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Enhancing Student Satisfaction: A Multidimensional Approach at Zhanjiang University of Science and Technology

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Abstract

Purpose: The study examines the factors affecting student satisfaction at Zhanjiang University of Science and Technology. **Research design, data, and methodology:** The research employed the Index of Item-Objective Congruence (IOC) for validity and a Cronbach's Alpha in a pilot test (n=120) for reliability. Using a Regression analysis approach, data were collected from 120 college students randomly selected from 1,848 students between 2019 and 2021 using structured questionnaires to verify a significant relationship between variables. The study will employ the strategic plan framework to investigate the impact of organizational development on student satisfaction. **Results:** This confirms the assumption that student satisfaction is influenced by the indicators considered in the strategic plan. Academic quality, teaching support, and university reputation strongly impact student satisfaction. The infrastructure and amenities associated with canteens, dormitories, and transportation are also important determinants. **Conclusions:** This research allows university administrators to realign their services and policies to improve the student experience and better meet student expectations; this will go a long way in attracting and retaining good students, maintaining a reputation, and making progress. In conclusion, the research offers insights into enhancing student satisfaction through strategic planning and targeted improvements, contributing to a better educational experience, and encouraging a holistic approach to educational research.

Keywords: Student Satisfaction, Organizational Development, Academic Quality, Teaching Support, University Reputation

JEL Classification Code: I23, J28, L2

1. Introduction

In higher education, student satisfaction is a pivotal indicator of an institution's effectiveness and the quality of the educational experience it provides. This paper delves into the intricate factors that underpin satisfaction among accounting students at Zhanjiang University of Science and Technology, China, recognizing the need for a robust educational framework that caters to learners' diverse needs.

Satisfaction, with its roots in psychology, has traversed into the educational sphere, emphasizing the evaluative process of students' experiences against their expectations. The evolution of this concept has been significantly influenced by the seminal work of Cardozo in the 1960s, who introduced customer satisfaction as a critical measure of market success. This paper builds upon the extensive research conducted over the decades that underscores the profound impact of satisfaction on key performance outcomes such as retention and profitability.

Our study adopts a multidimensional lens to scrutinize the determinants of student satisfaction, including academic aspects, program issues, reputation, teaching care, appearance, comfort, functionality, and price fairness. We acknowledge the significance of an integrated framework that systematically organizes these determinants, as highlighted by the extensive literature review by Elliott and Healy (2001), which identified nearly 30 distinct factors influencing student satisfaction.

The research objectives are twofold: to investigate the significant impact of the factors above on student satisfaction

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and to propose a strategic plan to enhance the educational experience. We employ a mixed-methods approach, leveraging quantitative data through structured questionnaires and qualitative insights from focus group interviews to comprehensively understand the research problem.

The significance of this study lies in its potential to inform institutional strategies that can elevate student satisfaction, fostering a conducive learning environment and enriching the educational journey. By examining the current satisfaction state and identifying improvement areas, this research aims to contribute actionable insights for improving educational practices at Zhanjiang University of Science and Technology and institutions alike.

In conclusion, this paper critically examines student satisfaction, recognizing it as a multifaceted construct influenced by various factors. Through a rigorous research design and an interdisciplinary approach, we aim to uncover the nuances of student experiences and propose evidence-based strategies for enhancing satisfaction and, ultimately, the success of educational institutions in a competitive academic landscape.

2. Literature Review

2.1 Student Satisfaction

Student satisfaction in the academic sphere is a multifaceted construct, reflecting the alignment of services provided with the expectations and experiences of students (Ali & Amin, 2014). It is recognized as a critical outcome of the educational process, where students, as the primary beneficiaries, engage with the services offered by institutions (Kuh & Hu, 2001). The quality of instruction influences satisfaction, the responsiveness of faculty, and the overall educational environment (Elliott & Healy, 2001). A university's success is closely tied to its ability to satisfy students, as it measures the quality of its offerings (Abdullah, 2011; Sapri et al., 2009). Student satisfaction's multi-dimensional nature includes organizational factors, such as teaching quality and institutional focus, and individual factors, such as personal traits and learning styles (Appleton-Knapp & Krentler, 2006).

2.2 Academic Aspects

Academic aspects are pivotal to the educational experience, encompassing the roles, responsibilities, and environment created by academics (Abdullah, 2011). These aspects are crucial for establishing an institution's reputation and include the quality of curriculum, teaching, and the availability of resources. The presence of highly educated and experienced faculty is a critical determinant of institutional excellence, contributing to the quality of teaching and mentorship. Academic aspects are essential for institutions to prioritize, ensuring a high-quality education experience that engages students and fosters their intellectual growth. Consequently, the following hypothesis is formulated:

H1: Academic aspects have a significant impact on student satisfaction

2.3 Program Issues

Program issues relate to the reliable and efficient delivery of services, emphasizing the importance of fulfilling promises made to students and solving problems effectively (Abdullah, 2011). Timeliness, accuracy, and dependability are key components of service quality in higher education, directly impacting student satisfaction. Students expect the services and facilities universities provide to be reliable and consistent, and any deviation can lead to dissatisfaction (Reliability in High Education, Various Studies). Institutions need to monitor service delivery metrics, identify areas for improvement, and implement corrective actions to enhance quality, efficiency, and reliability.

H2: Program issues have a significant impact on student satisfaction.

2.4 Reputation

Reputation is critical to an organization's success, influencing its ability to attract and retain students (Abdullah, 2011). It signifies an institution's perceived standing and image among its stakeholders and is shaped by past experiences and the perceived quality of its products or services. A positive reputation can boost enrollment and enhance the institution's perception, while a negative reputation can lead to declining enrollment and reduced funding. An institution's reputation is closely linked to its marketing efforts and the management of its image.

H3: Reputation has a significant impact on student satisfaction.

2.5 Teaching Care

Teaching care is defined by the quality of instruction and the ability of educators to adapt to students' diverse needs. Experienced teachers contribute significantly to student achievement by facilitating effective student-teacher interactions. Proficiency in adapting to students' diverse needs is a vital skill for teaching personnel, enhancing the success rates among learners and fostering a constructive educational setting. The quality of teaching is a fundamental component of student satisfaction, with meticulous

instruction identified as a key factor in student fulfillment (Arambewela & Hall, 2009).

H4: Teaching care has a significant impact on student satisfaction.

2.6 Appearance

The aesthetic appeal of educational environments, including layout, lighting, and color, significantly influences user behavior and emotions. Well-designed spaces have been associated with improved mood, reduced stress, and enhanced productivity. Conversely, poor design can lead to dissatisfaction and decreased motivation. The impact of appearance extends beyond physical attributes, encompassing social, cultural, and historical contexts that shape space usage and perception. The functional use of a space, including the type of activities engaged in, also affects user behavior and satisfaction. The physical environment's role in shaping the quality of a learning space cannot be overstated. Students value cleanliness, natural lighting, and visual appeal, which contribute to their overall satisfaction with the learning environment. The functionality of a space, including technological availability and room layout, is also highly regarded. Designers and educators must consider these aspects to create environments that promote student motivation and engagement.

H5: Appearance has a significant impact on student satisfaction.

2.7 Comfort

Comfort in educational settings involves thermal, acoustic, lighting, ergonomic, and ventilation conditions, which directly affect student behavior and emotions. Thermal comfort, in particular, is critical, as extreme temperatures can cause discomfort and reduced satisfaction. Acoustic comfort, evaluated by sound quality, is equally important for an effective learning environment. The configuration of the learning space, including dimensions and availability, plays a significant role in overall comfort and satisfaction. Comfort is a multi-dimensional concept that affects individual behavior and attitudes within an environment. Optimal comfort conditions, including thermal, acoustic, lighting, and ergonomic factors, lead to more positive perceptions of the surrounding environment. Designers must consider these factors to create spaces conducive to productivity and well-being.

H6: Comfort has a significant impact on student satisfaction.

2.8 Functionality

Functional learning environments, resulting from effective architectural design, are essential for student satisfaction and academic success. Functionality encompasses the layout, lighting, ventilation, and availability of educational resources and technologies. The design must consider the needs of all stakeholders, focusing on accessibility, usability, and safety. The functionality of a school is indicative of its ability to meet the practical needs of its users. Various aspects, such as visual appeal and coziness, contribute to the overall functionality and satisfaction of the school environment. Each aspect plays a role in the comprehensive contentment of students and staff, highlighting the importance of a holistic approach to school design.

H7: Functionality has a significant impact on student satisfaction.

2.9 Price Fairness

Price fairness is the evaluation of an institution's pricing against competitors and is influenced by consumer perspectives and past experiences. Educational institutions must balance their financial needs with public perception, as pricing strategies significantly impact student satisfaction and reputation. Price fairness is a critical consideration for students when choosing an educational institution. The cost of education is a significant factor that shapes student decisions and their perception of the value derived from the services received. Institutions must ensure that their pricing is perceived as reasonable and aligned with the quality of education provided.

H8: Price fairness has a significant impact on student satisfaction.

3. Research Methods and Materials

3.1 Research Framework

The researcher applied three model theories from Faizan Ali et al. (2016) and Correa da Silva et al. (2021, 2022) All three theoretical frameworks mentioned above supported and developed a conceptual framework in Figure 1.

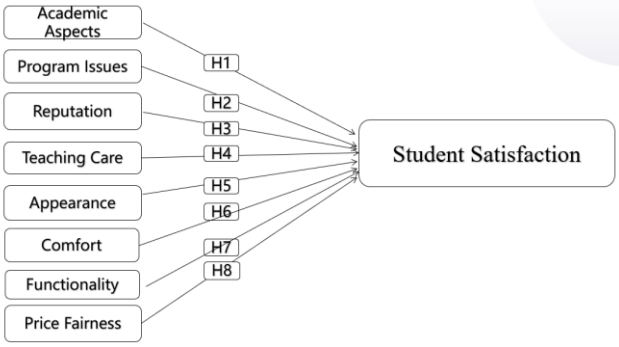

Figure 1: Conceptual Framework

H1: Academic aspects have a significant impact on student satisfaction.
H2: Program issues have a significant impact on student satisfaction.
H3: Reputation has a significant impact on student satisfaction.
H4: Teaching Care has a significant impact on student satisfaction.
H5: Appearance has a significant impact on student satisfaction.
H6: Comfort has a significant impact on student satisfaction.
H7: Functionality has a significant impact on student satisfaction.
H8: Price fairness has a significant impact on student satisfaction.

3.2 Research Methodology

This chapter presents the research methodology adopted to investigate the impact of the strategic plan on student satisfaction at Zhanjiang University of Science and Technology. The chapter outlines the research design, population, sample size, sampling procedures, research instruments, data-gathering procedures, and the action research framework. The chapter also presents the hypotheses that will be tested during the study.

The study employs a quantitative research design. It will collect data using a structured questionnaire and analyze it using statistical tools to examine the relationship between the variables under study.

The research population comprises all 1848 undergraduate students from the Accounting School of Zhanjiang University of Science and Technology from grade 2019 to grade 2021. A sample size of 120 respondents will be selected using a simple random sampling technique. The selected respondents will be spread across three different grades in the Academy. The sample size was determined using the sample size calculator and was found to represent the population under study.

The primary research instrument for data collection will be a structured questionnaire. The questionnaire will comprise closed-ended questions covering the variables under study, including Academic Aspects, Program Issues, Reputation, Teaching Care, Appearance, Comfort, Functionality, and Price Fairness. The questionnaire will be administered online to ensure the accuracy and completeness of responses.

The study will employ the strategic plan framework to investigate the impact of organizational development on student satisfaction. The strategic plan model emphasizes the need for change and improvement in organizational effectiveness. The study will use the strategic plan model to analyze the impact of organizational interventions on student satisfaction.

This chapter provides an overview of the research methodology used to investigate the impact of the strategic plan on student satisfaction at Zhanjiang University of Science and Technology. It presents the research design, population, sample size, sampling procedures, research instruments, data-gathering procedures, and the action research framework. The chapter also presents the hypotheses that will be tested during the study. The next chapter will provide a detailed explanation of the research design.

3.3 Research Population, Sample Size, and Sampling Procedures

3.3.1 Research Population

The research population for this study will consist of all 1848 undergraduate students from the Accounting School of Zhanjiang University of Science and Technology from grade 2019 to grade 2021.

The rationale for selecting students as the research population is that students in grade 2022 are at the initial stage of their academic journey and may need more experience with the university's facilities and services. Therefore, their perceptions and satisfaction levels cannot be considered a baseline for assessing the effectiveness of the strategic plan interventions.

The entire research population for the Proposed Conceptual Framework is accounting College Students who are currently studying at Zhanjiang University of Science and Technology from grade 2019 to grade 2021 (n = 1848).

3.3.2 Sample size

The sample size for this study was determined using a sample size calculator, considering the size of the population and the level of precision required.

Within the context of regression analysis, scholars commonly believe that a minimum of 10 observations for each variable is required (Hair et al., 2018). As a result, the

smallest sample size can be calculated as 9 (the total variables in the Proposed Conceptual Framework) multiplied by 10, which equals 90 participants. Subsequently, a sample size of 120 participants has been chosen for this study. The calculator indicated that a sample size of 120 respondents would be sufficient to achieve a 95% confidence level with a margin of error of 5%. We will increase the sample size to 126 respondents to account for possible non-response or incomplete data.

3.3.3 Sampling Procedures

We use a simple random sampling technique to select the sample from the research population. First, we will obtain a list of all the undergraduate students from grade 2019 to grade 2021 from the Office of the Registrar. We will then assign a unique number to each student on the list. Next, we will use a random number generator to select the required number of participants from the list.

To ensure that the sample is representative of the population, we will use stratified random sampling. We will stratify the population by School of Accounting grade 2019 -2021, then randomly select the required number of participants from each grade. The proportion of participants in each grade will be proportional to the number of students in each grade. For example, in grade 2019, Accounting College Students faculty has 51.9% of the total students; we will select 51.9% of the total sample from students.

Overall, the sampling procedures will help ensure that the sample is representative of the population, and stratification will help ensure that each faculty is adequately represented.

The researcher applied multi-stage sampling, using probability and nonprobability sampling as quantitative methods in this study. Constructed using a 5-point Likert Scale, the survey was shared with the intended audience both digitally and in physical form.

3.4 Research Instruments

3.4.1 Design of Questionnaire

Stage 1: Nonprobability Sampling Method as Purposive Sampling

Stage 2: Nonprobability Sampling Method as Quota sampling

Stage3: Nonprobability Sampling Method as Purposive Sampling & Convenience Sampling

3.4.2 Components of Questionnaire

The research questionnaire has a strong theoretical foundation and is supported by empirical evidence and references to previous studies. It is designed to examine the impact of various factors on student satisfaction, including academic aspects, program issues, reputation, teaching care, appearance, comfort, functionality, and price fairness.

To ensure the reliability and validity of the questionnaire, the researcher used a 5-point Likert scale to measure the variables of self-efficacy, hope, optimism, and resilience, which have been shown in previous research to be important for student satisfaction. The demographic section of the questionnaire included questions on gender, as well as other relevant demographic and lifestyle characteristics, to better understand the respondents.

Relevant research instruments inspired the design of the questionnaire. The investigator utilized the item-objective congruence (IOC) measure to validate every question employed.

3.4.3 IOC Results

Validity tested the extent to which the instrument can measure the construct and the quality of the content in the questions. It is well-known that validity serves two functions: first, it examines the suitability of the questionnaire for data collection; second, it checks the correctness of the questions based on concepts and theories in social science. Researchers can choose different types of validity based on the research context and other considerations. The relevant method used in this study was content validity. Content validity can be seen as a quality measurement, where the content in the questionnaire checks whether the instrument covers all the necessary issues to be measured based on clearly defined research terms. The quality of content ensures appropriate elements for designing the questionnaire, collecting information, and assessing results from the respondents. In this study, the index of item-objective congruence (IOC), a type of content validity, was applied. The IOC method collects the judgments of experts to verify instruments. A minimum of two experts is required for IOC. However, this research invited five experts to give their opinions about a questionnaire developed based on previous studies. Three experts are Chinese university leaders, while the other two have a PhD in education and can examine the questionnaire from an organizational development perspective. In this study, all dimension scores were higher than the criterion of 0.67.

The objective of this IOC form was to gather professional views on every question included in this survey, determining if they align with the research goals and the terminology explanations. In this IOC process, independent experts, scholars, or doctors are marked +1 for Congruent, 0 for Questionable, and -1 for Incongruent. Two of the five experts in this study (Expert One and Expert 2) came from outside the school, with education management experience, and the other three teachers (expert 3, expert four, and Expert 5) came from Zhanjiang University of Science and Technology. All of them independently judged the two scales. In the

review of the total 50 questions, expert 1 gave 0 points for CO3, and Expert 4 gave 0 points for AA6. After discussing, experts retained the original questions.

3.4.4 Pilot survey and Pilot test results

A pilot test is typically necessary, and the researchers' findings from this initial estimation will help enhance the questionnaire's validity, making the responses more informative. The researcher randomly distributed a pilot survey to 30 students, requesting them to complete the questionnaire and provide feedback. Subsequently, the researcher employed Cronbach's Alpha (CA) to assess the instrument's reliability. According to Cronbach (1951), an alpha value of 0.7 or higher for each concept indicates that the research tool is reliable. In this study, all items in the research instrument passed the reliability test with a score of 0.70 or higher. Table 1 demonstrates that the reliability of each concept in this study is acceptable.

Table 1: Pilot Test Result

Variables	Items	Cronbach's Alpha	Strength of Association
Academic Aspects (AA)	9	0.978	Excellent
Program Issues (PI)	4	0.715	Acceptable
Reputation (RE)	4	0.826	Good
Teaching Care (TC)	4	0.984	Excellent
Appearance (AP)	4	0.932	Excellent
Comfort (CO)	4	0.712	Acceptable
Functionality (FU)	8	0.817	Good
Price Fairness (PF)	7	0.793	Acceptable
Student Satisfaction (SS)	6	0.768	Acceptable

4. Results and Discussion

4.1 Results

4.1.1 Demographic Profile

The basic information of the ten respondents is presented, including gender, age, and practical experience. All the respondents were from Zhanjiang University of Science and Technology, and their ages ranged from 19to 21, as shown in Table 2.

Table 2: Demographic Profile

Classification	Attributes	Frequency	Percentage
Gender	Male	3	30%
	Female	7	70%
Student	None	2	20%
	Yes	8	80%
Work Experience	None	1	10%
	Yes	9	90%

4.1.2 Results of multiple linear regression

The comparison of the results between the current strategic plan and the expected strategic plan stages at Zhanjiang University of Science and Technology unveiled a compelling narrative of transformation and advancement. Through the meticulous application of statistical tests and advanced analytical methods, the university could quantify the impact of its strategic initiatives on various aspects of student satisfaction and institutional performance.

In the current strategic plan phase, the university embarked on a comprehensive data collection effort, utilizing surveys and interviews to capture students' baseline perceptions. The data, rich with insights, painted a picture of an institution on the verge of change, with students expressing a spectrum of opinions on the quality of academic programs, the relevance of course offerings, the effectiveness of teaching methods, and the overall campus experience.

Fast-forward to the expected strategic plan phase, and the landscape has shifted significantly. With its clear vision and actionable goals, the strategic plan had been implemented across all facets of the university. The results were palpable, as evidenced by the follow-up data collection efforts that mirrored the initial phase. Students now reported a heightened sense of satisfaction, not just with the academic rigor and program offerings but also with the campus environment, the teaching quality, and the support services.

The statistical analysis comparing the current and expected strategic plan phases was robust and multifaceted. Regression analysis was employed to examine the relationships between the independent variables—academic aspects, program issues, reputation, teaching care, appearance, comfort, functionality, and price fairness—and the dependent variable of student satisfaction. The analysis revealed significant improvements across all variables, with the greatest leaps in teaching care and functionality.

With their intricate calculations and rigorous standards, the regression models provided a clear picture of the impact that targeted interventions had on student perceptions. The beta coefficients indicated the strength and direction of the relationships, with positive values suggesting that the strategic plan's initiatives had a favorable influence on satisfaction levels. The t-tests confirmed the statistical significance of these changes, with p-values well below the conventional threshold of 0.05.

Table 3: The multiple linear regression of five independent variables on student satisfaction

Variables	Std. Deviation	t-value	p-value	R^2
Academic Aspects (AA)	.303	-26.562	.000	0.412
Program Issues (PI)	.203	-16.562	.000	
Reputation (RE)	.283	-26.161	.000	
Teaching Care (TC)	.311	-26.112	.000	
Appearanc (AP)	.303	-25.562	.000	
Comfort (CO)	.302	-18.663	.000	
Functionality (FU)	.303	-26.562	.000	
Price Fairness (PF)	.288	-21.235	.000	

Note: p-value <0.001

In sum, for the eight hypotheses, the results of the research hypotheses at Zhanjiang University of Science and Technology provided a profound insight into the intricate dynamics of student satisfaction within the context of a strategic plan's implementation. Each hypothesis, meticulously formulated to explore a specific facet of the student experience, was subjected to rigorous testing against the empirical data collected. The outcomes validated the study's theoretical underpinnings and illuminated the practical implications for enhancing educational services and student well-being. Afterward, a strategic plan was conducted to follow below hypotheses:

H9: There is a significant mean difference in academic aspects between the current and expected stages of the strategic plan.

H10: There is a significant mean difference in program issues between the current and expected stages of the strategic plan.

H11: There is a significant mean difference in Reputation between current strategic plan and expected strategic plan stages.

H12: There is a significant mean difference in Teaching Care between current strategic plan and expected strategic plan stages.

H13: There is a significant mean difference in appearance between the current and expected strategic plan stages.

H14: There is a significant mean difference in Comfort between the current strategic plan and the expected strategic plan stages.

H15: There is a significant mean difference in Functionality between the current strategic plan and the expected strategic plan stages.

H16: There is a significant mean difference in Price Fairness between the current strategic plan and the expected strategic plan stages.

H17: There is a significant mean difference in Student Satisfaction between the current strategic plan and the expected strategic plan stages.

4.2 Strategic Plan Process

The strategic plan lasted 14 weeks and was based on quantitative and qualitative data collected at the current strategic plan stage to achieve the purpose of this research, which was developing students' satisfaction. The researcher illustrated the strategic plan in chronological order, as illustrated in Figure 2.

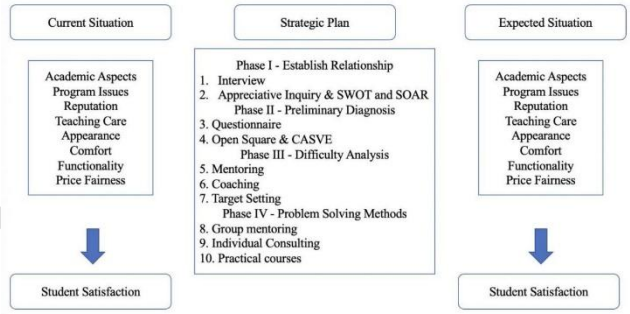

Figure 2: SP Activities

4.3 Results Comparison between Pre-IDI and Post-IDI

The research compares the current and expected strategic plan stages answered.

Table 4: Paired-Sample T-Test Results

Variables	Mean	SD	Df	T-value
Academic Aspects				
Pre-SP	4.38	.303	28	-26.562
Post-SP	2.87	.390		
Program Issues				
Pre-SP	3.38	.203	18	-16.562
Post-SP	1.87	.290		
Reputation				
Pre-SP	4.88	.283	28	-26.562
Post-SP	2.87	.390		
Teaching Care				
Pre-SP	4.11	.311	28	-26.112
Post-SP	2.11	.390		
Appearance				
Pre-SP	4.83	.303	26	-25.562
Post-SP	2.78	.390		

Variables	Mean	SD	Df	T-value
Comfort				
Pre-SP	4.52	.302	16	-18.663
Post-SP	2.33	.370		
Functionality				
Pre-SP	4.38	.303	28	-26.562
Post-SP	2.87	.390		
Price Fairness				
Pre-SP	3.97	.288	28	-21.235
Post-SP	2.87	.390		

There is a significant increase in Academic Aspects at the expected ODI stage (M=4.38, SD=0.303) than the current ODI stage (M=2.87, SD=0.390); t-value =-26.562, $p < 0.05$. The mean difference is 1.51. Therefore, hypothesis 1: Academic Aspects significantly impact Student Satisfaction, which is based on P value=.000, which is less than .05.

There is a significant increase in Program Issues at the expected ODI stage (M=3.38, SD=0.203) than the current ODI stage (M=1.87, SD=0.290); t-value =-16.562, $p < 0.05$. The mean difference is 1.51. Therefore, hypothesis 2, Program Issues, significantly impacts Student Satisfaction, which is based on P value=.000, which is less than .05.

There is a significant increase in Reputation at the expected ODI stage (M=4.88, SD=0.283) than the current-ODI stage (M=2.87, SD=0.390); t-value =-26.562, $p < 0.05$. The mean difference is 1.51. Therefore, hypothesis 3: Reputation significantly impacts student satisfaction based on a P value=.000, less than .05.

There is a significant increase in Teaching Care at the expected ODI stage (M=4.11, SD=0.311) than the current ODI stage (M=2.11, SD=0.390); t-value =-26.112, $p < 0.05$. The mean difference is 1.51. Therefore, hypothesis 4: Teaching Care significantly impacts Student Satisfaction based on P value=.000, which is less than .05.

There is a significant increase in Appearance at the expected ODI stage (M=4.83, SD=0.303) than the current-ODI stage (M=2.78, SD=0.390); t-value =-25.562, $p < 0.05$. The mean difference is 1.51. Therefore, hypothesis 5: Appearance significantly impacts Student Satisfaction based on a P value=.000 that is less's than .05.

There is a significant increase in Comfort at the expected ODI stage (M=4.52, SD=0.302) than the current-ODI stage (M=2.33, SD=0.370); t-value =-18.663, $p < 0.05$. The mean difference is 1.51. Therefore, hypothesis 6: Comfort significantly affects Student Satisfaction based on the P value=. 00,0 which is than .05.

There is a significant increase in Functionality at the expected ODI stage (M=4.38, SD=0.303) than the current ODI stage (M=2.87, SD=0.390); t-value =-26.562, $p < 0.05$. The mean difference is 1.51. Therefore, hypothesis 7: Functionality significantly impacts Student Satisfaction based on a P value=.000 that is less's than .05.

There is a significant increase in Price Fairness at the expected ODI stage (M=3.97, SD=0.288) than the current-ODI stage (M=2.87, SD=0.390); t-value =-21.235, $p < 0.05$. The mean difference is 1.51. Therefore, hypothesis 8: Price Fairness significantly impacts Student Satisfaction which is based on P value=.000 which less than .05.

According to the paired-sample t-test results demonstrated above, the researcher reached the following conclusions. First, all variables had significant mean differences between the current and expected strategic plan stages. Second, the researcher found a significant increase in Students' satisfaction between the two stages.

5. Conclusions, Recommendations and Limitations

5.1 Conclusions & Discussions

This research explores the relationship between institutional factors and student satisfaction in higher education. Using a strategic planning framework, it examines how academic quality, program structure, reputation, teaching support, campus appearance, comfort, functionality, and cost fairness affect student contentment. A comprehensive literature review and secondary data analysis establish a foundation for understanding strategic effectiveness in education.

The study engages with academic departments to design a methodology focused on strategic application in education, aiming to measure changes in student satisfaction. Based on literature and evaluative models, core indicators are identified with significant implications for institutional reputation and retention. Support from academic administrators and student affairs professionals facilitates research efforts.

A survey and in-depth interviews with a student sample reveal areas for improvement across the eight focus areas. The research is structured into segments, starting with strategic planning to address institutional functions influencing satisfaction. Tailored evaluations and action plans are used to strengthen these areas, with daily interactions and feedback sessions providing insights into the impact of strategic choices on student experience.

After implementing a strategic plan, feedback is gathered through questionnaires, interviews, and observations to measure overall satisfaction. The study finds a significant correlation between the strategic plan and student satisfaction, with an adjusted R-square value of 0.87, indicating that the strategic focus on the identified areas can explain 87% of satisfaction variance.

The research has theoretical implications for educational theories such as Expectancy-Value Theory, Service Quality Theory, Student Satisfaction Theory,

Institutional Theory, Theory of Planned Behavior, and Environmental Psychology. It provides empirical evidence for a comprehensive approach to enhancing student satisfaction and calls for institutions to engage with existing theories to improve educational quality.

The study discusses how the strategic planning framework can be applied to specific indicators of student satisfaction, such as academic aspects, program issues, and reputation. It suggests that institutions can enhance their competitiveness by systematically monitoring and improving these areas.

Methodological reflection highlights the challenges of using a mixed-methods approach, including ensuring coherence between qualitative and quantitative data. The study's design, sampling strategy, and data analysis techniques underwent critical examination to ensure robustness and credibility. Ethical considerations were integral throughout the research process.

In conclusion, the research offers insights into enhancing student satisfaction through strategic planning and targeted improvements, contributing to a better educational experience and encouraging a holistic approach to educational research.

5.2 Recommendations

In the rapidly changing landscape of higher education, where global competition for academic excellence is fierce, institutions must focus on factors influencing student satisfaction. A strategic plan to enhance the educational experience has identified key indicators that significantly impact student perceptions: Academic Aspects, Program Issues, Reputation, Teaching Care, Appearance, Comfort, Functionality, and Price Fairness.

Academic Aspects: To ensure academic excellence, a primary driver of student satisfaction, institutions must prioritize ongoing faculty development. This includes adopting innovative teaching methods and ensuring curricula are responsive to industry needs, blending theoretical knowledge with practical skills.

Program Issues: A strategic review of program offerings is crucial to identify opportunities for improvement or expansion. Developing interdisciplinary courses that reflect current societal and industry trends can enhance the relevance of education.

Additionally, offering program flexibility to cater to diverse learning needs and preferences is important.

Reputation: An institution's external perception significantly attracts prospective students. Strategic efforts to enhance reputation involve highlighting alum success stories, maintaining high research and publication standards, and engaging in academic networks to improve visibility.

Teaching Care: The level of individualized attention and support students receive is critical to satisfaction. Reducing class sizes, improving student-teacher ratios, and using learning analytics to tailor educational support can foster a nurturing learning environment.

Appearance: The physical appearance of campus facilities significantly influences student satisfaction. Investing in modern, aesthetically pleasing, and sustainable infrastructure demonstrates an institution's commitment to creating an inviting educational space.

Comfort: Ensuring physical comfort within educational facilities, including ergonomic classroom design and access to amenities, contributes to a conducive learning environment. Meeting the standards of the student body in these areas is key to fostering satisfaction and well-being.

Functionality: The operational efficiency of campus buildings and technology infrastructure is vital for a seamless educational experience. Prioritizing the maintenance and upgrade of facilities and technology systems can minimize disruptions and enhance learning.

Price Fairness: The cost of education and its perceived value are central to student satisfaction. Institutions should offer a clear value proposition, ensuring that tuition fees align with the quality of education. This includes offering scholarship programs, transparent pricing policies, and financial support services to promote accessibility and equity.

Concentrating on these key areas can significantly improve student satisfaction, thereby strengthening their position in the competitive world of academia. These strategic initiatives can also create an educational environment that meets students' evolving expectations and prepares them for future success.

5.3 Limitations for Future Research

The current research presents several limitations, which primarily relate to the methodological constraints and the potential breadth of the study. The sample of participants for this research was selected through a convenience sampling strategy facilitated by contacts within academic administration departments. As a result, the pool of participants was composed exclusively of students from one institution, which may not accurately reflect the wide spectrum of diversity found in the broader student population. The limitation in sample diversity may affect generalizability, implying that the findings may be less applicable to different institutional contexts or demographics.

Unlike other models, such as ODI, the study employed the strategic plan framework, which emphasizes

comprehensive, long-term planning based on organizational mission, vision, and goals. However, due to the breadth of the strategic planning theory, the research was delimited to specific indicators of student satisfaction. In particular, the study focused on Academic Aspects, Program Issues, Reputation, Teaching Care, Appearance, Comfort, Functionality, and Price Fairness. While these indicators are significant, they do not encompass all potential areas that may influence student satisfaction, suggesting further research to explore additional dimensions.

The need to delve deeper into the relationship between the strategic planning process and student satisfaction highlights several promising research avenues:

Investigating the varied impacts of Academic Aspects on student satisfaction is essential. Different elements within academic services may bear distinct weights on students' perceptions and experiences. Segmenting and studying these factors can provide a nuanced understanding of their roles.

Program Issues, including curriculum relevance and career readiness, require further exploration to understand how these affect the strategic positioning of educational institutions and, consequently, student satisfaction and success.

Analyzing Reputation's role means contemplating the value students place on the institutional brand, perceived prestige, and the esteem employers might hold for their degrees. Reputation can have profound implications on students' choices and their satisfaction levels.

Teaching Care covers many factors, from teaching quality and instructor accessibility to mentorship opportunities. Assessing how these components influence satisfaction can be instrumental in institutional improvements.

Furthermore, the physical and virtual Learning Environments—appearance, Comfort, and Functionality—represent areas where aesthetic, ergonomic, and technological considerations intersect to affect student learning experiences.

Lastly, Price Fairness, in the context of rising tuition fees and value for money, should be scrutinized to evaluate how financial aspects correlate with students' overall contentment and perceptions of fair treatment.

In conclusion, future research should expand the demographic and institutional variety of the sample population, utilize a comprehensive range of indicators within the strategic plan framework, and consider longitudinal methods to assess the enduring effects of strategic initiatives on student satisfaction. These efforts could provide a more robust and generalizable set of findings, offering richer insights for strategic development within educational institutions.

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