EFFECT OF SERVICE QUALITY ON STUDENT SATISFACTION IN HIGHER EDUCATION IN MOZAMBIQUE

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Abstract: *In the increasingly competitive higher education market, institutions are adopting a market-oriented approach that places students as the key customers. Service quality has emerged as a crucial factor in enhancing the competitive performance of higher education institutions (HEIs) by positively influencing student satisfaction. This study examined the effect of university service quality on student satisfaction with Mozambican public and private HEIs. Using a descriptive and analytical approach, a quantitative analysis was conducted based on a survey of 402 students attending HEI courses in Mozambique. The study used survey questionnaire to gather information directly from the participants. The data analysis involved a series of statistical tests, including multivariate regression, bivariate analysis, ANOVA tests, and exploratory factor analysis. The study found a statistically significant positive impact of university service quality on student satisfaction,where the independent variables explained a significant portion of the variance in student satisfaction. Notably, the dimensions of teaching quality, administrative services, social environment, and curricula demonstrated the most significant impact on student satisfaction. Empirical evidence from the Mozambican context supports the significance of university service quality in student satisfaction and the overall institutional experience. HEI managers should prioritize offering high-quality services emphisizing giving on teaching quality and well-designed curricula is crucial. Furthermore, a specialattention should be given to the social environment and positive student experiences with administrative services. Balancing investments in tangible assets is necessary, as they may not be as influential in students' academic performance as teaching quality and well-structured academic programs.*

Keywords: *Africa, service quality, higher education institutions, student satisfaction, Mozambique*

INTRODUCTION

The growing national and international competition faced by higher education institutions forces them to select the best strategies that guarantee their success. Hence, they try to exceed the expectations of their students to satisfy them (Manzoor, 2013). The sustainability of the operations of universities depends on factors such as competitive advantage, student satisfaction, loyalty, and creating value (Dharmayanti, Samuel, & Devie, 2018). Therefore,

improving the quality of services is a vital element for students when choosing the university they intend to study (Schüller, Rašticová, & Konečný, 2013).

The services offered by HEIs are similar to those provided by service companies. The interaction between the service provider and the receiver results in a relationship that satisfies both parties (Manzoor, 2013). The introduction of payment-by-feemodels has boosted this orientation of institutions (Minh&Huu, 2016). Monitoring and managing student satisfaction is crucial in highly competitive environments (Shahsavar & Sudzina, 2017). This section will define the main concepts of the study and explain their relationship.

Service quality, reputation, and tuition fees affect the perception of value created by universities (Dharmayanti et al., 2018). People who pay for the services they use do not like to be passive recipients of any service provided by the institutions with which they interact. Students are now considered educational institutions' customers and partners in the teaching and learning process (Douglas, Mcclelland, & Davies, 2008). Therefore, it is increasingly important for universities to focus on student satisfaction to attract and retain them (Gruber, Fuß, Voss, Zikuda, & Gruber, 2010; Manzoor, 2013; Temizer & Turkyilmaz, 2012). So, in addition to learning, satisfaction must also be one of the desirable outcomes to be achieved by an educational institution (Gruber et al., 2010; Temizer & Turkyilmaz, 2012).Due to the increase in the number of HEIs, which, as a consequence, resulted in increased competition to attract and retain the best students, interest in student satisfaction catapulted(Temizer & Turkyilmaz, 2012). Student satisfaction and loyalty strongly depend on efforts to provide quality services (Temizer & Turkyilmaz, 2012). Therefore, HEIs must listen to and satisfy their students.

Perceived service quality is the market's assessment of recent customer experience (Temizer & Turkyilmaz, 2012; Taecharungroj, 2014). In the context of HEIs, the customer is the student. Parasumem et al., in 1985, developed the SERVQUAL scale, based on the customer's perspective of service quality, the most common model used to measure service quality (Son, Ha, Thi, & Khuyen, 2018). The model is multidimensional and consists of five categories: reliability, guarantees, tangibles, empathy, and responsiveness (Son et al., 2018).

University service quality is crucial for the competitiveness of HEIs (Temizer & Turkyilmaz, 2012). A positive perception of service quality significantly affects the perceived value of services, HEIs' reputation and image, student satisfaction (Jiewanto, Laurens & Nelloh, 2012; Ismail, Surfadi & Yunan, 2016; Minh &Huu, 2016), and ultimately, student loyalty (Jiewanto, Laurens & Nelloh, 2012; Ismail, Surfadi & Yunan, 2016; Minh & Huu, 2016). Hence, HEIs cement their legitimacy before society when they ensure the quality and satisfaction of their students (Duarte, Raposo, & Alves, 2012). Those institutions must constantly obtain feedback from their stakeholders to understand how they value the services and how they can be improved (Duarte et al., 2012). Therefore, universities have been guided by a customer-oriented service delivery philosophy, as they believe it is more likely to meet the needs and desires of their students more effectively (Minh&Huu, 2016).

When universities know how students perceive the quality of services offered, they can adapt their services to positively impact students' perceptions of service quality and satisfaction levels (Gruber et al., 2010). In this context, the literature suggests that monitoring students' experiences as feedback is vital to delivering quality services by HEIs (Gruber et al., 2010)

Student satisfaction is a short-term attitude that results from evaluating the student's educational experience at the institution (Shahsavar & Sudzina, 2017). There is a recognition among scholars that student satisfaction results from comparing the perceived experience with the institution and its expectations, thus affecting the student's favourable or unfavourable evaluation (Taecharungroj, 2014). Student satisfaction is vital for HEIs because it significantly impacts student motivation and engagement, improving educational outcomes (Bellamkonda, 2016). Satisfaction also positively affects student retention, recruitment efforts, and fundraising for HEIs (Shahsavar & Sudzina, 2017),thus strengthening the competitive position of the educational institution in the industry (Temizer & Turkyilmaz, 2012; Shahsavar & Sudzina, 2017).

Student satisfaction has assumed particular importance on the agendas of university managers because it is strongly related to student recruitment (Duong, 2016). For this reason, the institution's objective is to maximise students' satisfaction with their experience with the university while minimising their dissatisfaction to improve their performance in the ranking and thus help with recruitment (Douglas et al., 2008).
For Duong (2016), three critical reasons justify the interest in studying student satisfaction, citing Sinclaire (2011):

> Satisfaction is the key to continuing studies, as it directly influences student motivation. It is positively related to retention and the intention to take additional courses in the future. It represents a public relations asset for HEIs.

Shahsavar and Sudzina (2017) argue that the issue of satisfaction and loyalty in the context of higher education needs further investigation. In an increasingly competitive academic world, creating and maintaining student satisfaction is crucial (Awan & Rehman, 2013). Thus, the study intended to examine effect of service quality on student satisfaction in higher education in Mozambique

METHODOLOGY

This section provides a detailed account of the methodology employed in the study, including the research approach, data collection, instrument development, sampling technique, sample characteristics, and data analysis.

Research Design
This study adopts a descriptive and analytical approach to investigate the effect of university service quality on student satisfaction in Mozambican public and private higher education institutions (HEIs). By using the relationship between service quality and student satisfaction in the context of Mozambique.

Data Collection and Instrument Development

Primary data was collected through a survey questionnaire to gather information directly from the participants. The questionnaire was designed to measure the key constructs of the study, namely service quality and student satisfaction. The questionnaire consisted mainly of closed questions with items aligned with constructs of interest. The respondents were asked to rate their responses on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The survey instrument used in this study was adapted from validated instruments utilised in previous studies conducted by Taecharungroj (2014) and Temizer&Turkyilmaz (2012).

The questionnaire underwent rigorous validation processes to ensure its validity and reliability. A reliability analysis was conducted to assess the internal consistency of the constructs and their respective dimensions. Cronbach's Alpha coefficient was used to estimate the reliability, with the quality of services construct demonstrating a reliability coefficient of 0.89 and student satisfaction exhibiting a reliability coefficient of 0.84.These high reliability coefficients indicate that the scales used in the questionnaire are internally consistent and reliable for measuring the constructs of interest.

The data was collected electronically from the target population. To ensure the protection of participants' rights and privacy, respondents were given the choice to voluntarily complete the questionnaire. Anonymity and confidentiality were maintained throughout the data collection process to comply with ethical considerations.

Sampling Technique and Sample Size

The study targeted students attending HEI courses in Mozambique as the population of interest. The sample was selected using a combination of convenience and snowball sampling techniques. The convenience sampling approach allowed for the selection of participants based on accessibility and willingness to participate, while the snowball sampling technique facilitated the identification of additional potential respondents through referrals from initial participants.The sample size comprised a total of 402 students, ensuring adequate representation and statistical power for the study.

Data Analysis

The collected data underwent a comprehensive data analysis process to derive meaningful insights and draw conclusions. Statistical analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 20.The data analysis involved a series of statistical tests, including multivariate regression, bivariate analysis, ANOVA tests, and exploratory factor analysis. These tests allowed for examining the relationships between variables, identifying significant factors impacting student satisfaction, and exploring the underlying dimensions of service quality. The findings from the statistical tests were interpreted to determine the nature and extent of the influence of service quality on student satisfaction in Mozambican HEIs.

RESULTS

Social Characterization and Academic Profile of Respondents

The characteristics of the respondents included the following: gender distribution, age bracket, year of attendance, academic level, and type of institution. The sample is similarly represented in terms of gender, with the most expressive age group of 21 years old or less at 41%, slightly above the 22–30 age group, at 40.8%. Regarding educational establishments, students in public institutions represent 82% of respondents, and universities are the most represented with 88.4%. The first three years concentrate a higher proportion of students (62.8%).

Table 1. Social characterization and academic profile of respondents

Variable	Description	N	%	Variable	Description	N	%
Idade	up to 21 years	162	41.0%	Academic level	Bachelor	350	89.3%
	22 - 30 years	161	40.8%		Master's degree	38	9.7%
	> 30 years	72	18.2%		Doctorate	4	1.0%
	Total	395	100%		Total	392	100%
Sexo	Female	199	50.5%	Nature of the institution	Public	328	82.8%
	Male	195	49.5%		Private	68	17.2%
	Total	394	100%		Total	396	100%
Year of attendance	1st year	81	20.5%	Type of institution	University	350	88.4%
	2nd year	82	20.8%		Superior Institute	41	10.4%
	3rd year	85	21.5%		College	4	1.0%
	4th year	103	26.1%		Academy	1	0.3%
	5th year	36	9.1%		Total	396	100%
	6th year	8	2.0%				
	Total	395	100%				

Reliability of Constructs

Before administering the multivariate analysis and ANOVA, to ensure the consistency and stability of each indicator in relation to its construct, the author tested the reliability of the constructs using Cronbach's Alpha, and the results showed that all constructs, except the social environment, have good reliability.

Table 2
Composition and reliability of synthetic indexes.

Synthetic index	Mean	Std. Deviation	Cronbach's Alpha	Nr. Of Indicators
University service quality	3.36	.67125	0.89	19
Student satisfaction	3.63	.95226	0.84	4
Teaching quality	3.46	.79706	0.73	4
Administrative services	2.91	.96761	0.84	5
Physical environment	3.24	.97114	0.77	4
Social environment	3.54	.82385	0.60	3
Quality of curicula	3.94	.95670	0.88	3

Hypotheses Testing

The results suggest that university service quality positively impacts student satisfaction. The independent variables (quality of teaching, quality of administrative services, physical environment, social environment, and quality of curricula) explain 41% (adjusted R^2) the variation of the dependent variable (student satisfaction). The F test allows for validating the model in global terms. It tests the hypothesis that the R^2 in the population is zero. Thus, the hypothesis that R^2 is zero and statistically significant ($F(5.389) = 53,681$; $p<0.001$) is rejected.

The independent variables (quality of teaching, social environment, and quality of curricula) present a statistically significant correlation ($p<0.00$) with the independent variable (student satisfaction). The quality of administrative services also proved to be statistically significant ($p=0.037$), while the physical environment dimension did not prove to be statistically significant ($p=0.262$). Correlations vary from moderate for the variable quality of administrative services (0.585) to high for the variable quality of curricula (0.773).

The coefficient table presents the equation of the following estimated line: Student satisfaction = 0.297 + 0.276 Teaching quality + 0.105 Quality of administrative services + (-.055) Physical environment + 0.307 Social environment + 0.296 Quality of curricula.

Table 3. Determining factors of student satisfaction (multiple regression)

Independent variables	Betas	
Teaching quality	0.276**	
Quality of administrative services	0.105*	
Physical environment	-0.055	
Social environment	0.0307**	
Quality of curricula	0.296**	
Adjusted R²		0.408
F(5,389)		53.681
** *p*< 0,001; * *p*<0,05		

The findings from the hypothesis testing shed light on the specific dimensions of service quality that significantly impact student satisfaction in Mozambican higher education institutions. The table presented below summarises the key results of the hypothesis testing conducted in this study, focusing on the relationship between university service quality and student satisfaction.

Table 4 Summary of hypothesis

Hypothesis	Result	P. value
H1: University service quality has a significant relationship with student satisfaction.	Confirmed	.001
H2: The quality of teaching has a significant relationship with student satisfaction.	Confirmed	.000
H3: Administrative quality has a significant relationship with student satisfaction.	Confirmed	.037
H4: The physical environment has a significant relationship with student satisfaction.	Not supported	.262
H5: The social environment has a significant relationship with student satisfaction.	Confirmed	.000
H6: The quality of curricula has a significant relationship with student satisfaction.	Confirmed	.000

DISCUSSION

The findings of this study reveal a positive and statistically significant correlation between the quality of university services and student satisfaction, aligning with previous research. The quality of university services plays a pivotal role in the reputation and prestige of institutions (Duarte et al., 2012) and serves as a crucial antecedent for student satisfaction (Shahsavar&Sudzina, 2017; Dharmayanti et al., 2018). As student satisfaction increasingly impacts the performance of higher education institutions, aspects such as attracting high-calibre students (Duong, 2016; Douglas et al., 2008) and retaining them (Douglas et al., 2008) heavily rely on their satisfaction. Consequently, universities face a growing imperative to prioritise student satisfaction to attract and retain students (Gruber et al., 2010; Manzoor, 2013; Temizer&Turkyilmaz, 2012).

The findings of Gruber et al. (2010) reinforce the significance of understanding students' perceptions of service quality. By comprehending these perceptions, universities can adapt their services to positively impact students' perceptions of service quality and overall satisfaction. In line with existing literature, this study recognises the fundamental role of teachers in increasing student satisfaction levels. Additionally, factors such as curriculum content, the quality of administrative services, and the institution's social environment exert significant influences on satisfaction and thus warrant due attention. This study successfully replicates previous knowledge regarding the relationship between service quality and student satisfaction while identifying the factors that have the greatest impact.

One commonly argued rationale for improving physical facilities in educational institutions is the belief that it will enhance student satisfaction. Existing literature within most service quality models suggests that tangible elements play a pivotal role in customer satisfaction. Within the higher education context, Hanssen andSolvoll (2015)emphasise the critical role of infrastructure quality, including well-equipped libraries and adequate IT facilities, in student satisfaction. However, the results of the present study indicate that the physical environment did not significantly impact student satisfaction as anticipated. This discrepancy raises the need for further investigation to understand why improving physical facilities may not always translate into increased student satisfaction.

In conclusion, this study contributes to the existing literature by affirming the positive relationship between service quality and student satisfaction in higher education institutions. By identifying the factors that most significantly impact satisfaction, universities can focus their efforts on enhancing the quality of teaching, curricula, administrative services, and the social environment to better meet student expectations. Moreover, the study highlights the need for deeper exploration of the impact of physical facilities on student satisfaction, as the results suggest a discrepancy between expectations and outcomes. Future research should delve into the underlying factors influencing this relationship to provide a more nuanced understanding and guide institutions in their decision-making regarding physical infrastructure improvements.

CONCLUSIONS

The present study establishes that the quality of services has a significant and positive impact on student satisfaction within higher education institutions. The observed correlation between service quality and student satisfaction is not only statistically significant but also substantial, as the quality of services explains a significant portion of the variance in the dependent variable, student satisfaction. Among the various dimensions of service quality examined, the quality of teaching, administrative services, social environment, and curricula emerge as the most influential factors driving student satisfaction within the Mozambican context. Conversely, the physical environment exhibited a residual and non-significant impact on student satisfaction, deviating from the initial expectations.

This research contributes to the existing literature by providing empirical evidence within the Mozambican higher education context, illuminating the critical role of university service

quality in fostering student satisfaction and shaping their overall institutional experience. These findings have important implications for higher education institutions aiming to succeed in a fiercely competitive environment.

Based on the study's conclusions, the main recommendation for universities is to prioritise the provision of high-quality services to meet and exceed student expectations. Recognising the pivotal role of service quality in their success, HEI managers must devote attention to fostering a positive social environment within their institutions, as well as ensuring a seamless and gratifying experience for students with respect to administrative services. The study underscores the paramount importance of focusing on the quality of teaching and curricula content, as these dimensions play a central role in shaping students' perceptions of university services and, in turn, their overall satisfaction.

In navigating resource allocation decisions, higher education institutions are advised to strike a balance between investments in tangible assets and the enhancement of teaching quality and well-designed academic programmes. While physical facilities are often deemed essential for customer satisfaction in various service contexts, this study reveals that they may not hold the same level of influence on student satisfaction in higher education. Therefore, institutions should cautiously evaluate their investments to ensure optimal resource allocation aligned with the most impactful dimensions of service quality.

The study's limitations include a low representation of respondents from private sector institutions (17.2%) compared to the population (39.8%), along with underrepresented post-graduate students (10.7%) and those from Academies, Colleges, and Superior Institutes (11.7%). To enhance study reliability, future research should aim to include a more diverse and balanced representation of these groups. Additionally, calibrating indicators for the physical environment dimension is necessary to better reflect the Mozambican context, as it showed a residual impact on student satisfaction. For future investigations, refining these indicators will offer deeper insights into the role of physical facilities in influencing satisfaction.

Future research could expand on this study by exploring other dimensions of service quality and incorporating qualitative methods to gain richer insights into students' experiences and perceptions. Investigating the impact of student satisfaction on academic performance, retention, and institutional reputation would provide a broader understanding of its implications. By addressing these limitations and embracing new research directions, universities can further enhance service quality and student satisfaction, positively impacting their overall performance and competitiveness.

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The author is an assistant lecturer on undergraduate and post-graduate programmes in Business Management for the Faculty of Economics since 2000, in the following subjects: Marketing Management, Service Marketing and Marketing Research. The academic qualification of the author is a master's degree in business management. Currently is doing is PhD thesis in the field of Marketing at Eduardo Mondlane University.

DISCLOSURE STATEMENT

The author has no conflicts of interest to declare. There is no financial interest to report. I certify that the submission is original work and is not under review at any other publication.

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