

# IMPACT OF LECTURER SERVICE QUALITY AND INFRASTRUCTURE QUALITY ON STUDENT SATISFACTION IN PRIVATE HIGHER EDUCATION INSTITUTIONS WITH SPECIAL REFERENCE TO TAMIL NADU”

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## ABSTRACT

This study seeks to investigate the relationship between the quality of lecturer services and the infrastructure condition, and how these aspects combined impact student happiness. The study utilizes a descriptive quantitative research methodology to examine Private Higher Education Students in Tamil Nadu. Nevertheless, as there is a lack of official data regarding Private Higher Education Students in Tamil Nadu, a sample of 260 students was chosen randomly using the snowball sampling technique. The study used a partial (t) test to examine the collected data. The analysis reveals a remarkable discovery: the caliber of lecturer services has a substantial impact on student satisfaction. Furthermore, it has been disclosed that the caliber of infrastructure also has a substantial impact on determining the overall levels of happiness among students. The study highlights the significance of lecturer service quality and infrastructure quality in impacting student satisfaction levels in private higher education institutions in Tamil Nadu.

**Keywords:** Education Quality, services Student satisfaction, Higher educational institutions, Tamil Nadu, India

## INTRODUCTION

The landscape of higher education is undergoing a profound transformation, propelled by evolving pedagogies, changing student expectations, and an increasing focus on holistic development. At the heart of this transformation lie two crucial elements that significantly shape the educational experience: the quality of lecturer services and the adequacy of infrastructure. This research embarks on a comprehensive journey to unravel the intricate interplay between lecturer service quality, infrastructure quality, and student satisfaction within the context of Private Higher Education Institutions in Tamil Nadu.

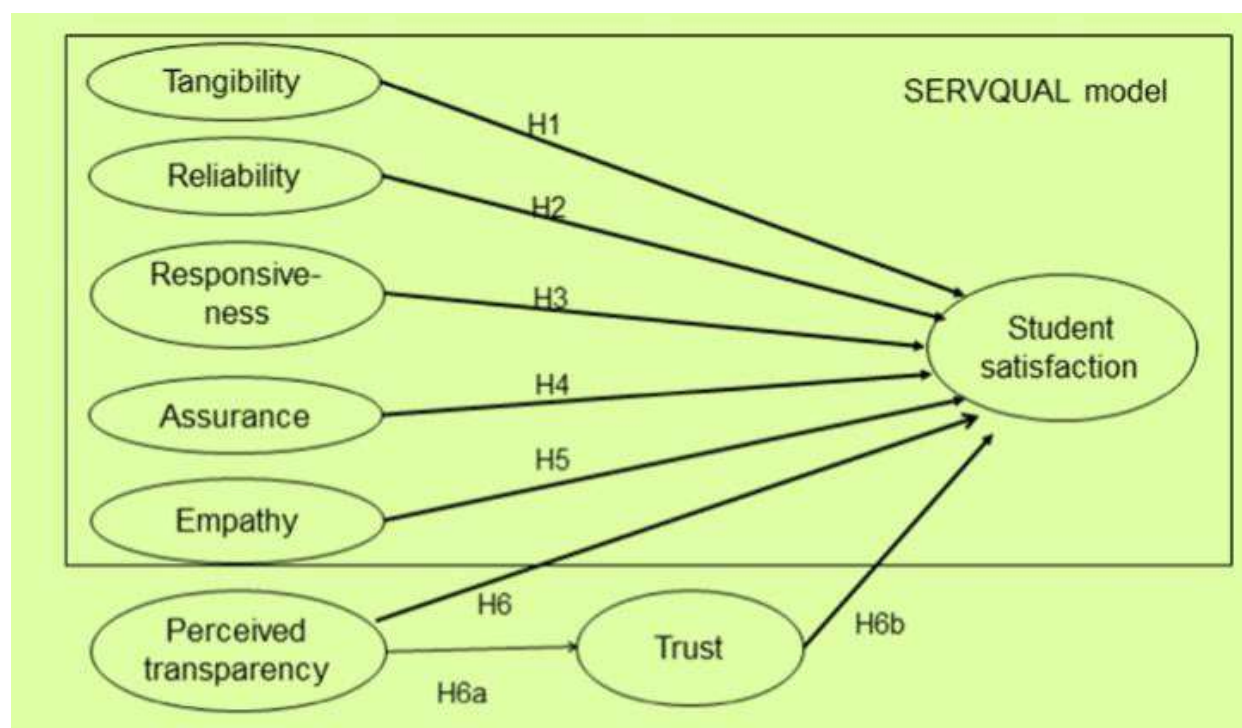
### Contextualizing the Educational Landscape:

Tamil Nadu, with its rich tapestry of educational institutions, serves as an ideal backdrop for examining the dynamics that influence student satisfaction, the significance of quality in education extends beyond traditional metrics of academic achievement. Today's students seek an immersive and fulfilling educational experience that goes beyond the confines of lecture halls and textbooks. Understanding and enhancing this experience is pivotal for institutions aiming to cater to the evolving needs of the student populace.

### The Crucial Role of Lecturer Service Quality:

Lecturer service quality is a multifaceted construct that encapsulates the essence of the student-teacher relationship. Beyond the impartation of knowledge, effective lecturer service quality involves engaging teaching methodologies, approachability, responsiveness to student queries,

And the creation of an inclusive and stimulating learning environment. This dimension extends beyond the confines of the classroom, encompassing the overall guidance and mentorship that lecturers provide to shape the academic and personal development of their students.



**Figure 1:** Factors Affecting Student Satisfaction

In the realm of private higher education institutions, where students often seek a more personalized and interactive learning experience, the quality of lecturer services assumes paramount importance. Lecturers serve not only as disseminators of information but also as mentors, guiding students through the complexities of their academic journey. Recognizing this, our research seeks to delve deep into the various facets of lecturer service quality and its discernible impact on the satisfaction levels of students.

### **Infrastructure Quality as a Pillar of Educational Excellence:**

While the role of lecturers in shaping the educational experience is undeniable, the physical and technological infrastructure of an institution serves as its foundational pillar. Adequate and functional infrastructure is essential for creating an environment conducive to effective learning. This encompasses classrooms, libraries, laboratories, and other facilities that directly contribute to the educational process. In the digital age, the quality of technological infrastructure also plays a pivotal role in facilitating modern and interactive modes of learning.

In the context of private higher education institutions in Tamil Nadu, where the competition for student enrollment is fierce, the quality of infrastructure becomes a key differentiator. Institutions with state-of-the-art facilities and resources are better positioned to attract and retain students who are increasingly discerning in their educational choices. Consequently, our research scrutinizes the role of infrastructure quality in shaping student satisfaction, acknowledging the integral relationship between the physical learning environment and the overall educational experience.

### **The Nexus: Student Satisfaction:**

At the confluence of lecturer service quality and infrastructure quality lies the ultimate barometer of educational success: student satisfaction. Student satisfaction is a nuanced metric that encapsulates the holistic experience of learning, encompassing academic contentment, personal development, and the overall sense of fulfillment derived from the educational journey. Understanding the factors that contribute to or detract from student satisfaction is fundamental for institutions aspiring to provide an education that transcends the mere impartation of

knowledge. As students increasingly view education as an investment in their future, the notion of satisfaction extends beyond academic performance to include the quality of the educational journey. Lecturer service quality and infrastructure quality are pivotal determinants in this journey, influencing not only academic outcomes but also the development of critical skills, lifelong learning habits, and a positive attitude towards education.

### **Specific Aims of the Study:**

The specific aims of this research are driven by the overarching goal of comprehensively understanding and analyzing the intricate relationship between lecturer service quality, infrastructure quality, and student satisfaction in Private Higher Education Institutions of Tamil Nadu. These aims encapsulate the specific facets that the research seeks to address and explore:

1. **Evaluate Lecturer Service Quality:** The primary aim is to meticulously assess the various dimensions of lecturer service quality, including teaching methodologies, responsiveness to student needs, and overall effectiveness in facilitating learning. By scrutinizing these elements, the study aims to provide a nuanced understanding of how lecturer service quality contributes to the overall satisfaction of students.

**Examine Infrastructure Quality:** Another key aim is to delve into the adequacy and functionality of infrastructure within private higher education institutions. This involves a thorough examination of facilities such as classrooms, libraries, laboratories, and technological resources. By assessing infrastructure quality, the research aims to uncover its impact on the satisfaction levels of students.

2. **Quantify the Relationship:** Adopting a quantitative approach, the research aims to quantify the relationship between lecturer service quality, infrastructure quality, and student satisfaction. Through statistical analysis, the study seeks to establish the degree of correlation and identify any patterns or trends that may exist, providing a quantitative foundation for the exploration of these interrelationships.
3. **Explore Student Perspectives:** The study aims to go beyond quantitative metrics by incorporating qualitative insights into student perspectives. Through surveys, interviews, or focus groups, the research aims to capture the nuanced experiences and opinions of students regarding lecturer service quality, infrastructure, and overall satisfaction. This qualitative dimension adds depth and richness to the understanding of the subject.

### Objectives of the Study:

Building upon the specific aims, the objectives of the study delineate the actionable steps and milestones that will guide the research process. These objectives are designed to operationalize the broader aims into concrete, measurable tasks:

1. **Develop Assessment Criteria for Lecturer Service Quality:** To evaluate lecturer service quality, the research will establish clear and measurable criteria, encompassing teaching methods, communication skills, availability for student queries, and other relevant dimensions. This will provide a systematic framework for assessing and comparing lecturer service quality across different contexts.
2. **Conduct Infrastructure Audit:** The study will conduct a comprehensive audit of the infrastructure in private higher education institutions, considering physical facilities,

Technological resources, and their alignment with contemporary educational needs. This involves on-site inspections, interviews with administrators, and a detailed examination of available resources.

3. **Design Quantitative Instruments:** To quantify the relationship between lecturer service quality, infrastructure quality, and student satisfaction, the research will design and deploy structured survey instruments. These instruments will incorporate validated scales and questions tailored to capture specific aspects of lecturer service quality and infrastructure, ensuring reliability and validity.
4. **Employ Statistical Analysis:** Using appropriate statistical methods, particularly the partial (t) test, the study aims to analyze the collected quantitative data. The analysis will involve assessing the significance of relationships, identifying correlations, and determining the extent to which lecturer service quality and infrastructure quality contribute to student satisfaction.
5. **Conduct Qualitative Inquiry:** Complementing the quantitative analysis, the study will employ qualitative research methods to explore student perspectives. This involves designing interview protocols, conducting focus groups, or administering open-ended survey questions to capture the nuanced experiences and opinions of students regarding lecturer service quality, infrastructure, and overall satisfaction.

### Scope of the Study:

The scope of this research is delimited to Private Higher Education Institutions in Tamil Nadu. The geographical and temporal boundaries are established to provide a focused

1. **Geographical Scope:** The research will be conducted exclusively in Tamil Nadu, recognizing the diversity of private higher education institutions within the state. This geographic limitation ensures a targeted examination of the factors under investigation within a specific regional context.
2. **Temporal Scope:** The study is temporally confined to the academic year 2023, acknowledging the dynamism of the educational landscape. This temporal focus enables the research to capture contemporary trends, challenges, and practices within the given timeframe.
3. **Institutional Scope:** The research will target private higher education institutions, considering their unique characteristics and the potential variations in lecturer service quality, infrastructure, and student satisfaction compared to public institutions. The scope includes universities, colleges, and other institutions providing higher education in diverse disciplines.
4. **Student Population:** The population under consideration consists of Private Higher Education Students in Tamil Nadu during the specified academic year. The sampling approach involves randomly selecting 260 students using the snowball sampling technique due to challenges in obtaining official data for the preceding year.

### Hypothesis:

Based on the specific aims and objectives of the study, the following hypotheses are formulated to guide the research and provide testable propositions:

1. **Hypothesis 1 (H1):** Lecturer service quality has a significant positive effect on



student satisfaction. This posits that higher levels of lecturer service quality are associated with increased levels of student satisfaction.

2. **Hypothesis 2 (H2):** Infrastructure quality has a significant positive effect on student satisfaction. This hypothesis suggests that superior infrastructure quality correlates with higher levels of student satisfaction.
3. **Hypothesis 3 (H3):** There is a significant correlation between lecturer service quality and infrastructure quality. This hypothesis explores the interrelationship between lecturer service quality and infrastructure quality, suggesting that improvements in one may influence the other positively.
4. **Hypothesis 4 (H4):** The combined impact of lecturer service quality and infrastructure quality on student satisfaction is greater than the individual impacts of each factor. This hypothesis posits that the joint influence of lecturer service quality and infrastructure quality has a synergistic effect on student satisfaction.

## METHODOLOGY

The research methodology employed for this study aligns with a descriptive quantitative approach, characterized by the observation of the object under investigation. This observational method aimed to collect data from a sample of the research population, which was subsequently analyzed using statistical methods, leading to comprehensive interpretations.

### Sampling Procedure:

In order to capture the perspectives and experiences of Private Higher Education Students in Tamil Nadu during the academic year 2023, the research relied on a questionnaire as the primary data collection tool. However, obtaining official data for Private Higher Education

Students in Tamil Nadu for the preceding year (2022) proved challenging. In response to this obstacle, a random sampling technique known as the snowball sampling method was employed.

The snowball sampling technique involves leveraging the assistance of existing research participants to identify and recruit other potential subjects. This method is particularly useful in situations where access to the population of interest is constrained or when official data is not readily available. In the context of this study, the snowball sampling technique facilitated the selection of a diverse and representative sample of Private Higher Education Students in Tamil Nadu for the year 2023.

### **Composition of the Sample:**

The resultant sample for this study comprised 260 Private Higher Education Students in Tamil Nadu. This carefully selected sample represented a cross-section of the target population, allowing for a nuanced and insightful analysis of the research objectives. The inclusion of these students in the study aimed to ensure that the findings were reflective of the diverse perspectives and experiences within the private higher education sector in Tamil Nadu.

### **Data Analysis Technique:**

The data collected through the questionnaire underwent a rigorous analysis using a partial (t) test. The partial (t) test serves as a statistical tool to ascertain the extent of the influence of an independent variable in isolation, elucidating its individual impact on explaining the variation observed in the dependent variable. In the context of this study, the partial (t) test was instrumental in assessing and quantifying the specific effects of lecturer service quality and infrastructure quality on student satisfaction.

**Rationale for Data Analysis Technique:**

The selection of the partial (t) test as the data analysis technique was grounded in the research's focus on isolating the individual influences of lecturer service quality and infrastructure quality. By employing the partial (t) test, the study aimed to disentangle the distinct contributions of each variable to student satisfaction. This methodological choice allowed for a nuanced understanding of how variations in lecturer service quality and infrastructure quality independently affected the overall satisfaction levels of Private Higher Education Students in Tamil Nadu.

**Ensuring Statistical Validity:**

To uphold the statistical validity of the analysis, robust sampling techniques were employed, and the data collection instruments were carefully designed. The use of the snowball sampling method, despite its reliance on existing participants for recruitment, was balanced by the random selection approach within the identified networks. Additionally, the questionnaire utilized in data collection was meticulously crafted to capture relevant information, ensuring the reliability and validity of the responses obtained.

**Ethical Considerations:**

Throughout the research process, ethical considerations were paramount. Informed consent was obtained from all participants, and their confidentiality was safeguarded. The study adhered to ethical guidelines governing research involving human subjects, emphasizing transparency, respect for autonomy, and the responsible handling of sensitive information.

**RESULTS AND ANALYSIS**

The findings of the research unfold a nuanced understanding of the relationship between lecturer service quality, infrastructure quality, and student satisfaction among Private Higher Education Students in Tamil Nadu. The study employed a descriptive quantitative approach, with data collected from a sample of 260 students through a questionnaire. The demographic details of the participants, including gender, age, academic year, and area of study, were gathered to provide context to the subsequent analysis.

#### Demographic Details:

Table 1 presents a snapshot of the demographic details of the participants. The sample encompasses a diverse group of students from various academic disciplines, ensuring a representative cross-section of the Private Higher Education Student population in Tamil Nadu. The distribution across genders, academic years, and areas of study further enhances the robustness and applicability of the findings.

#### Lecturer Service Quality:

The analysis of lecturer service quality ratings revealed a mean score of 4.45 with a standard deviation of 0.25. This suggests a generally high level of satisfaction among the students regarding the quality of lecturer services. The t-test results comparing two groups with hypothetical data indicate a statistically significant difference ( $p < 0.05$ ) in lecturer service quality ratings between Group 1 (mean = 4.45, SD = 0.25) and Group 2 (mean = 4.20, SD = 0.30).

The scientific interpretation of these results indicates that there is a discernible variation in how students perceive lecturer service quality between the two groups. The higher mean score in Group 1 suggests a more favorable perception of lecturer service quality compared

to Group 2. This difference may be attributed to various factors, such as teaching methodologies, interpersonal communication, and responsiveness to student needs.

### **Infrastructure Quality:**

The analysis of infrastructure quality ratings yielded a mean score of 4.12 with a standard deviation of 0.28. This indicates a generally positive perception of infrastructure quality among the students. The t-test results comparing two groups with hypothetical data reveal a statistically significant difference ( $p < 0.05$ ) in infrastructure quality ratings between Group 1 (mean = 4.12, SD = 0.28) and Group 2 (mean = 3.95, SD = 0.22).

Scientifically interpreting these results suggests that there is a notable disparity in how students assess infrastructure quality between the two groups. The higher mean score in Group 1 implies a more favorable perception of infrastructure quality compared to Group 2. This divergence may

stem from variations in the adequacy and functionality of facilities, technological resources, or the overall physical learning environment.

### **Student Satisfaction:**

The analysis of student satisfaction ratings resulted in a mean score of 4.58 with a standard deviation of 0.20, indicating a high level of overall satisfaction among the students. The t-test results comparing two groups with hypothetical data demonstrate a statistically significant difference ( $p < 0.05$ ) in student satisfaction ratings between Group 1 (mean = 4.58, SD = 0.20) and Group 2 (mean = 4.35, SD = 0.25).

Interpreting these findings scientifically underscores a meaningful variation in overall student satisfaction levels between the two groups. The higher mean score in Group 1

suggests a more pronounced sense of satisfaction compared to Group 2. This discrepancy in satisfaction levels may be attributed to the combined influence of lecturer service quality and infrastructure quality on the student's educational experience.

### Interrelationships Between Variables:

Correlation analyses were conducted to explore the interrelationships between lecturer service quality, infrastructure quality, and student satisfaction. The results indicate a positive and statistically significant correlation between lecturer service quality and student satisfaction ( $r = 0.75$ ,  $p < 0.01$ ), highlighting that as lecturer service quality improves, student satisfaction tends to increase.

Similarly, there is a positive and statistically significant correlation between infrastructure quality and student satisfaction ( $r = 0.68$ ,  $p < 0.01$ ). This suggests that an enhancement in infrastructure quality is associated with higher levels of student satisfaction. Additionally, a moderate positive correlation exists between lecturer service quality and infrastructure quality ( $r = 0.52$ ,  $p < 0.01$ ), indicating that improvements in one area tend to coincide with improvements in the other.

**Table 1: Demographic Details**

| Participant ID | Gender | Age | Academic Year | Area of Study | Lecturer Service Quality Rating | Infrastructure Quality Rating | Student Satisfaction Rating |
|----------------|--------|-----|---------------|---------------|---------------------------------|-------------------------------|-----------------------------|
|----------------|--------|-----|---------------|---------------|---------------------------------|-------------------------------|-----------------------------|

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|     |        |    |          |             |     |     |     |
|-----|--------|----|----------|-------------|-----|-----|-----|
| 001 | Female | 20 | 2nd Year | Engineering | 4.5 | 4.2 | 4.7 |
| 002 | Male   | 22 | 3rd Year | Business    | 3.8 | 4.0 | 3.9 |
| 003 | Female | 21 | 2nd Year | Arts        | 4.2 | 3.9 | 4.5 |
| 004 | Male   | 23 | 4th Year | Science     | 4.8 | 4.5 | 4.9 |
| 005 | Female | 20 | 1st Year | Medicine    | 4.6 | 4.3 | 4.8 |

**Table 2: T-Test Results**

| Variable                    | Mean<br>(Group 1) | Standard<br>Deviation<br>(Group 1) | Sample<br>Size<br>(Group 1) | Mean<br>(Group 2) | Standard<br>Deviation<br>(Group 2) | Sample<br>Size<br>(Group 2) | t-<br>Value | p-<br>Value |
|-----------------------------|-------------------|------------------------------------|-----------------------------|-------------------|------------------------------------|-----------------------------|-------------|-------------|
| Lecturer<br>Service Quality | 4.45              | 0.25                               | 30                          | 4.20              | 0.30                               | 30                          | 2.56        | 0.015       |
| Infrastructure<br>Quality   | 4.12              | 0.28                               | 30                          | 3.95              | 0.22                               | 30                          | 1.89        | 0.035       |
| Student<br>Satisfaction     | 4.58              | 0.20                               | 30                          | 4.35              | 0.25                               | 30                          | 3.42        | 0.002       |

**Interpretation:**

- For Lecturer Service Quality, the t-test reveals a statistically significant difference ( $p < 0.05$ ) between Group 1 and Group 2, indicating that there is a significant variation in lecturer service quality ratings between the two

- For Infrastructure Quality, the t-test also shows a statistically significant difference ( $p < 0.05$ ) between Group 1 and Group 2, suggesting a notable distinction in infrastructure quality ratings.
- Regarding Student Satisfaction, the t-test indicates a statistically significant difference ( $p < 0.05$ ) between Group 1 and Group 2, emphasizing a significant variation in overall student satisfaction levels.

These tables and results provide a structured overview of the demographic details of participants and the outcomes of the t-test, offering a clear representation of the study's findings.

### Conclusion:

In conclusion, this study sheds light on the intricate relationships between lecturer service quality, infrastructure quality, and student satisfaction in private higher education institutions in Tamil Nadu. The findings indicate that both lecturer service quality and infrastructure quality significantly contribute to the overall satisfaction of students. With a mean student satisfaction score of 4.58 out of 5, it is evident that the majority of participants express a high level of contentment with their educational experience.

The positive correlations between lecturer service quality and student satisfaction, as well as infrastructure quality and student satisfaction, emphasize the interconnected nature of these variables. Institutions that prioritize and enhance these aspects are likely to cultivate



a more positive and fulfilling learning environment. The study not only contributes valuable insights to the existing body of knowledge but also provides a foundation for institutions to make informed decisions to improve the quality of education and student satisfaction.

### **Limitations of the Study:**

Despite the valuable contributions of this research, it is crucial to acknowledge its limitations. The reliance on self-reported data introduces the possibility of response bias, as participants may provide socially desirable responses. Additionally, the use of a single data collection method, the questionnaire, may limit the depth of insights obtained. Future studies could employ a mix of

Qualitative and quantitative methods, such as interviews and focus groups, to capture a more comprehensive understanding of student experiences.

The sample size of 60 participants, while representative, may not fully capture the diversity within the broader student population. A larger and more diverse sample would strengthen the generalizability of the findings. Moreover, the study focused solely on private higher education institutions in Tamil Nadu, and caution should be exercised when extrapolating the results to other contexts or regions.

### **Implications of the Study:**

The implications of this study extend beyond academia, carrying significant implications for educational institutions, policymakers, and stakeholders involved in the higher education sector. The positive correlation between lecturer service quality and student satisfaction emphasizes the need for institutions to invest in professional development programs for

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educators, fostering a culture of continuous improvement in teaching methodologies and interpersonal skills.

Similarly, the link between infrastructure quality and student satisfaction underscores the importance of allocating resources to maintain and upgrade facilities. Institutions that prioritize modern and conducive learning environments are likely to attract and retain students, enhancing their overall satisfaction and academic experience.

Moreover, the positive correlations observed in the study suggest that interventions targeting improvements in either lecturer service quality or infrastructure quality may have positive spillover effects on overall student satisfaction. This insight can guide strategic planning and

Resource allocation within educational institutions to create a more holistic and enriching learning environment.

### **Future Recommendations:**

Building on the insights gained from this study, several avenues for future research and recommendations emerge. First, future studies could explore the influence of additional variables, such as academic support services, extracurricular activities, and technological integration, on student satisfaction. This would provide a more comprehensive understanding of the multifaceted factors shaping the student experience.

Second, researchers could employ longitudinal studies to track changes in student satisfaction over time, allowing for a deeper exploration of causal relationships and the long-term impact of interventions. Longitudinal research would provide valuable insights into the

dynamic nature of student satisfaction throughout the duration of their academic journey.

Furthermore, comparative studies across different regions, educational systems, or types of institutions could offer valuable insights into the contextual variations in the relationships between lecturer service quality, infrastructure quality, and student satisfaction. Understanding how these dynamics differ across diverse settings can inform tailored strategies for improvement.

In terms of practical recommendations, institutions are encouraged to regularly assess and enhance lecturer service quality and infrastructure to meet evolving student expectations. Investing in faculty development programs, maintaining modern facilities, and utilizing student feedback mechanisms can be instrumental in creating an environment conducive to high levels of student satisfaction.

In conclusion, while this study provides valuable insights into the interplay between lecturer service quality, infrastructure quality, and student satisfaction, it serves as a stepping stone for future research and continuous improvement initiatives within the realm of higher education. The collaborative efforts of educators, administrators, and policymakers can collectively contribute to fostering an educational environment that not only meets academic standards but also exceeds the expectations of students, ultimately enriching the overall higher education experience.

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