

Factors Affecting Student Satisfaction with Graduation Check Services: A Case Study of 4th year Students of International College, Khon Kaen University

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Abstract

This research investigates fourth-year students' satisfaction with graduation check services at the International College, Khon Kaen University. The research employs the SERVQUAL methodology to assess five elements of service quality: Reliability, Responsiveness, Assurance, Process Quality, and Communication & Clarity. A standardized questionnaire was distributed to 231 students, and the data were analyzed using descriptive statistics and one-way ANOVA. The findings indicate a significant overall satisfaction level (Mean = 4.19, SD = 0.81). Reliability received the greatest score (Mean = 4.24), followed by Assurance and Communication & Clarity (both Mean = 4.21), whilst Responsiveness attained the lowest, yet still elevated, mean (4.09). ANOVA indicated no significant differences among students by academic major ($p > .05$); however, significant differences were observed based on service usage frequency ($p < .05$): individuals utilizing the service twice expressed more pleasure than those using it more than twice. The results indicate that service consistency and effective communication are essential for repeat customers. The study advocates for the enhancement of communication channels, the improvement of system usability, and the provision of individualized support to fortify graduation clearing services.

Keywords

Student satisfaction; graduation check service; SERVQUAL; higher education services; service quality

1. Introduction

Student satisfaction serves as a critical metric of service quality in higher education, impacting institutional reputation, student retention, and graduation rates. The graduation check service is a crucial administrative procedure utilized to ascertain if students have fulfilled all academic criteria for degree conferral. Inefficiencies or ambiguous procedures may induce irritation and increase the effort for both students and staff. The SERVQUAL framework serves as a thorough tool for evaluating student satisfaction with graduation verification services by measuring the gaps between the expectations of fourth-year students and their actual perceptions of service performance. The disparities are assessed across five specific dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Bansal et al., 2020; Green, 2014; Ismailova & Chynybaev, 2025; Mines et al., 2025). Utilizing its established application in assessing service quality in higher education, the recognition of negative gaps within these dimensions acts as a crucial indicator of elements that reduce satisfaction, including procedural ambiguity or operational inefficiencies (Bansal et al., 2020; Chilukuri et al., 2021; Green, 2014). Graduation checks involve the administrative validation of degree requirements, and inefficiencies such as processing delays and communication failures can cause considerable irritation for students and staff alike. The tangible dimension includes the physical and digital infrastructure, such as web portals, forms, and the professional aesthetics of workplaces. Students increasingly expect intuitive digital interfaces for document submission and status tracking; thus, deficiencies often emerge from outdated systems or chaotic physical environments, resulting in reduced satisfaction, especially in resource-limited contexts (Ismailova & Chynybaev, 2025; Mines et al., 2025). The behavioral and procedural aspects of SERVQUAL further clarify the student experience. Reliability, characterized as the capacity to execute services consistently and precisely, often reveals the most significant deficiencies. This entails the prompt and accurate validation of academic credits during graduation inspections. Inconsistent processing or mistakes in degree audits might undermine trust, since research indicates that deficiencies in this area significantly affect school reputation and student retention (Bansal et al., 2020; Chilukuri et

al., 2021; Green, 2014). Responsiveness is closely related, indicating the staff's readiness to offer timely support and efficient communication. Negative gaps arising from delayed responses or ambiguous timescales intensify irritation, especially for graduating students facing stringent deadlines (Ismailova & Chynybaev, 2025; Mines et al., 2025). Moreover, assurance depends on the knowledge, politeness, and proficiency of staff to foster trust; deficiencies arise when people are not trained on regulations, resulting in student concern during critical verification procedures (Bansal et al., 2020; Green, 2014). Ultimately, empathy involves delivering compassionate, tailored support, exemplified by customized assistance for intricate transfer credit situations. Shortcomings in this domain, frequently expressed via general administrative replies, have been demonstrated to exacerbate student discontent (Bansal et al., 2020; Chilukuri et al., 2021; Green, 2014; Ismailova & Chynybaev, 2025; Mines et al., 2025).

Previous research has widely employed SERVQUAL to evaluate educational services in many contexts. Surveys conducted among undergraduates at Thai institutions have effectively pinpointed deficiencies in student services, providing actionable insights for administrative management (Bansal et al., 2020; Chilukuri et al., 2021; Green, 2014). Research on Moroccan engineering students revealed significant deficiencies in reliability and responsiveness, leading to recommendations for specific procedural enhancements (Bansal et al., 2020; Green, 2014; Ismailova & Chynybaev, 2025; Mines et al., 2025). Research on online and hybrid education has uncovered substantial deficiencies across all dimensions, with reliability and responsiveness consistently recognized as the most lacking areas—insights that are readily applicable to the assessment of digital graduation portals (Bansal et al., 2020; Green, 2014; Ismailova & Chynybaev, 2025; Mines et al., 2025). Extensive research in higher education corroborates these findings, emphasizing that tangibles and dependability are common areas of deficiency that substantially affect overall outcomes, such as student satisfaction and graduation rates (Ismailova & Chynybaev, 2025). This research employs the SERVQUAL framework to examine the determinants influencing student satisfaction with graduation check services among fourth-year students at the International College, Khon Kaen University.

2. Literature Review

The SERVQUAL model, initially developed by Parasuraman, Zeithaml, and Berry (1988), continues to serve as a reliable framework for assessing service quality discrepancies in higher education, especially for administrative procedures like graduation clearing. By evaluating the five fundamental dimensions—reliability, responsiveness, certainty, empathy, and tangibles—institutions can accurately identify inefficiencies that hinder student advancement. Notwithstanding the advent of domain-specific adaptations such as HEISQUAL or HiEduQual, current research substantiates the persistent relevance of SERVQUAL in measuring the disparity between student expectations and their actual perceptions of service provision (Barrios-Ipenza et al., 2024; Dickinson, 2025; Goumairi et al., 2020; Toghroli et al., 2021; Wahyuni et al., 2024). Research in higher education reveals that administrative responsiveness and clear communication are crucial factors influencing overall student satisfaction (Lee & Chen, 2018; Smith, 2015). Thus, the model functions as an essential diagnostic instrument for reducing the friction typically linked to bureaucratic processes.

Administrative touchpoints, such as registration, academic advising, and clearance procedures, are crucial in influencing the student experience; efficient processes and staff proficiency have demonstrated a reduction in the need for multiple visits while enhancing perceived service quality. Nonetheless, graduation clearance continues to be an insufficiently scrutinized aspect, despite its direct influence on student results, including the prompt awarding of degrees and overarching institutional perceptions (Mattah et al., 2018). Utilizing SERVQUAL in this context enables institutions to pinpoint particular shortcomings—such as procedural ambiguity or delays—that intensify student frustration and require multiple interactions, reflecting conclusions from extensive research on registration and advising (Dickinson, 2025; Goumairi et al., 2020). This emphasis rectifies a notable gap in the research by concentrating on graduation-specific elements within the conventional 22-item SERVQUAL scale, advancing past broad administrative evaluations to identify the precise obstacles of the exit process (Dickinson, 2025; Mattah et al., 2018).

An in-depth examination of the SERVQUAL dimensions highlights their particular significance to graduation clearance. Reliability, characterized by the precise and prompt validation of degree requirements devoid of errors,

often reveals significant deficiencies in online and administrative services; such shortcomings are crucial, as they directly compromise student satisfaction and institutional allegiance (Barrios-Ipenza et al., 2024; Dickinson, 2025; Goumairi et al., 2020). Responsiveness, characterized by timely responses to inquiries and the delivery of explicit timeframes, is a crucial determinant of satisfaction, since unfavorable discrepancies can markedly increase anxiety during critical clearance processes (Dickinson, 2025; Goumairi et al., 2020). Moreover, Assurance pertains to the proficiency of personnel and their understanding of regulations, fostering trust and diminishing the necessity for students to seek continual clarification; significantly, deficiencies in this area have been identified in engineering education settings in Morocco (Goumairi et al., 2020). Empathy is defined by the delivery of tailored assistance for individual circumstances, such as transfer credits, and is essential for perceived quality in student-oriented administration (Dickinson, 2025; Toghroli et al., 2021). Ultimately, Tangibles now include accessible digital platforms and forms; when services transition online, modifications in this area are crucial to guarantee favorable initial impressions (Barrios-Ipenza et al., 2024; Dickinson, 2025).

Although SERVQUAL serves as a fundamental metric, contemporary research promotes context-specific modifications to improve applicability. Models like HEISQUAL, encompassing seven variables such as professor profile and curriculum, and HiEduQual, emphasizing administrative services and support, provide specialized methodologies for the industry (Barrios-Ipenza et al., 2024; Wahyuni et al., 2024). Certain studies have incorporated the Kano model to categorize satisfaction determinants, recognizing factors like infrastructure and ongoing enhancement as crucial for fulfilling graduate expectations (Barrios-Ipenza et al., 2024). Empirical implementations of gap analysis have produced actionable insights; for example, evaluations in U.S. and online contexts have recognized reliability and responsiveness as primary concerns, whereas Moroccan universities have measured "non quality" to inform strategic enhancements (Dickinson, 2025; Goumairi et al., 2020). Ultimately, a tailored implementation of SERVQUAL—customized for fourth-year students and validated for local online formats—enhances institutional retention and reputation by methodically rectifying the inefficiencies present in the graduation clearance process (Barrios-Ipenza et al., 2024; Goumairi et al., 2020; Mattah et al., 2018; Toghroli et al., 2021). This study enhances the current literature by concentrating on the graduation clearance process, a significant yet little scrutinized administrative practice that directly influences student results and institutional perceptions.

3. Methodology

This study employs a quantitative cross-sectional design, utilizing a SERVQUAL-based questionnaire completed to fourth-year students, in accordance with accepted methodological guidelines for evaluating service quality gaps in higher education administration. The instrument transcends the conventional SERVQUAL dimensions—Reliability, Responsiveness, and Assurance—by integrating context-specific metrics of Process Quality and Communication & Clarity (Datta & Vardhan, 2013; Nde & Lukong, 2010; Yousapronpaiboon, 2014). The instrument structure commonly employs a 5-point Likert scale (1=strongly disagree to 5=strongly agree), while variations, including 7-point scales, are present in the literature. Moreover, modifications that incorporate expanded item sets—typically surpassing 35 items in contrast to the original 22—are commonly employed to improve contextual relevance for particular processes such as graduation checks, while maintaining internal consistency, often resulting in Cronbach's alpha coefficients greater than 0.80 (Datta & Vardhan, 2013; Ko & Chou, 2020; Yousapronpaiboon, 2014). The targeted focus on fourth-year students facilitates the acquisition of critical service experiences pertinent to graduation clearance, aligning with analogous cross-sectional surveys executed in Saudi and Gulf university contexts (Datta & Vardhan, 2013).

The analytical framework employs descriptive statistics to encapsulate satisfaction levels across various dimensions and items, enabling the computation of gap scores (perception minus expectation); generally, scores surpassing a designated threshold, such as -1, are construed as indicative of satisfaction (Nde & Lukong, 2010; Yousapronpaiboon, 2014). One-way ANOVA is employed to analyze demographic changes and assess statistically significant differences among academic majors, offering a reliable approach for group comparisons, including distinctions between engineering and other fields (Datta & Vardhan, 2013; Ko & Chou, 2020). Following the identification of substantial F-values, Tukey HSD post-hoc tests are utilized to identify specific disparities among majors, a favored approach in higher education service quality research when the assumption of homogeneity of variances is satisfied (Nde & Lukong, 2010). Previous research offers empirical evidence for the utilization of

SERVQUAL in educational contexts. A study including 199 students at a Saudi university employed a modified 35-item SERVQUAL instrument alongside gap analysis, uncovering negative gaps in all dimensions and emphasizing "trust" as the highest priority, while "responsibility" was ranked lowest (Datta & Vardhan, 2013). Wider applications of the approach often utilize Pearson correlation coefficients to ascertain validity and Importance Performance Analysis (IPA) grids to pinpoint priority regions for enhancement, particularly those situated in Quadrant II (Ko & Chou, 2020; Yousapronpaiboon, 2014). Additionally, a study at Umea University employing convenience sampling and self-administered questionnaires has validated the model's effectiveness in precisely assessing student views of service quality (Nde & Lukong, 2010). A quantitative, cross-sectional study methodology was employed. Two hundred thirty-one fourth-year students from seven disciplines at the International College, Khon Kaen University, participated. A SERVQUAL-based questionnaire evaluated five dimensions of service quality: Reliability, Responsiveness, Assurance, Process Quality, and Communication & Clarity. Items were evaluated utilizing a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). Descriptive statistics (mean, standard deviation) encapsulated student happiness. One-way ANOVA assessed differences among academic majors and frequency-of-service categories (1 time, 2 times, >2 times). Tukey HSD post-hoc testing revealed particular intergroup differences where ANOVA demonstrated significant outcomes.

4. Results

4.1 Descriptive Statistics

Table 1 demonstrates that the demographic profile reveals a predominance of female responders, amounting to 163 persons (70.60%). The predominant age group was persons aged 21–25 years, including 217 participants (93.90%). The topic of study with the biggest representation was International Marketing (IM), comprising 60 respondents (26.00%). Moreover, the predominant frequency of service utilization was a solitary visit (1 time), as indicated by 149 persons (64.50%).

Table 1: General Characteristics of Respondents

Status / Characteristic	Frequency (n=231)	Percentage (%)
Gender		
Male	55	29.40
Female	127	70.60
Age		
Under 20 years	1	0.40
21 – 25 years	217	93.90
26 – 30 years	12	5.20
Over 31 years	1	0.40
Field of Study		
Global Business (GB)	36	15.60
International Marketing (IM)	60	26.00
International Entrepreneurship (IE)	21	9.10

International Affairs (IA)	52	22.50
Creative Media Technology (CMT)	37	16.00
International Journalism (IJ)	11	4.80

Tourism Management (TM)	14	6.10
Frequency of Graduation Verification Service Usage		
1 Time	149	64.50
2 Times	33	14.30
More than 2 Times	49	21.20
Position Type		
Student	229	99.14
Staff	1	0.43
Lecturer	1	0.43
Other	0	0.00

Table 2 displays the assessment of Service Reliability. The findings demonstrate that the overall dependability was elevated (Mean = 4.24, S.D. = 0.84). The item with the highest rating was "The procedures were clear and transparent" (Mean = 4.32, S.D. = 0.91), followed by "Staff provided accurate information regarding verification procedures" (Mean = 4.29, S.D. = 0.86).

Table 2: Evaluation Results regarding Service Reliability

Item	Mean (\bar{x})	S.D.	Interpretation
1. Staff provided accurate information regarding verification procedures.	4.29	0.86	High
2. Staff consistently followed established procedures.	4.20	0.93	High
3. The verification process was completed within the stipulated time.	4.16	0.96	High
4. The procedures were clear and transparent.	4.32	0.91	High
Overall	4.24	0.84	High

Table 3 displays the findings for Responsiveness and Accessibility. The overall rating was at a high level (Mean = 4.09, S.D. = 0.93). The highest-rated aspect was "Document submission was convenient" (Mean = 4.20, S.D. = 0.99),

followed by "Staff provided assistance when students had inquiries" (Mean = 4.13, S.D. = 0.99).

Table 3: Evaluation Results regarding Responsiveness and Accessibility

Item	Mean (\bar{x})	S.D.	Interpretation
1. Staff provided assistance when students had inquiries.	4.13	0.99	High
2. Staff responded to questions quickly and clearly.	4.01	1.10	High
3. Service contact channels were convenient.	4.02	1.05	High
4. Document submission was convenient.	4.20	0.99	High
Overall	4.09	0.93	High

Table 4 shows the evaluation of Staff Assurance and Competence. The overall result was at a high level (Mean = 4.21, S.D. = 0.93). The item with the highest score was "Staff possessed the knowledge and ability to provide appropriate advice" (Mean = 4.24, S.D. = 0.95), followed by "Students felt confident when receiving service from staff" (Mean = 4.20, S.D. = 1.01).

Table 4: Evaluation Results regarding Staff Assurance and Competence

Item	Mean (\bar{x})	S.D.	Interpretation
1. Staff possessed the knowledge and ability to provide appropriate advice.	4.24	0.95	High
2. Students felt confident when receiving service from staff.	4.20	1.01	High
3. Staff were polite and professional.	4.18	1.00	High
Overall	4.21	0.93	High

Table 5 presents the results regarding System and Process Quality. The overall evaluation was at a high level (Mean = 4.18, S.D. = 0.85). The highest-rated item was "Staff provided service with student convenience in mind" (Mean = 4.22, S.D. = 0.93), followed by "Individual consultation was available when needed" (Mean = 4.19, S.D. = 0.85).

Table 5: Evaluation Results regarding System and Process Quality

Item	Mean (\bar{x})	S.D.	Interpretation
1. The online graduation check system was easy to understand.	4.13	0.94	High
2. Staff provided service with student convenience in mind.	4.22	0.93	High
3. Individual consultation was available when needed.	4.19	0.94	High
Overall	4.18	0.85	High

Table 6 illustrates the findings for Communication and Information Clarity. The overall rating was at a high level (Mean = 4.21, S.D. = 0.83). The highest-rated item was "Online service channels were convenient to use" (Mean = 4.24, S.D. = 0.91), followed by "Training was organized, procedures clarified, and timelines clearly defined" (Mean = 4.23, S.D. = 0.87).

Table 6: Evaluation Results regarding Communication and Information Clarity

Item	Mean (\bar{x})	S.D.	Interpretation
1. Documents and forms were clear and easy to understand.	4.16	0.93	High
2. Online service channels (e.g., website/submission system) were convenient to use.	4.24	0.91	High
3. Training was organized, procedures clarified, and timelines clearly defined.	4.23	0.87	High
Overall	4.21	0.83	High

Table 7 summarizes the evaluation results across all dimensions. The overall satisfaction was at a high level (Mean = 4.19, S.D. = 0.81). The dimension with the highest evaluation was Service Reliability (Mean = 4.24, S.D. = 0.84), followed jointly by Staff Assurance and Competence (Mean = 4.21, S.D. = 0.93) and Communication and Information Clarity (Mean = 4.21, S.D. = 0.83).

Table 7: Overview of Evaluation Results Across All Dimensions

Dimension	Mean (\bar{x})	S.D.	Interpretation
1. Service Reliability	4.24	0.84	High
2. Responsiveness and Accessibility	4.09	0.93	High
3. Staff Assurance and Competence	4.21	0.93	High
4. System and Process Quality	4.18	0.85	High
5. Communication and Information Clarity	4.21	0.83	High
Overall	4.19	0.81	High

4.2 ANOVA

Table 8 details the ANOVA results for Frequency of Usage. While no significant differences were found for Reliability, significant variations emerged across Responsiveness, Assurance, Process, and Communication dimensions. Variables marked as significant were subjected to further post-hoc testing (see Table 5).

Table 8: Summary of One-Way ANOVA Results by Frequency of Service Usage.

Dependent Variable	df	F	p-value	Result
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1. Service Reliability				
1.1 Accurate information	2, 179	2.84	.061	Not Significant

1.2 Consistent adherence	2, 179	1.91	.151	Not Significant
1.3 Timeliness	2, 179	0.81	.447	Not Significant
1.4 Transparency	2, 179	0.40	.674	Not Significant
2. Responsiveness				
2.1 Staff assistance	2, 179	4.02	.020*	Significant
2.2 Quick response	2, 179	7.05	.001**	Significant
2.3 Contact channels	2, 179	1.28	.280	Not Significant
2.4 Document submission	2, 179	0.70	.500	Not Significant
3. Assurance				
3.1 Staff knowledge	2, 179	4.17	.017*	Significant
3.2 Student confidence	2, 179	4.72	.010*	Significant
3.3 Politeness	2, 179	5.85	.003**	Significant
4. Process Quality				
4.1 Ease of understanding	2, 179	2.99	.053	Not Significant
4.2 Convenience	2, 179	4.44	.013*	Significant
4.3 Individual consultation	2, 179	6.03	.003**	Significant
5. Communication				
5.1 Clarity of forms	2, 179	2.43	.091	Not Significant
5.2 Online channels	2, 179	4.37	.014*	Significant
5.3 Training/Timelines	2, 179	4.38	.014*	Significant

Note. Significance level set at *= $p < .05$, ** = $p < .01$.

Table 9 displays the outcomes of the Tukey HSD post-hoc multiple comparisons, executed to identify the precise sources of variation among the three user groups. The analysis demonstrates a consistent and statistically significant trend: respondents in Group 2 (who utilized the service precisely twice) reported markedly higher

satisfaction scores than those in Group 3 (who utilized the service more than twice) across all significant dimensions. In terms of Responsiveness, Group 2 assessed the speed and clarity of responses (Item 2.2) substantially higher ($p = .001$) than Groups 1 and 3. In a similar vein, regarding Process Quality, Group 2 determined that the accessibility of individual consultation (Item 4.3) was markedly superior ($p = .003$) compared to the other two groups.

Table 9: One-Way ANOVA and Tukey HSD Results for Frequency of Service Usage for statistically significant variables.

Dependent Variable	F	p-value	Post-hoc Comparisons (Tukey HSD)
Responsiveness			
Item 1 (Assistance)	3.996	.020*	Group 2 > Group 3
Item 2 (Quick response)	7.048	.001**	Group 2 > Group 1, 3
Assurance			
Item 1 (Knowledge)	4.146	.017*	Group 2 > Group 3
Item 2 (Confidence)	4.761	.010*	Group 2 > Group 3
Item 3 (Politeness)	6.186	.003**	Group 2 > Group 3
Process			
Item 2 (Convenience)	4.465	.013*	Group 2 > Group 3
Item 3 (Consultation)	5.960	.003**	Group 2 > Group 1, 3
Communication			
Item 2 (Online Channels)	4.394	.014*	Group 2 > Group 3
Item 3 (Training/Timelines)	4.049	.019*	Group 2 > Group 3

Note. Group 1 = 1 Time; Group 2 = 2 Times; Group 3 = >2 Times.

* = $p < .05$, ** = $p < .01$. Comparison notation ">" indicates a statistically significant difference at the .05 level.*

The disparities in the aspects of Assurance and Communication were predominantly observed between Group 2 and Group 3. Group 2 consistently regarded the staff as more courteous, informed, and the online channels as more efficient than Group 3 did. The data indicate that the service experience is most favorable for individuals engaging with the system twice, while those necessitating more than two engagements (Group 3) see a notable deterioration in perceived service quality.

5. Discussion and Implementation

The main aim of this study was to assess student satisfaction about the graduation clearance procedure utilizing a modified SERVQUAL framework. The results indicate a predominantly favorable assessment of the administrative services offered, with elevated mean scores across all parameters. A comprehensive examination of service

frequency uncovers significant subtleties related to procedural friction. The results indicate a high level of overall satisfaction with the graduation verification service. The characteristics of Reliability and Assurance exhibited the highest performance, signifying consistency and proficiency among administrative personnel. Nonetheless, diminished Responsiveness scores and the pronounced disparities among usage frequency groups underscore apprehensions regarding delays, complexity, or inadequate clarity in current procedures. Enhancing digital systems, clarifying information, and offering tailored support for students requiring service re-engagement helps mitigate friction.

The field of study or student major is not a significant differentiator among groups. The major does not seem to affect opinions of Reliability, Responsiveness, Assurance, Process, or Communication within this group. Nonetheless, the frequency of service utilization is a crucial determinant. The research found that the frequency of service usage is a significant differentiator. Students with two instances of experience consistently reported markedly higher scores across various dimensions—especially in Responsiveness, Assurance, and Process quality—compared to those with three instances of experience. The principal finding indicates the enhanced performance or perception linked to students having dual experience. Research endeavors should concentrate on comprehending the particular characteristics related to the experiences, situations, or demographics of students who underwent dual experiences that resulted in these favorable outcomes. Conversely, an inquiry should be undertaken to ascertain the reasons behind the consistently lower scores of students with three instances of experience; this data could guide essential enhancements or interventions.

The findings reveal that Service Reliability received the highest rating (Mean = 4.24), primarily influenced by procedural transparency. This discovery presents a notable contrast to the overall literature. Although prior studies have frequently recognized Reliability as the dimension exhibiting the most significant negative gaps and the predominant cause of student dissatisfaction (Barrios-Ipenza et al., 2024; Dickinson, 2025; Goumairi et al., 2020), the present study indicates that this particular institution has effectively addressed these prevalent issues. By guaranteeing that procedures are "clear and transparent" (Item 1.4, Mean = 4.32), the institution has fulfilled the essential requirement for precise and reliable verification—a factor identified as vital for sustaining institutional loyalty (Barrios-Ipenza et al., 2024; Dickinson, 2025). The elevated scores in Communication and Information Clarity reinforce the claims made by Lee and Chen (2018) and Smith (2015) that effective communication is a crucial factor in student happiness.

The principal discovery arises from the Analysis of Variance (ANOVA) concerning the Frequency of Service Utilization. The data indicates a non-linear correlation between service interaction and satisfaction, particularly emphasizing a performance disparity between students who utilized the service twice (Group 2) and those that necessitated more than two interactions (Group 3). Participants in Group 2 consistently indicated the highest levels of satisfaction, markedly surpassing Group 3 in Responsiveness, Assurance, and Process Quality. This indicates that a two-step interaction model—possibly an initial submission followed by successful verification—constitutes the optimal administrative workflow. The elevated scores for Process Quality and Individual Consultation (Item 4.3) within this cohort correspond with Toghroli et al. (2021), who underscored the significance of customized assistance for perceived quality. When the system functions as designed (resolving within two visits), staff skill and empathy are distinctly acknowledged and appreciated. In contrast, Group 3 (customers with more than two visits) exhibited markedly lower scores, especially in Responsiveness ($p = .001$) and Assurance ($p = .003$). This drop corroborates the caution expressed by Mattah et al. (2018) that graduation clearance is a critical juncture when inefficiencies can significantly affect student impressions. The diminished ratings for "Quick Response" (Item 2.2) and "Staff Politeness" (Item 3.3) within this group indicate that frequent interactions may be indicative of persistent difficulties or procedural uncertainty. Literature indicates that impairments in response exacerbate anxiety during high-stakes operations (Dickinson, 2025; Goumairi et al., 2020). For Group 3, the requirement for several visits likely alters the view of "Individual Consultation" from a beneficial service to a bureaucratic obstacle, thereby undermining their confidence in staff competence—a fundamental aspect of the Assurance dimension (Goumairi et al., 2020).

The research underscores the efficacy of digital integration. The high individual item score for Online Service Channels (Mean = 4.24) corroborates recent studies that emphasize the necessity of user-friendly digital portals as vital "Tangibles" in contemporary education (Barrios-Ipenza et al., 2024; Dickinson, 2025). The absence of a notable

distinction between groups about the clarity of online forms (Item 5.1) indicates that the digital interface is sound; instead, the discontent observed in Group 3 arises from the human or procedural reaction to those digital submissions. A comprehensive strategic strategy is necessary to significantly enhance the effectiveness of the graduation verification process. Emphasis must be made on enhancing the clarity and coherence of information transmission across all communication channels, ensuring that announcements, official documents, and digital instructions are unequivocal and consistent. This initiative should coincide with technical improvements to the online graduation verification system, specifically designed to promote usability and transparency by including real-time progress tracking and automated alerting systems. In addition to systemic enhancements, a more student-focused service model is recommended, especially concerning the delivery of tailored advisory assistance for people necessitating many service engagements. Finally, to uphold operating standards during moments of high demand, it is essential to employ dynamic resource allocation tactics, such as increasing staffing numbers or extending operational hours during peak processing times.

6. Conclusion and limitations

In conclusion, although the institution attains elevated overall satisfaction, the "Frequency of Usage" variable functions as a pivotal diagnostic metric. The results validate the effectiveness of SERVQUAL in identifying certain inefficiencies (Barrios-Ipenza et al., 2024). The substantial decline in satisfaction among students necessitating more than two visits suggests that, although the conventional procedure (encountered by Groups 1 and 2) is beneficial, the exception management process (experienced by Group 3) necessitates intervention. Mitigating the obstacles that compel students to engage in recurrent visits is crucial to averting the decline of confidence and certainty articulated by Goumairi et al. (2020) and Mattah et al. (2018). This research substantiates that service quality elements substantially affect student satisfaction. Although the majority of students indicated great satisfaction, repeat users reported reduced satisfaction levels. The group sizes in the "Frequency of Service Usage" analysis are disproportionate. The analysis appropriately employed the Harmonic Mean Sample Size for the Tukey HSD test. It is important to acknowledge that the limited sample size of students with two instances of experience may potentially influence the stability of the mean. Nonetheless, the observation that students with dual experience exhibited statistically significant differences, despite this limitation, underscores the robustness of these findings.

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