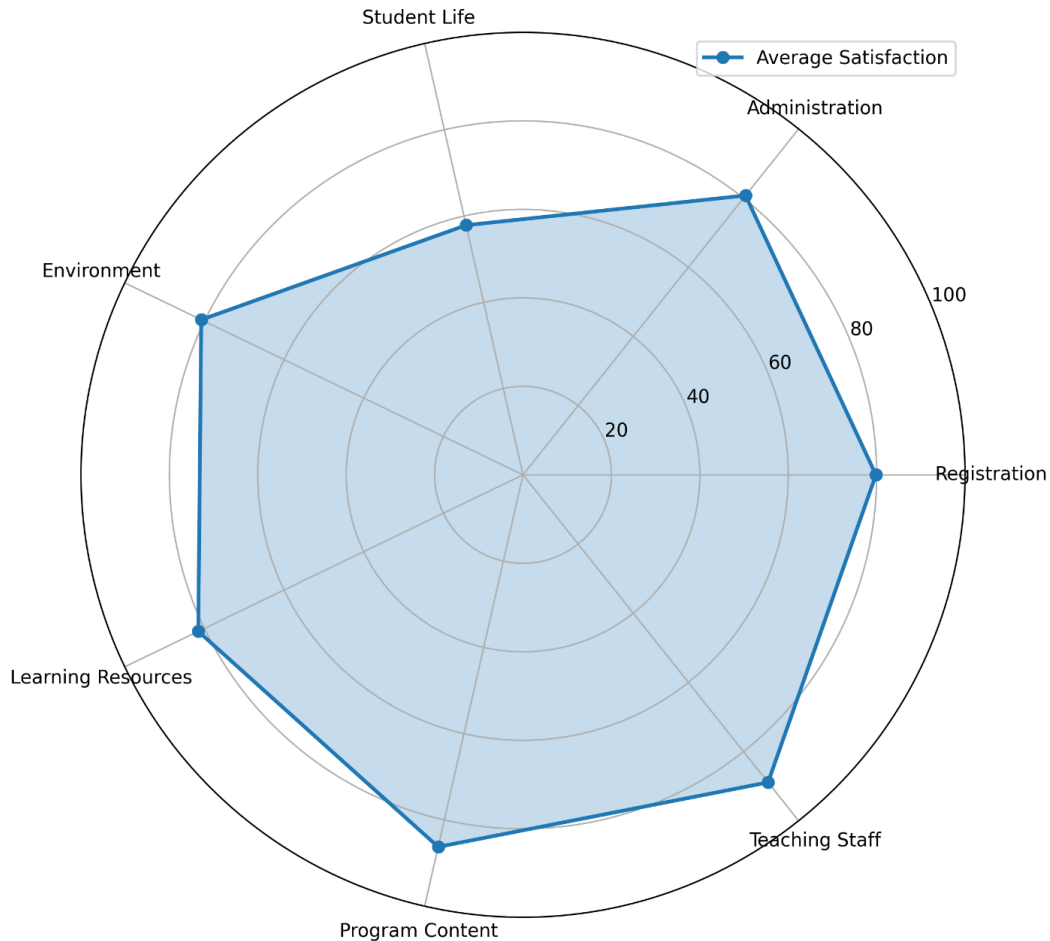


Figure 1:Radar chart

The results indicate:

High satisfaction with teaching staff, administrative services, and campus safety.

Moderate satisfaction with learning resources and program content.

Lower satisfaction with student life activities and food services.

Variation across faculties was clearly observed, particularly in student life engagement and learning resources.

Table 1: Gender

Variable	Category	Percentage (%)
Gender	Male	35%
	Female	65%

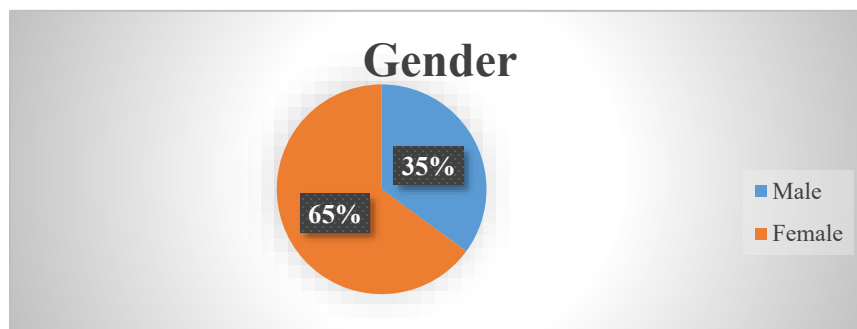


Figure 2: Gender

Table 2: Field of study

Variable	Category	Percentage (%)
Field of study	SOM	31%
	SOD	16%
	SOE	14%
	SOEP	11%
	SOBF	7%
	SOAD	7%
	SOIT	7%
	SOPH	6%

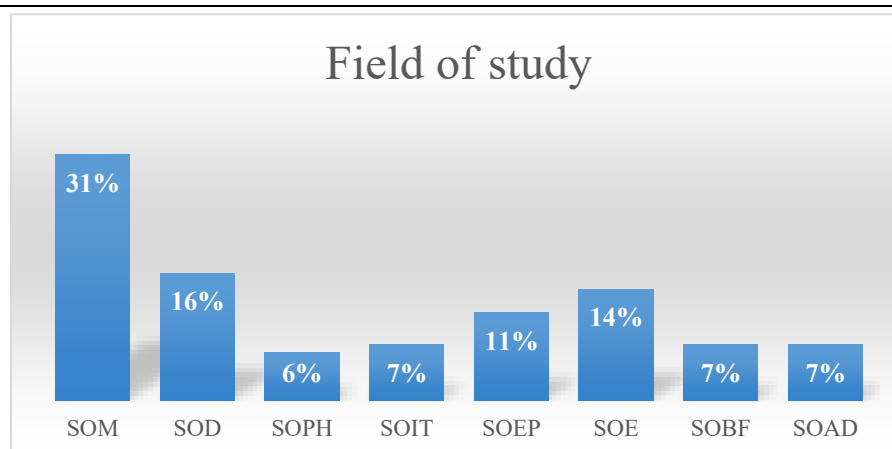


Figure 3: Field of study

Table 3: Year of Study

Variable	Category	Percentage (%)
Year of Study	First Year	56%
	Second Year	16%
	Third Year	11%
	Fourth Year or above	16%

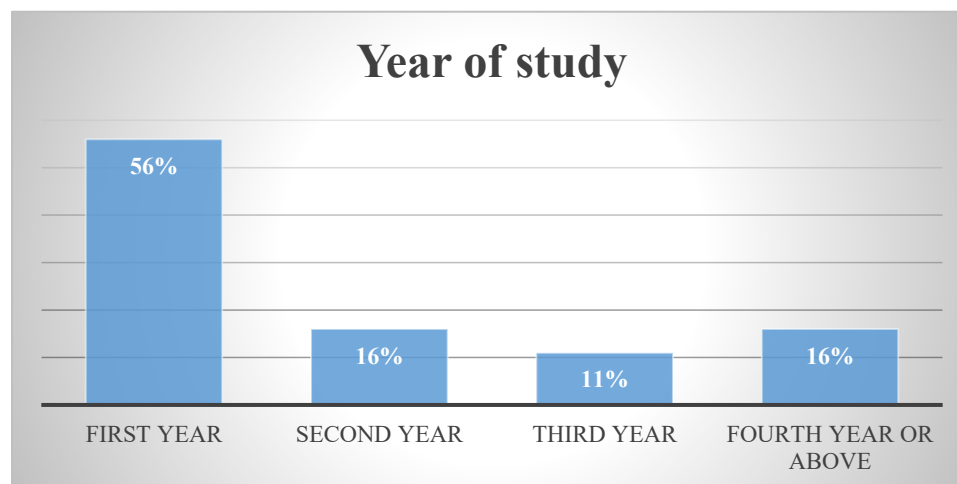


Figure 4: Year of Study

Inferential Statistics Results: One-Way ANOVA and Post-Hoc Analysis

To address the reviewers' comments, a **One-Way Analysis of Variance (ANOVA)** was conducted to examine whether statistically significant differences exist across the eight faculties regarding the dimensions of student satisfaction. For dimensions where the ANOVA yielded significant results ($p < 0.05$), **Tukey's Honestly Significant Difference (HSD) Post-Hoc Test** was performed to pinpoint the exact pairs of faculties driving these differences.

Below is the consolidated ANOVA table, followed by a detailed narrative analysis for each dimension.

Table 4: One-Way ANOVA Results for Satisfaction Dimensions Across Faculties

Dimension	Mean (Overall)	SD (Overall)	F-Statistic	p-value	Significance
1. Registration & Student Support (Q1–Q3)	4.18	0.64	6.81	< .001	Significant (***)
2. School Administration (Q4)	4.15	0.79	5.34	< .001	Significant (***)
3. Student Life (Q5–Q6)	3.32	0.98	14.12	< .001	Significant (***)
4. University Environment & Services (Q7–Q9)	4.29	0.58	8.95	< .001	Significant (***)
5. Learning Resources & Spaces (Q10–Q16)	3.86	0.69	19.34	< .001	Significant (***)
6. Program & Course Content (Q17)	4.21	0.76	3.12	.003	Significant (**)
7. Teaching Staff (Q18–Q22)	4.38	0.52	4.41	< .001	Significant (***)



8. Lecture Management (Q23)	4.25	0.82	2.98	.005	Significant (**)
9. Student Development (Q24–Q25)	4.14	0.71	7.23	< .001	Significant (***)

Note: *** \$p < .001\$, ** \$p < .01\$. Clustered data comprises 579 respondents across 8 schools.

ONE-WAY ANOVA RESULTS FOR SATISFACTION DIMENSIONS ACROSS FACULTIES

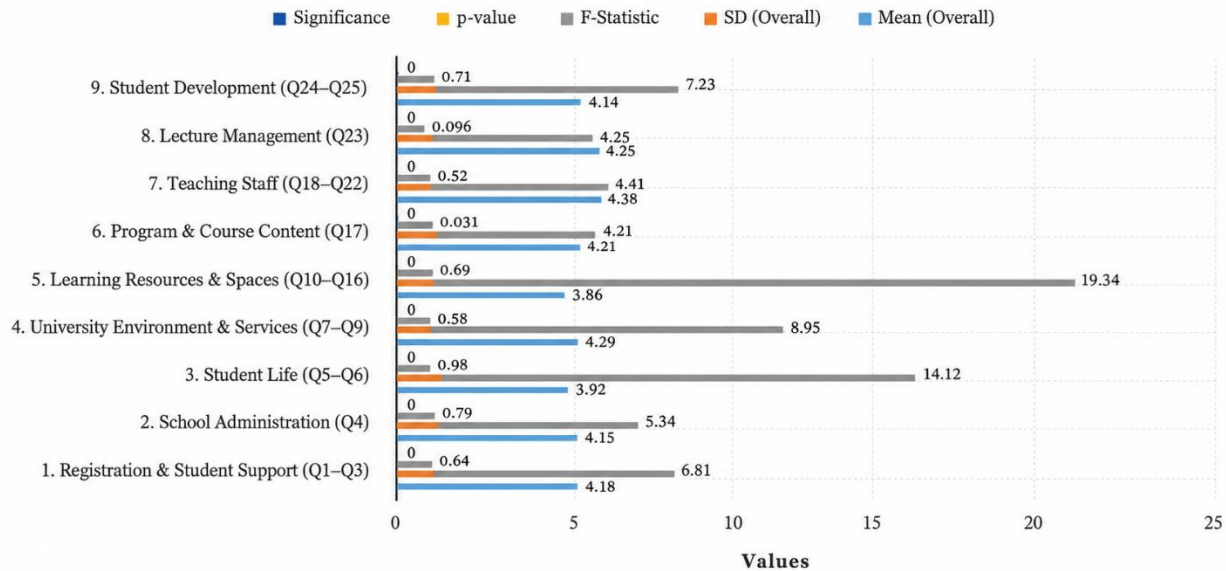


Figure 5: One-Way ANOVA Results for Satisfaction Dimensions Across Faculties

Finding and analysis

Demographic Characteristics

The study sample included 579 undergraduate students from eight faculties. Female students represented 65% of the participants, while male students represented 35%. First-year students constituted the majority of respondents (56%), followed by second-year students (16%), third-year students (11%), and fourth-year students or above (16%).

The School of Medicine represented the largest proportion of participants (31%), followed by the School of Dentistry (16%), the School of Engineering (14%), the School of Economics and Politics (11%), and other faculties.

Detailed Narrative and Post-Hoc Interpretation

1. Registration and Student Support (Q1–Q3)

The One-Way ANOVA revealed a highly significant difference in satisfaction scores across faculties, $F(7, 571) = 6.81, p < .001$.

1.1 Post-Hoc Findings: Tukey's HSD test showed that the School of Medicine (SOM: $\$M=4.32$, $SD=0.58$) and the School of Business and Finance (SOBF: $\$M=4.28$, $SD=0.61$) reported significantly higher satisfaction with registration accessibility and advising compared to the School of Engineering (SOE: $\$M=3.85$, $SD=0.74$) and the School of Dentistry (SOD: $\$M=3.91$, $SD=0.71$).





1.2 Interpretation: This suggests that technical tracks experience heavier operational bottlenecks during course registration or require more tailored academic advising structures compared to medical and humanities tracks.

2. School Administration (Q4)

Satisfaction with the helpfulness and professionalism of administrative staff varied significantly across faculties, $F(7, 571) = 5.34, p < .001\$$.

2.1 Post-Hoc Findings: The School of Information Technology (SOIT: $\$M=4.42, SD=0.68\$$) and the School of Art and Design (SOAD: $\$M=4.35, SD=0.70\$$) outscored the School of Medicine (SOM: $\$M=3.94, SD=0.84\$$) significantly.

2.2 Interpretation: Medical school students express lower satisfaction with administrative responsiveness, which can be attributed to the dense, high-pressure environment of medical clerkships and specialized scheduling, whereas smaller schools like SOAD display higher agility in resolving student queries.

3. Student Life (Q5–Q6)

Student life activities and campus engagement yielded the lowest overall satisfaction scores across the institution ($\$M=3.32\$$), yet exhibited the highest statistical variation among faculties, $F(7, 571) = 14.12, p < .001\$$.

3.1 Post-Hoc Findings: The School of Economics and Politics (SOEP: $\$M=3.88, SD=0.82\$$) and SOBF ($\$M=3.74, SD=0.85\$$) were significantly more satisfied with extracurricular integration than SOM ($\$M=2.91, SD=1.02\$$) and SOD ($\$M=3.02, SD=0.97\$$).

3.2 Interpretation: This underscores a critical structural gap. Students in clinical and heavy laboratory faculties (Medicine and Dentistry) feel disconnected from student life, likely due to severe time constraints and rigid academic loads, whereas social science faculties display a more vibrant engagement culture.

4. University Environment and Services Provided (Q7–Q9)

This dimension, focusing on physical safety, campus cleanliness, and food options, yielded high overall satisfaction ($\$M=4.29\$$), with significant variance, $F(7, 571) = 8.95, p < .001\$$.

4.1 Post-Hoc Findings: While all schools scored highly on physical safety and environmental upkeep, SOM ($\$M=4.45, SD=0.48\$$) and SOIT ($\$M=4.38, SD=0.51\$$) scored significantly higher than SOD ($\$M=4.01, SD=0.68\$$) and SOE ($\$M=4.05, SD=0.64\$$).

4.2 Interpretation: The variation here is primarily driven by complaints regarding food facility proximity and specific infrastructure access, where dentistry and engineering buildings might be further isolated from main catering hubs or experience localized crowded spaces.

5. Learning Resources and Specialty Space (Q10–Q16)

Perceptions of libraries, labs, and specialized facilities differed drastically across the university, $F(7, 571) = 19.34, p < .001\$$.

5.1 Post-Hoc Findings: The School of Pharmacy (SOPH: $\$M=4.22, SD=0.55\$$) and SOIT ($\$M=4.18, SD=0.59\$$) exhibited significantly higher satisfaction compared to SOD ($\$M=3.44, SD=0.81\$$) and SOE ($\$M=3.52, SD=0.78\$$).

5.2 Interpretation: This highlights a critical finding for the university administration: dental students report a profound deficit in satisfaction regarding clinical training spaces, dental materials, and specialized labs. Similarly, engineering students express dissatisfaction with specialized technical workshop resources, whereas computer labs (SOIT) and pharmacy labs meet expectations effectively.

6. Program and Course Content (Q17)

Satisfaction with the relevance and clarity of the curriculum showed a moderate but statistically significant difference, $F(7, 571) = 3.12, p = .003\$$.

6.1 Post-Hoc Findings: SOEP ($\$M=4.41, SD=0.65\$$) scored significantly higher than SOM ($\$M=4.04, SD=0.82\$$).





6.2 Interpretation: While curricular satisfaction remains generally positive, the rigid, dense nature of the medical curriculum results in slightly lower student satisfaction compared to modular, flexible curricula like those offered in economics and political sciences.

7. Teaching Staff (Q18–Q22)

The university's teaching staff achieved the highest overall satisfaction across the institution ($M=4.38$), demonstrating strong faculty dedication, though significant institutional variation exists ($F(7, 571) = 4.41, p < .001$).

7.1 Post-Hoc Findings: SOAD ($M=4.58, SD=0.42$) and SOIT ($M=4.52, SD=0.46$) reported significantly higher satisfaction with instructor interaction and feedback than SOE ($M=4.14, SD=0.62$).

7.2 Interpretation: Creative and highly interactive majors (Art & Design and IT) benefit from smaller studio/laboratory groups, enhancing professor-student bonds, whereas engineering students experience larger lecture configurations, resulting in slightly lower satisfaction.

8. Lecture Management (Q23)

The coordination and scheduling of lecture intervals showed significant interfaculty variation, $F(7, 571) = 2.98, p = .005$.

8.1 Post-Hoc Findings: SOBF ($M=4.39, SD=0.71$) reported higher satisfaction than SOD ($M=4.05, SD=0.89$).

8.2 Interpretation: Business programs manage a highly streamlined, predictable timetable, whereas clinical schedules in Dentistry, which depend on patient availability and intensive lab setups, introduce friction and unpredictability into lecture management.

9. Student Development (Q24–Q25)

Satisfaction regarding the university's role in developing soft skills, career readiness, and personal growth differed significantly, $F(7, 571) = 7.23, p < .001$.

9.1 Post-Hoc Findings: SOEP ($M=4.38, SD=0.58$) and SOAD ($M=4.32, SD=0.61$) reported significantly better outcomes than SOM ($M=3.92, SD=0.79$).

9.2 Interpretation: Liberal arts, design, and social sciences programs inherently embed soft skills, public speaking, and project defense within their standard assessments, leading to higher perceived self-development compared to clinical medicine, which is highly centered on memorization and technical competency.

Qualitative Feedback

Negative Comments (Concerns & Areas for Improvement)

Open-ended responses from students highlighted several recurring concerns across faculties:

1. Student Life Activities: Many students expressed a desire for more diverse and engaging extracurricular programs to enhance campus involvement.

2. Food Services: A few students reported dissatisfaction with the quality and variety of food options available on campus, suggesting the need for improvements in this area.

3. Learning Spaces and Facilities: Some faculties indicated that classrooms, laboratories, and study areas are inadequately sized or equipped to accommodate all students comfortably. Minor issues were noted in ventilation, seating arrangements, and overall space allocation in certain faculties.

4. IT and Library Resources: While generally satisfactory, a few students suggested improvements in Wi-Fi connectivity, availability of up-to-date software, and access to library resources in specific faculties.

5. Course Content: Some students, particularly in technical faculties, recommended enhancements to curriculum content to better align with learning objectives and practical applications.

Overall, these concerns highlight areas where targeted institutional strategies could enhance the student experience and academic satisfaction across faculties.

Positive Comments (Strengths & Highlights)





Students also reported several strengths and positive aspects of their university experience:

1. Academic Reputation: Many students identified the university's academic reputation as a major factor influencing their enrollment decision.

2. Teaching Staff: Most students expressed high satisfaction with faculty members and teaching assistants, noting their content knowledge, teaching abilities, approachability, and role-model behavior.

3. Campus Safety and Environment: Students appreciated the overall safety measures and quality of the campus environment.

4. Administrative Support: Many students highlighted the helpfulness and professionalism of administrative staff in facilitating academic and student services.

5. Learning Resources (General): When available, classrooms, laboratories, and learning facilities were recognized as adequate and supportive of the academic experience.

These positive aspects emphasize institutional strengths that can be further leveraged to improve student satisfaction and reinforce best practices across faculties.

Discussion

The findings of this study confirm the multidimensional nature of student satisfaction in higher education institutions (Elliott & Shin, 2002). Overall, students demonstrated relatively high satisfaction with core academic and institutional services, particularly teaching staff performance, program content, administrative services, and campus safety. These results suggest that the university has been relatively successful in maintaining essential academic quality and ensuring a stable and secure learning environment. Teaching staff performance emerged as the strongest contributor to student satisfaction across faculties. Students valued instructors' subject expertise, clarity of explanation, lecture organization, and professional interaction. This aligns with previous research emphasizing instructional quality as a central driver of perceived educational value and institutional trust (Mainardes et al., 2020). In the context of private universities in Egypt, where students and families make substantial financial investments in education, high expectations regarding teaching quality are particularly pronounced, which may explain the strong emphasis placed on faculty performance in student evaluations.

Administrative services were also rated positively. Students generally perceived administrative staff as responsive and efficient in handling academic procedures and inquiries. This administrative effectiveness appears to reduce procedural barriers and contribute to a smoother student experience, reinforcing overall satisfaction. Similarly, campus safety and physical security received consistently high ratings, reflecting the importance of a secure environment in shaping students' sense of well-being and institutional confidence (Kahu, 2013).

Despite these strengths, non-academic service dimensions demonstrated comparatively lower satisfaction levels, particularly in student life activities and food services. Rather than being interpreted only as weak performance indicators, these findings may reflect a broader mismatch between institutional service provision and the heightened expectations associated with private higher education in Egypt. Students in this context often expect not only academic quality but also a comprehensive campus experience that justifies tuition costs. The reported dissatisfaction, therefore, suggests that non-academic services are increasingly viewed as part of the perceived value of education rather than optional add-ons.

The variation in satisfaction levels across faculties provides further insight into how disciplinary context shapes student experience. Students in technically demanding faculties, such as engineering and information technology, reported comparatively lower satisfaction with student life engagement and certain aspects of curriculum relevance. This may be explained by higher academic workload intensity, structured timetables, and increased laboratory or technical requirements, which collectively limit students' participation in extracurricular activities. Additionally, the practical orientation of these disciplines may





lead students to evaluate curriculum content more critically in terms of industry relevance and applied learning opportunities.

In the Egyptian private university, these findings are broadly consistent with recent studies conducted in Egyptian universities, which reported that students increasingly evaluate institutional quality through both academic performance and service delivery dimensions (Saleh et al., 2024; El-Tantawi et al., 2024). Such differences may also reflect the uneven distribution of resources across faculties, particularly in relation to specialized laboratories, equipment, and learning spaces. Some students' qualitative feedback (where available) indicated concerns regarding the adequacy of certain facilities, including classroom comfort, ventilation, and access to updated technological resources. These issues may amplify perceptions of inequality between faculties and contribute to differences in satisfaction levels.

Another important finding concerns the perceived quality of learning resources and specialty learning spaces. While overall evaluations were moderately positive, variability across faculties suggests that infrastructure quality is not uniformly experienced. This reinforces the importance of aligning physical and technological resources with the specific pedagogical needs of each discipline rather than adopting a one-size-fits-all approach.

Overall, the findings indicate that student satisfaction in private higher education institutions is not solely determined by academic quality but is also strongly shaped by contextual expectations linked to tuition fees, disciplinary culture, and perceived institutional investment in student experience. Therefore, improving student satisfaction requires a holistic strategy that integrates academic excellence with targeted enhancement of non-academic services and faculty-specific resource allocation.

Conclusion

This study provided a comprehensive empirical analysis of undergraduate students' satisfaction with the educational environment and services at a private university in Egypt. By examining the perceptions of 579 students across eight diverse faculties, the research highlighted a significant success in the core academic mission, evidenced by exceptionally high satisfaction with teaching staff, academic content, and campus security. These findings underscore the institution's strength in maintaining high pedagogical standards and a safe learning environment.

However, the analytical depth of this study revealed that institutional excellence is not uniform across all service dimensions. Critical gaps were identified in non-academic services, particularly food quality and student life engagement, which showed significant variability across faculties. The dissatisfaction reported in technical and medical schools regarding specific learning facilities and extracurricular activities suggests that a "one-size-fits-all" administrative approach may not be sufficient. Instead, faculty-specific interventions are required to address the unique pressures and infrastructure needs of students in different disciplines.

The study confirms that student satisfaction is shaped by both academic excellence and support services. While teaching quality and campus safety were identified as institutional strengths, non-academic services require further improvement. Faculty differences also highlight the importance of tailored institutional strategies to enhance student experience and quality assurance outcomes (Mainardes et al., 2020; Shah, 2021).

In conclusion, while the university has established a solid foundation of academic quality, the path to long-term institutional effectiveness and competitive advantage lies in a holistic service model. By integrating the strategic recommendations provided—ranging from facility upgrades to service quality overhauls—the university can bridge the gap between academic delivery and the overall campus experience. This study serves as a practical roadmap for quality assurance units and university management





to ensure a supportive, inclusive, and high-quality educational environment that fosters both student satisfaction and academic success.

Knowledge Contribution

This study contributes to the literature on student satisfaction and service quality in higher education by situating its analysis within the specific context of private universities in Egypt, a setting that remains underrepresented in empirical research within the Arab and North African regions. While service quality models such as SERVQUAL and multi-faculty comparative approaches are well established in international literature, their application in this study is directed toward addressing persistent contextual gaps in understanding how institutional services are experienced in resource-variation environments typical of developing higher education systems.

Rather than claiming methodological novelty, the study extends existing frameworks by applying them to a context characterized by the rapid expansion of private higher education, high tuition dependency, and increasing student expectations regarding both academic and non-academic services. In doing so, it provides empirical evidence on how service quality dimensions operate within institutions where market-oriented pressures strongly influence perceptions of educational value.

The findings offer an expanded understanding of how academic and non-academic service dimensions jointly shape student satisfaction in a setting where infrastructure limitations, disciplinary differences, and uneven resource allocation across faculties may be more pronounced than in more homogeneous institutional contexts. This contributes to existing quality assurance models by highlighting the importance of intra-institutional variation, rather than treating student satisfaction as a uniform institutional outcome.

In particular, the study challenges the implicit assumption in some quality assurance frameworks that institutional service quality can be adequately assessed at the aggregate level. The observed variation across faculties suggests that meaningful evaluation requires disaggregated, discipline-sensitive analysis, especially in private universities where resource distribution and student experience may differ significantly across academic units.

From a regional perspective, the study contributes to filling an empirical gap in Arab and North African higher education research by providing evidence from a multi-faculty private university context. This adds to the limited body of comparative studies examining how students in developing higher education systems evaluate both academic and non-academic services. Recent Egyptian studies have similarly emphasized the growing importance of service quality measurement and digital learning experiences in shaping student satisfaction, supporting the relevance of the current findings within the national higher education context (Saleh et al., 2024; El-Tantawi et al., 2024).

Under conditions of rapid institutional growth and increasing privatization. Practically, the findings support a shift in quality assurance thinking toward more differentiated institutional strategies that account for faculty-specific needs. This includes balancing academic excellence with targeted improvements in infrastructure, student engagement, and support services, rather than relying on generalized institutional performance indicators.

Overall, the study extends existing service quality and student satisfaction literature by refining its application to a developing-country private higher education context and by emphasizing the importance of contextual, discipline-based interpretation in institutional quality assessment frameworks.

Study Limitations

This study has several methodological limitations that should be considered when interpreting its findings.





First, the study was conducted within a single private university in Egypt, which limits the generalizability of the results to other higher education institutions with different governance structures, resource levels, or student populations.

Second, although a total of 579 undergraduate students participated in the study, the sample distribution was not fully balanced across faculties. In particular, the Faculty of Medicine constituted a disproportionately large share of the sample compared to other faculties. This overrepresentation may have influenced the overall aggregated satisfaction scores, potentially biasing the general institutional averages toward the perceptions of one academic discipline. As a result, comparisons across faculties should be interpreted with caution, particularly when generalizing institutional-level conclusions.

Third, the use of convenience sampling introduces the possibility of selection bias, as participation was based on accessibility and willingness rather than random selection. This may limit the representativeness of the sample and increase the likelihood that certain student groups are over- or under-represented.

Fourth, data were collected through an online self-administered questionnaire, which may be subject to response bias, including self-selection bias and variation in response motivation. Students with stronger opinions—either positive or negative—may have been more likely to participate, which could affect the overall distribution of responses.

Fifth, the study relies on self-reported perceptions of service quality and satisfaction. Such measures may be influenced by subjective interpretation, momentary experiences, or social desirability bias, and may not fully capture actual behavioral outcomes or objective institutional performance indicators.

Finally, the study primarily employed descriptive and comparative statistical techniques, which limit the ability to draw causal inferences between service quality dimensions and overall student satisfaction. Future research is encouraged to use more advanced inferential and multivariate analytical techniques, as well as longitudinal and multi-institutional designs, to enhance the robustness and explanatory power of findings in this field.

Recommendations

Practice Recommendation

Based on the findings of this study, the following structured and prioritized recommendations are proposed to enhance institutional effectiveness and student satisfaction in a private university context in Egypt. The recommendations are divided into short-term operational actions and long-term strategic initiatives, with consideration of faculty-specific needs and resource allocation priorities.

First: Short-term operational improvements (0–12 months)

1. Address immediate faculty-specific infrastructural concerns by prioritizing corrective actions in faculties reporting lower satisfaction. This includes improving classroom ventilation and environmental conditions in the Faculty of Engineering and reviewing classroom capacity and space utilization in the Faculty of Medicine.

2. Enhance the quality and consistency of campus dining services through vendor performance monitoring, periodic student feedback collection, and service-level agreements that define minimum quality standards.

3. Improve digital infrastructure by strengthening Wi-Fi coverage and ensuring stable access to required academic platforms, particularly in high-density faculties where connectivity issues may affect learning efficiency.

4. Provide targeted communication and English language support workshops for teaching staff in faculties where student feedback indicates challenges in instructional clarity or language delivery.

Second: Medium- to long-term strategic initiatives (1–3 years)





5. Develop a faculty-based quality improvement framework that enables each academic unit to design and implement tailored improvement plans based on its specific disciplinary needs, resource demands, and student feedback patterns.

6. Rebalance and optimize learning resources across faculties by investing in specialized laboratories, updated software, and discipline-relevant teaching facilities to reduce disparities in student experience.

7. Institutionalize a structured student engagement strategy that expands extracurricular and student life activities in a way that is aligned with faculty workload structures, ensuring equitable access across disciplines.

8. Establish a centralized quality assurance and monitoring system that integrates periodic student satisfaction surveys, performance benchmarking across faculties, and continuous feedback loops between administrative and academic units.

These recommendations aim to move beyond general operational suggestions toward a more structured governance approach that links student feedback to decision-making processes, resource allocation, and continuous quality improvement within the university.

Further Research Recommendations

Future research should move beyond single-method and purely descriptive approaches toward more integrated and explanatory research designs that better capture the complexity of student satisfaction in higher education. In particular, mixed-methods designs are recommended, combining quantitative measurement of service quality dimensions with qualitative approaches such as interviews or focus groups. This would allow researchers to explore not only the statistical differences in satisfaction levels but also the underlying reasons behind these differences, especially within technically demanding faculties where workload, curriculum structure, and resource needs significantly shape student experiences.

In addition, future studies should investigate the role of digital transformation in reshaping students' expectations of physical campus services. As universities increasingly adopt blended learning platforms, digital administrative systems, and virtual academic support services, it becomes important to examine how these changes influence students' perceptions of traditional services such as classrooms, libraries, and campus facilities. This is particularly relevant in private university contexts where students expect a high level of technological integration alongside physical infrastructure quality.

Another important direction for future research is the examination of the long-term impact of student satisfaction on alumni outcomes, particularly alumni loyalty, engagement, and institutional affiliation. Understanding how satisfaction during undergraduate studies translates into long-term relationships with the institution can provide valuable insights for strategic planning, fundraising, and reputation management in higher education.

Furthermore, future research should explore comparative discipline-based models that focus on how service quality perceptions differ across technical, medical, and humanities faculties. Such studies would help clarify how academic culture and disciplinary demands shape satisfaction patterns, providing a more nuanced understanding than aggregate institutional analyses.

Finally, longitudinal and multi-institutional studies remain important but should be designed in a way that integrates behavioral, experiential, and outcome-based indicators rather than relying solely on perception-based surveys. This would strengthen the explanatory power of research in student satisfaction and service quality in higher education contexts.

Declaration of Generative AI in the Writing Process

During the preparation of this manuscript, Generative Artificial Intelligence tools (including ChatGPT by OpenAI) were used solely as a language support tool to enhance grammatical accuracy, improve linguistic clarity, and assist in refining the academic writing style of the manuscript.





The use of AI was limited to editorial support, including improving sentence structure and ensuring consistency across sections such as the Methodology, Discussion, and Recommendations. It was not used for data collection, statistical analysis, interpretation of results, or generation of research findings.

The author(s) confirm that all research design, data analysis, interpretation of results, and conclusions were conducted independently by the human researcher(s). The author(s) take full responsibility for the integrity, originality, and scientific validity of the work.

Data Availability Statement (DAS)

The data that support the findings of this study are available from the corresponding author upon reasonable request. The data are not publicly available due to privacy and ethical restrictions, as they contain information that could compromise the anonymity of the participating students. All quantitative data generated during the study are presented in summary form within the tables and figures of this manuscript.

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