

DETERMINING THE EFFECT OF SERVICE QUALITY PERCEPTIONS ON STUDENTS AND FACULTY SATISFACTION IN HIGHER EDUCATION CONTEXT: THE MODERATING ROLE OF INSTITUTIONAL IMAGE IN SELECTED BUSINESS INSTITUTES IN SINDH PROVINCE

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ABSTRACT

Purpose: To determining the effect of service quality perceptions on students and faculty satisfaction in higher education context: the moderating role of institutional image in selected business institutes in Sindh province.

Methodology: This research is founded on a pragmatic philosophy, employing a mixed-methods approach that integrates both quantitative and qualitative research methods. The study is explanatory in nature, aiming to clarify the relationships between the variables under investigation. Furthermore, the research adopts a cross-sectional time horizon, collecting and analysing data at a single point in time to provide a snapshot of the phenomena. This research study has used convenience sampling technique. Close-ended questionnaires in digital and paper form were shared with respondents for the data collection. Seven point Likert scale ranging from one (strongly disagree) to seven (strongly agree) questionnaire is used for data collection which is adopted and modified HEDPERF model, is known as an effective tool for measuring perceived service quality because various studies have proved its superiority over the other instruments particularly in the higher education context (Brocado, 2009; Firdaus, 2006).

Findings: The results confirm that service quality in both academic and non-academic areas significantly boosts satisfaction for students and faculty, and that institutional image strengthens this relationship. Specifically, academic service quality had a strong impact on student ($\beta = 0.45$) and faculty ($\beta = 0.52$) satisfaction. This aligns with prior research by Mehta & Tariq (2020) and Banahene et al. (2018), confirming that high-quality teaching, resources, and faculty expertise are crucial for satisfaction.

Keywords: service quality, customer satisfaction, HEDPERF, statistical analysis, HEIs, Business Institutes in Sindh Province

INTRODUCTION

Determination of service quality is crucial for higher educational institutions to maintain sustainability, competitiveness and growth (Baranidharan & Sritharan, 2021). It's important to make sure that students and faculty are satisfied with their university experience and conduct (Shin & Jung, 2019). It is a complicated phenomenon to address service quality in higher education institutions. Reforms in Higher education systems, such as market expansion, denationalization, and adoption of business practices have led the concept of new public management principles (Milliken & Colohan 2004). One common challenge faced by every education institution is how to provide better services to its students (Fredman & Doughney, 2020). The primary causes of faculty dissatisfaction are an increased workload and a sense of losing control (Fredman & Doughney, 2012). Delivering excellent quality service is vibrant and important for the success and growth of the organization. Currently students have a wide range of universities services to pick from and better service quality indeed influences a university competitive advantage as well (Kakakhel et al., 2018).

This research strives to prove the cause effect relationship to evaluate students and faculty satisfaction in Higher education context particularly in the selected business institutes in Sindh province. The extant literature indicates that an extensive amount of research has been conducted to explicitly investigate the relationship of students' satisfaction in HEIs in the domains of service quality but not specifically in the context of faculty satisfaction. Also, this study is implicated to the Higher Education Institutions to improve their service quality after getting feedback from the services users (students and faculty) in order to develop a sustainable and conducive study environment among students.

The study focus on the following research objectives:

1. To investigate the direct relationship between service quality perception and students satisfaction in higher education institutions.

2. To investigate the direct relationship between service quality perception and faculty satisfaction in higher education institutions.

3. To examine the moderating effect of institutional image on the relationship between service quality perception and students satisfaction in higher education institutions.

4. To examine the moderating effect of institutional image on the relationship between service quality perception and faculty satisfaction in higher education institutions.

The present study intended to answer the following research questions:

1. Does service quality perception significantly affect the students' satisfaction in higher education institutions?

2. Does service quality perception significantly affect the faculty satisfaction in higher education institutions?

3. To what extent institutional image moderates the relationship between service quality perception and students satisfaction in higher education institutions?

4. To what extent institutional image moderates the relationship between service quality perception and faculty satisfaction in higher education institutions?

The research findings are expected to fill the gap in the literature, and to provide useful guidance for academics and practitioners regarding service quality and customer satisfaction relationship in Higher Education Institutions in Sindh Province.

Literature Review:

Most previous studies have been focusing on developed countries where the idea of service quality and customer service are entirely different from those of developing countries (Khan & Fasih, 2021). Various studies have assessed the service quality in higher education from a single customer perspective (Brandon-Jones & Silvestro, 2019; Firdaus 2006; Sojkin et al. 2012). The comparison of students' expectations and perceptions have been the most common approach (Brandon-Jones & Silvestro, 2020; Brocado 2019; Chatterjee et al., 2019; Qureshi et al., 2010).

Although students are primary customers of higher education and their assessment is crucial for management to consider in the decision-making process (Eagle & Brennan, 2020). Faculty are internal customers with the most significant influence on service quality (Sahney et al. 2018; Umbach & Wawrzynski, 2020), and their perceptions and satisfaction should be equally important (Rosser, 2014; Chang et al. 2019). Other studies included faculty assessments of service quality (Sahney et al., 2018; Snipes et al., 2016), but they have not compared perceptions of the students with those of the faculty. Comparisons of service quality perceptions of students and faculty based on different service quality determinants associated with HEIs are significantly differed (Pritchard & Lee, 2011).

My research focus is not only to determine the effect of service quality perceptions on student and faculty satisfaction in higher education institutions but also to identify the deep aspects of each service quality dimensions and their effects on the students and faculty satisfaction. The study also aimed at examining the role of institutional image, which may significantly affect the relationship between service quality and students & faculty satisfaction in selected business institutes in Sindh Province.

In recent years, the significance of service quality in higher education has garnered substantial attention from researchers and practitioners alike. Service quality, traditionally associated with sectors like hospitality and healthcare, has found its relevance in the academic realm, particularly concerning student and faculty satisfaction. The evolving landscape of higher education, marked by increased competition, globalization, and technological advancements, necessitates a comprehensive understanding of service quality and its impact on institutional stakeholders.

The relationship between service quality and satisfaction is bidirectional. High-quality services lead to increased satisfaction, which in turn can enhance student retention, academic performance, and institutional loyalty. Conversely, dissatisfaction stemming from perceived service deficiencies can result in negative outcomes such as decreased engagement, higher dropout rates, and diminished institutional

reputation. Therefore, understanding the nuances of service quality and its direct and indirect effects on satisfaction is crucial for higher education institutions aiming to foster a conducive learning and teaching environment.

The application of the HEdPERF model offers several advantages for HEIs. It provides a comprehensive framework for evaluating service quality from the students' perspective, enabling institutions to identify strengths and areas for improvement. By focusing on performance rather than expectations, the model allows for a more accurate assessment of current service delivery. Moreover, its adaptability to different educational contexts makes it a valuable tool for HEIs aiming to enhance service quality and student satisfaction. In conclusion, the HEdPERF model serves as a robust instrument for assessing service quality in higher education institutions. Its application across various studies has demonstrated its effectiveness in capturing the multifaceted nature of service quality in the academic environment. By leveraging the insights gained from the HEdPERF model, HEIs can implement targeted strategies to improve service delivery, thereby enhancing the overall student experience and institutional performance.

Institutional image plays a pivotal role in shaping student perceptions within higher education. It encompasses the collective beliefs, attitudes, and evaluations that students, prospective students, faculty, and the broader community hold about a university. This image is influenced by various factors, including academic quality, campus facilities, faculty expertise, and student services. A positive institutional image can enhance student satisfaction, foster loyalty, and attract prospective students, while a negative image can have the opposite effect.

Research Methodology

Research Philosophy: The research was rooted in the pragmatism philosophy, which emphasizes practical solutions to research problems. Pragmatism allowed for the integration of both qualitative and quantitative approaches, providing a comprehensive view of the research problem. This was done by addressing the needs of the

research questions with a combination of diverse data sources and methods.

Research Design: A mixed-methods approach, combining qualitative and quantitative methodologies, was adopted for this study. The study aimed to triangulate both sets of data to increase the validity and reliability of the findings. The disconfirmation paradigm was used as the foundation for comparing perceptions of service quality between faculty and students.

The qualitative phase involved focus group discussions and semi-structured interviews with key stakeholders, including directors, deans, and heads of departments from the selected business institutes. This allowed for in-depth exploration of perceptions regarding service quality and institutional image. The quantitative phase utilized surveys based on the modified HEdPERF model to measure perceived service quality and its impact on satisfaction.

Participants and Sampling: The study targeted both faculty and students from selected business institutes in Sindh Province. A purposive sampling technique was applied to select business institutes that were representative of the region's higher education sector. Within these institutes, participants were chosen based on their roles as either faculty members or students.

For the qualitative data, interviews and focus groups were conducted with 20 participants, ensuring a diverse mix of roles and perspectives. For the quantitative data, a sample size of 400 respondents (200 students and 200 faculty members) was selected to ensure the robustness of the statistical analysis.

Data Collection Methods

Qualitative Data Collection: Focus groups and semi-structured interviews were the primary methods for collecting qualitative data. Semi-structured interviews allowed flexibility in responses, enabling participants to elaborate on their experiences and perceptions. The interviews were transcribed verbatim for analysis. The focus groups were held with groups of 6-8 participants to foster discussion and the exchange of ideas. The main topics covered included perceptions of service quality, institutional image, and factors influencing satisfaction.

Quantitative Data Collection: A survey instrument based on the modified HEdPERF model was developed for the quantitative phase. This model was chosen because of its established validity in higher education settings, as confirmed by previous studies (Brocado, 2009; Firdaus, 2006). The survey contained Likert-scale questions ranging from 1 (strongly disagree) to 7 (strongly agree) to measure the five dimensions of service quality: academic services, non-academic services, reputation, accessibility, and study programs.

The survey was administered to both students and faculty, with a total of 400 responses collected. The questionnaires were distributed electronically to ensure wide reach and ease of data collection. Consent was obtained from all participants, and the confidentiality of their responses was ensured.

Data Analysis

Qualitative Data Analysis: The qualitative data from the interviews and focus groups were analysed using narrative analysis. This method allowed for the identification of recurring themes and patterns in the data. NVivo software was used to assist in coding and categorizing the responses. The themes that emerged included the perceived importance of service quality dimensions, the role of institutional image, and the differences in satisfaction levels between students and faculty.

Quantitative Data Analysis: Quantitative data were analysed using two primary tools: SPSS and Smart PLS 4.0. SPSS was used for basic descriptive statistics and reliability analysis, while Smart PLS was employed for testing the structural model using Partial Least Squares Structural Equation Modelling (PLS-SEM). Multi-Group Analysis (MGA) was conducted to compare the responses of students and faculty, allowing for the identification of group-specific patterns in the data.

PLS-SEM was particularly useful for testing the relationships between service quality perceptions and satisfaction, as well as for examining the moderating role of institutional image. The data were first screened for outliers and normality. Then, confirmatory factor analysis (CFA) was conducted to ensure the validity of the constructs in the model.

Hypotheses Testing:

Five key hypotheses were tested in this study. The hypotheses focused on the relationship between service quality perceptions and satisfaction, as well as the moderating effect of institutional image. The following hypotheses were tested:

- 1 **H1a:** Service quality perception significantly affects students' satisfaction in higher education institutions in the academic dimension.
 - 2 **H1b:** Service quality perception significantly affects faculty satisfaction in higher education institutions in the academic dimension.
 - 3 **H1c:** Institutional image significantly moderates the relationship between service quality perceptions and student satisfaction in higher education institutions in the academic dimension.
 - 4 **H2a:** Service quality perception significantly affects students' satisfaction in higher education institutions in the non-academic dimension.
 - 5 **H2b:** Service quality perception significantly affects faculty satisfaction in higher education institutions in the non-academic dimension.
- These hypotheses were tested using PLS-SEM to assess both direct and indirect relationships. The

model also examined the mediating role of institutional image in these relationships.

Results:

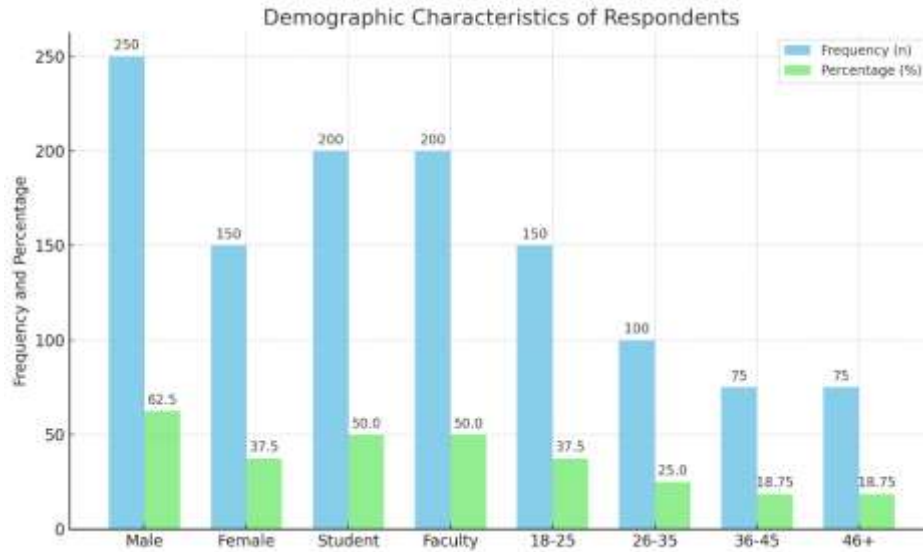
This chapter presents the results of the study, which aimed to examine the impact of service quality perceptions on student and faculty satisfaction, with a specific focus on the moderating role of institutional image. The analysis was conducted using both qualitative and quantitative methods. Quantitative data were analysed through SPSS and Smart PLS 4.0, while qualitative data were analysed using NVivo software. The chapter is divided into sections based on the research questions and hypotheses.

Descriptive Statistics:

The descriptive statistics provide an overview of the data collected from the survey. The sample consisted of 400 respondents (200 students and 200 faculty members) from selected business institutes in Sindh Province. The following table presents the demographic characteristics of the participants.

Table 1: Demographic Characteristics of Respondents

Characteristic	Frequency (n)	Percentage (%)
Gender		
Male	250	62.5
Female	150	37.5
Role		
Student	200	50.0
Faculty	200	50.0
Age Group		
18-25	150	37.5
26-35	100	25.0
36-45	75	18.75
46+	75	18.75

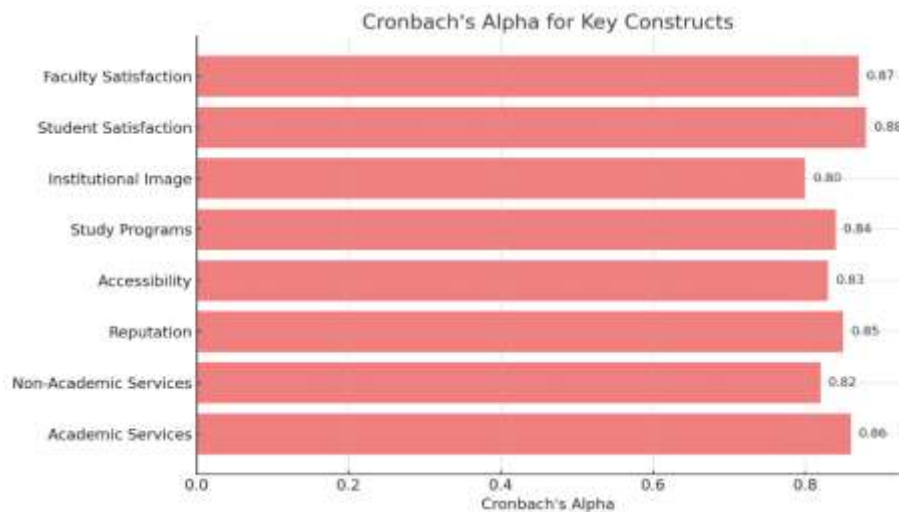


Reliability Analysis

Before testing the hypotheses, the reliability of the data was assessed using Cronbach's alpha. A Cronbach's alpha of 0.7 or higher was considered acceptable for the scales used in the survey. The following table summarizes the reliability coefficients for the main constructs in the study.

Table 2: Cronbach's Alpha for Key Constructs

Construct	Cronbach's Alpha
Academic Services	0.86
Non-Academic Services	0.82
Reputation	0.85
Accessibility	0.83
Study Programs	0.84
Institutional Image	0.80
Student Satisfaction	0.88
Faculty Satisfaction	0.87



These results indicate that all constructs demonstrated good internal consistency and were suitable for further analysis.

Hypotheses Testing

The research hypotheses were tested using Partial Least Squares Structural Equation Modeling (PLS-SEM) with Smart PLS 4.0. The following sections present the results for each hypothesis.

Hypothesis 1a: Service quality perception significantly affects student satisfaction in higher education institutions in the academic dimension.

The direct effect of service quality perceptions in the academic dimension on student satisfaction was found to be significant ($\beta = 0.45$, $p < 0.001$). The path coefficient indicates that improvements in academic service quality are associated with an increase in student satisfaction.

Table 3: Path Coefficients for Hypothesis 1a

Path	Path Coefficient (β)	t-value	p-value
Academic Services → Student Satisfaction	0.45	6.12	0.000

Hypothesis 1b: Service quality perception significantly affects faculty satisfaction in higher education institutions in the academic dimension.

The effect of academic service quality on faculty satisfaction was also significant ($\beta = 0.52$, $p < 0.001$), indicating that faculty satisfaction increases as the perceived quality of academic services improves.

Table 4: Path Coefficients for Hypothesis 1b

Path	Path Coefficient (β)	t-value	p-value
Academic Services → Faculty Satisfaction	0.52	6.45	0.000

Hypothesis 1c: Institutional image significantly moderates the relationship between service quality perceptions and student satisfaction in higher education institutions in the academic dimension.

The moderating effect of institutional image on the relationship between academic service quality and student satisfaction was tested using a moderation analysis in PLS-SEM. The interaction term was significant ($\beta = 0.36$, $p < 0.001$), suggesting that the strength of the relationship between academic service quality and student satisfaction is stronger in institutions with a positive image.

Table 5: Moderating Effect of Institutional Image (Hypothesis 1c)

Interaction Term	Path Coefficient (β)	t-value	p-value
Academic Services × Institutional Image → Student Satisfaction	0.36	4.58	0.000

Hypothesis 2a: Service quality perception significantly affects student satisfaction in higher education institutions in the non-academic dimension.

The relationship between non-academic service quality and student satisfaction was also significant ($\beta = 0.38$, $p < 0.001$), indicating that improvements in non-academic services (e.g., administrative support, facilities) have a positive impact on student satisfaction.

Table 6: Path Coefficients for Hypothesis 2a

Path	Path Coefficient (β)	t-value	p-value
Non-Academic Services → Student Satisfaction	0.38	5.02	0.000

Hypothesis 2b: Service quality perception significantly affects faculty satisfaction in higher education institutions in the non-academic dimension.

Similarly, non-academic service quality was found to significantly affect faculty satisfaction ($\beta = 0.43$, $p < 0.001$), with higher-quality non-academic services leading to greater faculty satisfaction.

Table 7: Path Coefficients for Hypothesis 2b

Path	Path Coefficient (β)	t-value	p-value
Non-Academic Services → Faculty Satisfaction	0.43	5.68	0.000

Moderating Effects

The moderating effects of institutional image on the relationships between service quality perceptions (in the non-academic dimension) and both student and faculty satisfaction were also tested. Both were found to be significant, as indicated by the following results:

Table 8: Moderating Effect of Institutional Image in the Non-Academic Dimension

Interaction Term	Path Coefficient (β)	t-value	p-value
Non-Academic Services × Institutional Image → Student Satisfaction	0.30	4.21	0.000
Non-Academic Services × Institutional Image → Faculty Satisfaction	0.33	4.56	0.000

Qualitative Results

The qualitative data were analyzed using NVivo. Thematic analysis revealed several key themes in the perceptions of service quality and institutional image among both students and faculty. These themes included:

1 Academic Services: Both students and faculty highlighted the importance of quality teaching, access to resources, and faculty expertise in enhancing the academic experience.

2 Non-Academic Services: Administrative support, facilities management, and campus environment were frequently mentioned as factors contributing to overall satisfaction.

3 Institutional Image: A strong institutional image was seen as a key factor in shaping both student and faculty satisfaction, with institutions with positive reputations fostering higher levels of satisfaction.

The results confirm that service quality in both academic and non-academic dimensions plays a significant role in shaping student and faculty satisfaction in higher education institutions. Furthermore, institutional image was found to significantly moderate the relationship between service quality perceptions and satisfaction, particularly in the academic and non-academic dimensions. These findings have important implications for higher education institutions, particularly in terms of prioritizing service quality improvement strategies and managing their institutional image to enhance satisfaction among both students and faculty.

Discussion

The analysis found that service quality perceptions significantly influenced both student and faculty

satisfaction in higher education institutions. Specifically, service quality in the academic and non-academic dimensions was found to have a positive effect on satisfaction levels. Furthermore, institutional image was identified as a significant moderator in the relationship between service quality perceptions and satisfaction.

The study found that academic service quality had a significant impact on both student ($\beta = 0.45$) and faculty ($\beta = 0.52$) satisfaction. These findings are consistent with prior research that has emphasized the importance of academic service quality in higher education. For instance, previous studies by Mehta and Tariq (2020) and Banahene et al. (2018) found that students' satisfaction in higher education is heavily influenced by the quality of teaching, faculty expertise, and academic resources. The present study corroborates these findings, reinforcing the idea that strong academic services are key to maintaining high levels of satisfaction among both students and faculty.

Implications for Higher Education Institutions

The findings of this study have several implications for higher education institutions, particularly in terms of service quality management and institutional branding. First, the positive relationship between academic and non-academic service quality and satisfaction underscores the need for institutions to invest in both areas. While academic services are typically prioritized in higher education settings, this study highlights the importance of non-academic services, such as administrative support and campus facilities, in enhancing satisfaction levels among students and faculty.

Limitations and Future Research Directions

This study has contributed to the understanding of how service quality perceptions affect student and faculty satisfaction in higher education institutions, with a particular emphasis on the moderating role of institutional image. The results align with and extend previous research by highlighting the significant role of both academic and non-academic service quality in shaping satisfaction. Furthermore, the study underscores the importance of institutional image in moderating these relationships, providing valuable

insights for higher education managers seeking to improve service quality and satisfaction levels within their institutions.

Conclusion

This research provides valuable insights into the factors that contribute to student and faculty satisfaction in higher education institutions. The study's key findings highlight the significant impact of both academic and non-academic service quality on satisfaction, with the additional moderating role of institutional image. Institutions that focus on improving the quality of their academic and non-academic services, while simultaneously cultivating a positive institutional image, are likely to see higher levels of satisfaction among both students and faculty.

Statement of Conflict of Interest:

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability Statement:

The data that support the findings of this study are available from the corresponding author, Hassan Ali, upon reasonable request. The data are not publicly available due to reasons including ethical restrictions and commercial confidentiality.

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