Testing the Mediation Effect of Quality of College Life (QLC) on the Influence of Satisfaction of Educational and Administrative Services on Loyalty of Polytechnic Students

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ABSTRACT

This research aims to explore the factors that influence student loyalty at the Aceh Ministry of Health Polytechnic. The factors studied include satisfaction with educational services, satisfaction with administrative services, satisfaction with facilities, and quality of college life. The population of this study were all students at the Aceh Ministry of Health Polytechnic. The sample for this study was determined using the Slovin formula with a sample size of 176 people. Data was collected using a questionnaire with a 5-point Likert scale. Data were analyzed using Structural Equation Modeling (SEM) using IBM SPSS-AMOS version 22 software. The findings of this research show that satisfaction with educational services has a positive effect on student loyalty and the quality of college life. administrative service satisfaction has a positive effect on student loyalty and the quality of college life. Facility satisfaction has a positive effect on the quality of college life. The quality of college life has a positive effect on student loyalty. Facility satisfaction moderates the relationship between educational service satisfaction and quality of college life. The findings of this research have several managerial implications for higher education administrators and decision-makers, namely: Improving the quality of educational services, administrative services, and facilities. Pay attention to synergies between various aspects of the service. Build strong relationships and foster a sense of belonging among students. This research shows that service satisfaction and quality of college life are important factors that influence student loyalty. Universities need to improve service quality and create a positive college environment to increase student loyalty.

Keywords: *Quality Of College Life (Qlc,)* Educational Service Satisfaction, Administrative Service Satisfaction, Health Polytechnic Student Loyalty and Facilities Satisfaction

BACKGROUND

Higher education is an educational institution that has an important role in creating quality human resources and plays a role in the development of science and technology. Apart from that, universities are also responsible for producing innovative research that can make a positive contribution to the progress of society and the nation.

In this context, the quality of services provided by universities becomes very important. Good academic service and administration not only provide an optimal educational experience for students but also becomes a benchmark for the success of an educational institution. Student satisfaction is the main indicator in

radiating the quality of services provided by higher education institutions.

Apart from that, another factor that is no less important is the quality of life in the campus environment or what is usually called Quality of College Life (QCL). This quality of life includes various aspects, such as educational facilities, ease of access, learning environment, and student welfare. A good quality of life in a campus environment can have a positive impact on student satisfaction and also their loyalty to higher education.

This research aims to dig deeper into the factors that influence student loyalty at the Aceh Ministry of Health Polytechnic. Apart from examining satisfaction with educational and administrative services, this research will also pay attention to students' perceptions of the educational facilities available on campus. By understanding these factors, it is hoped that universities can improve their shared services and create an environment that supports students in achieving academic success and their personal development.

LITERATURE REVIEW

2.1 Loyalty

Loyalty is an individual behavior that shows a tendency to make repeat purchases and support a brand or service consistently over a long period of time. This includes positive dedication to a particular brand and consistency in making purchases. Trusting clients can provide benefits to the organization, including lasting financial and business benefits. To achieve consumer loyalty, it is important to pay attention to aspects such as service quality, value provided to clients, and product benefits. These four variables are interrelated and can contribute to business success. Dedication is also considered an inseparable part of an organization in maintaining customer loyalty, which is reflected in satisfaction and the desire to continue using a particular product or service. Although the influence of external factors such as advertising can influence consumer behavior, loyalty remains an important aspect of the relationship between consumers and brands.

2.2. Quality of College Life (QCL)

Quality of College Life (QCL) is a concept that describes the level of student satisfaction with their life experience on campus. QCL includes cognitive and affective aspects which include satisfaction with the academic and social aspects of higher education, which are influenced by the quality of facilities and services provided by the university. The QCL measurement is based on the positive and negative influences of these two types of experiences, to improve the quality of higher education and form student loyalty. These two indicators, both the concept of personal satisfaction with the quality of university life and satisfaction with university facilities and services, have an important role in assessing student satisfaction and improving the quality of higher education as a whole.

2.3 Satisfaction with Education Services

Sopiatin (2010) in (Rustami & Kurniatun, 2016) describe student satisfaction as their positive perception of higher education services, which is influenced by the conformity between their expectations and natural reality. Galloway (1998) highlights the importance of sustainability improvements in clarity, accuracy, and accuracy of services, without focusing on one particular aspect. However, Trivellas & Dargenidou (2009) note that limited resources can hinder efforts to meet the needs of all stakeholders simultaneously. Therefore, the evaluation of student satisfaction should include their experiences during their studies as well as feedback after they leave the university, as proposed by Duarte et al. (2012). Paswan & Ganesh (2009) emphasize that providing services that customers have never experienced can increase their satisfaction. Factors that influence student satisfaction, according to Dib and Alnazer (2013), include administrative quality, university image, perceived value, and perceived costs. Meanwhile, according to Tjiptono &

Gregorius (2011), the specific benefits of customer satisfaction include increasing loyalty, potential future income, reducing customer exchange costs, increasing cost resilience, and disseminating positive information.

2.4 Administrative Service Satisfaction

Services, due to their intangible nature, can be measured through customer satisfaction, which is also important in the context of educational administration, a core process in educational institutions (Majid et al., 2020). Regulatory administration, in essence, is dedicated to certain subjects in contractual obligations with public authorities (Saputra & Zulkarnaini, 2016). Factors that influence satisfaction with administrative services, according to Sinambela et al (2006) research (Saputra & Zulkarnaini, 2016), include transparency, accountability, conditionality, participativeness, equality of freedom, and balance of privilege and commitment. This reflects the nature of government which includes openness, accountability, responsibility, participation, equality, and balance in providing services to the community.

2.5 Facility Satisfaction

References from the article "Framework for Measuring Student and Staff Satisfaction with University Campus Facilities" (Kärnä, S., & Julin, P. 2015) and research by Khurshid, F., & Arshad, M. (2012) reveal that student satisfaction with facilities campuses are influenced by a number of factors, including physical conditions and cleanliness, learning support facilities, health facilities, sports and recreation facilities, public facilities and campus life, accessibility and transportation, security factors, student participation in decision making, communication and information, and service quality administration. Yang also emphasized the importance of prioritizing these factors in increasing student and staff satisfaction with campus facilities, which in turn can assist campus facilities management in identifying areas of improvement that are needed.

2.6. Hypothetical Development

2.6.1 The Influence of Quality of College Life on Loyalty

The results of research conducted by (Grace & Kim, 2008) & (Shin et al., 2019) found that Quality of College Life (QCL) has a positive and significant influence on Student Loyalty. The results of these studies conclude that to increase student loyalty, university managers and policymakers must make efforts to increase students' QCL by ensuring that it meets all their needs and provides experiences that produce a positive influence throughout their campus life.

H1. The Influence of Quality of College Life on Loyalty

2.6.2 Satisfaction with Educational Services on Loyalty and Quality of College Life

The results of research conducted by (J. Lee & Anantharaman, 2013) show that all the paths proposed in the theoretical model are positive and significant, meaning that Education Service Satisfaction has a positive and significant influence. These results indicate that service quality consists of six latent dimensions (Teaching, Administrative Services, Academic Facilities, Campus Infrastructure, Support Services, and Internationalization). These results can help institutional leaders better recognize the factors that contribute to service quality so that they can quietly provide better services that increase student loyalty.

Research results (Rofiah, 2017) found that educational service satisfaction has a positive and significant influence on student loyalty. The results of these studies conclude that the higher the quality of service, the greater the loyalty of educational customers in using educational services.

The results of research conducted by (Dirgantari, 2012) found that the influence of the quality of educational

services on the image of higher education was considered positive and significant, meaning that satisfaction with educational services had a positive and significant influence on the Quality of College Life (QLC). The results of this research conclude that the higher the academic service, the more it will improve the quality of the image of the educational institution.

H2: Educational Service Satisfaction on Loyalty

H3: Satisfaction with educational services on the quality of university life

2.6.3 The Influence of Administrative Service Satisfaction on Loyalty and Quality of Higher Education Life

The results of research conducted by (Rinala et al., 2013) found that administrative service satisfaction has a positive and significant influence on student loyalty. The results of these studies conclude that the higher the academic service, the greater the loyalty of educational customers in using educational services.

The results of research conducted by (Maidinsah et al., 2012) found that the relationship between education, administration, and facilities was found to be significant on the quality of university life with an effective level of 10%. A positive coefficient value indicates that the relationship is consistent and not contradictory. The results of this research can conclude that increasing administrative services can influence improving the Quality of College Life (QLC).

H4. The Influence of Administrative Service Satisfaction on Loyalty

H5. The Influence of Administrative Service Satisfaction on the Quality of College Life

2.7 Research Framework

The theoretical framework serves as the foundation for all research efforts, according to Sekaran and Bougie (2003). It provides a foundation from which hypotheses can be derived and further tested to ensure the validity of the theory formulated. After this validation, the next step involves measurements using appropriate statistical analysis. Based on existing theory and previous research, there is an established relationship between the variables described previously. Based on this premise, the author designed a research model, as illustrated in the following figure.
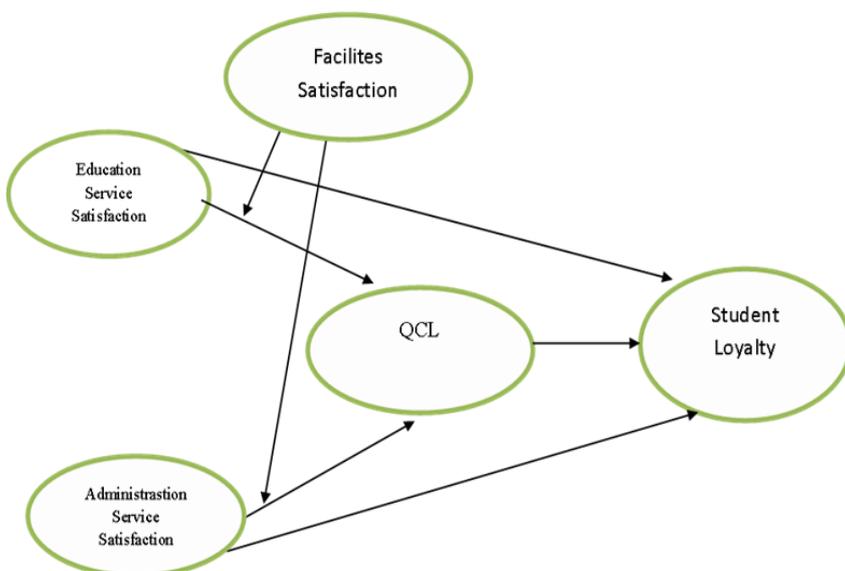

Figure 1: Research Framework

METHODOLOGY

3.1 Research Instruments

To ensure the validity of the study, all measurement items were sourced from previous research, with minor adjustments made to ensure consistency with this analysis. Specifically, the five items measuring Educational Service Satisfaction were adapted from Suharta (2017), while the five indicators for assessing Administrative Service Satisfaction were adopted from Alfiani (2016). The Quality of College Life variable uses five indicators derived from DK (2016), and the Facility Satisfaction indicator is taken from Khurshid & Arshad (2012).

The data collection process uses a questionnaire with a 5-point Likert scale. In addition, in-depth interviews were conducted with various sources (informants) to obtain comprehensive information regarding research variables and to complement the results obtained from quantitative analysis.

3.2 Population and Research Sample

In this study, the population was students from the Aceh Ministry of Health Polytechnic. Determining the minimum sample size for SEM according to Hair et al (2010) is 5-10 times the variable indicator. So the number of indicators is 22 indicators multiplied by 8 (22 x 8 = 176). So the total sample in this study was 176 respondents from the Aceh Ministry of Health Polytechnic students.

3.3 Data Analysis

This research uses a dual approach to data analysis, namely descriptive and verification methods. Initially, descriptive analysis was conducted to thoroughly investigate the demographic profile of the respondents, thereby revealing the various characteristics of the research participants. This phase also includes an assessment of the internal consistency of the constructs being examined. Next, verification analysis was carried out using Structural Equation Modeling (SEM) to examine and validate the relationships between the variables raised in this research. SEM offers a powerful statistical method for modeling complex relationships, allowing the examination of both observed and latent variables. It serves as a powerful tool to empirically test the hypothesized relationships between key constructs. SEM analysis uses IBM SPSS-AMOS version 22, a well-known software designed for Structural Equation Modeling. The software provides a comprehensive platform for triggering complex interaction variables and assessing overall research model suitability. The use of SEM, combined with the advanced features of IBM SPSS-AMOS version 22, ensures a rigorous verification process, thereby increasing the robustness and reliability of the study.

RESEARCH RESULTS AND DISCUSSION

4.1 Respondent Characteristics

This is a description of the demographic data of the respondents. Based on gender, the majority were women (90.3%, n=159), while only 9.7% (n=17) were men. Based on age, the highest proportion of respondents was 19 years old (40.9%, n=72), followed by 20 years old (30.7%, n=54), 18 years old (18.8%, n=33), and those aged over 20 years (9.6%, n=17). Regarding study programs, the most represented is "DIPLOMA 3 Dental Health" (51.1%, n=90), followed by "DIPLOMA 3 Sanitation" (14.8%, n=26), "DIPLOMA 3 Laboratory Technology" (11.9%, n =21), "DIPLOMA 3 Health Analyst" (9.7%, n=17), "DIPLOMA 3 Nutrition" (8.5%, n=15), and "DIPLOMA 3 Midwifery" (4.0%, n=7). These findings provide a comprehensive picture of the demographic composition of the sample respondents, thereby helping to understand the characteristics of the study population.

4.2 Testing Research Instruments

A. Validity with Average Variance Extracted (AVE)

Average Variance Extracted (AVE) is used to test the validity of each indicator and variable, where the AVE value reflects how much variance or diversity of the manifest variable can be accommodated by the latent construct. The greater the AVE value, the greater the representation of the manifest variable towards the latent construct. The Average Variance Extracted (AVE) table shows the extent to which the variance of each variable can be explained by the indicators used. The AVE value ranges from 0 to 1, with a higher value indicating a better ability to explain variables through indicators.

In this context, "Variables" refer to the various aspects or dimensions that are measured or assessed in research. Among them are Administrative Service Satisfaction, Educational Service Satisfaction, Facility Satisfaction, Quality of Lecture Life, and Student Loyalty. Each variable represents a different construct or concept that the researcher wishes to understand or evaluate. The "Average Variance Extracted (AVE)" value indicates the amount of variance captured by the items measuring each variable. A higher AVE value indicates that the items in the variable are highly related to each other and effectively measure the underlying construct. In this case, all AVE values are relatively high, ranging from 0.6 to 0.726, indicating good convergent validity and indicating that the items in each variable adequately represent the construct to be measured.

B. Reliability

In this context, "Variables" represent the various aspects or dimensions that are studied or evaluated in the research context. These variables include Satisfaction with Administrative Services, Satisfaction with Educational Services, Satisfaction with Facilities, Quality of College Life, and Student Loyalty. "Cronbach's Alpha" is a measure of internal consistency reliability, which assesses how closely related a set of items are as a group. A higher Cronbach's Alpha value indicates greater consistency or reliability between the items in each variable. In this case, all Cronbach's Alpha values are relatively high, ranging from 0.777 to 0.874, indicating strong internal consistency among the items measuring each variable. This indicates that the items in each variable measure the same underlying construct consistently, thereby increasing measurement reliability.

C. Measurement Model

Confirmatory Factor Analysis (CFA) functions as an important stage in assessing the dimensions that form latent variables in the framework of this research. The latent variables or constructs used in this research model consist of three exogenous variables and two endogenous variables which include the mediating variable and the dependent variable. Similar to traditional factor analysis, the main goal of CFA is to evaluate the unidimensionality of the dimensions that make up each latent variable, thereby allowing researchers to ascertain how effectively the indicators used reflect the single dimensions of the latent variable. Additionally, CFA plays an important role in validating the conceptual model by ensuring that the proposed latent variables fit the empirical data collected. Therefore, CFA results for each model will be presented and analyzed. These results not only provide insight into the extent to which the indicators measure latent variables but also facilitate the researcher's understanding of the alignment between the conceptual model and the empirical reality observed in the research data.

Table 1. Loading Factor

	Original Sample	Standard Deviation (STDEV)	T statistics	P value
a1 <- ES	0.789	0.057	13,778	0

a2 <- ES	0.891	0.016	55,782	0
a3 <- ES	0.843	0.027	30,962	0
a4 <- ES	0.764	0.052	14.81	0
b1 <- ASS	0.855	0.022	38,251	0
b2 <- ASS	0.839	0.041	20,357	0
b3 <- ASS	0.844	0.026	32,116	0
b4 <- ASS	0.861	0.023	37,761	0
c1 <- FS	0.791	0.023	34,686	0
c2 <- FS	0.861	0.018	48.9	0
c3 <- FS	0.838	0.031	26,927	0
c4 <- FS	0.724	0.071	10,177	0
d1 <- QCL	0.734	0.041	18,082	0
d2 <- QCL	0.781	0.032	24,565	0
d3 <- QCL	0.746	0.058	12.76	0
d4 <- QCL	0.833	0.023	35,813	0
e1<-SL	0.837	0.025	33,837	0
e2<-SL	0.878	0.02	44,669	0
e3<-SL	0.832	0.028	29,369	0
e4<-SL	0.862	0.019	45,288	0

The results of processed CFA data for all constructs in this study are displayed and can be used to test validity. To see the contribution of each indicator to the variable, the amounts can be seen in the following table. This table provides information regarding the outer loading of indicators on the latent variables measured in the research model. Outer loading measures how well these indicators can predict the true latent variable. The main focus is on the Original Sample column, where a value >0.50 indicates that the indicator is considered valid in measuring each latent variable. From these results, it can be concluded that all indicators are considered valid because they have a loading factor coefficient of >0.50

4.3 Hypothesis Testing

Hypothesis test verification This research was conducted to test and analyze the influence of Educational Service Satisfaction and Administrative Service Satisfaction on the Quality of College Life and Student Loyalty.
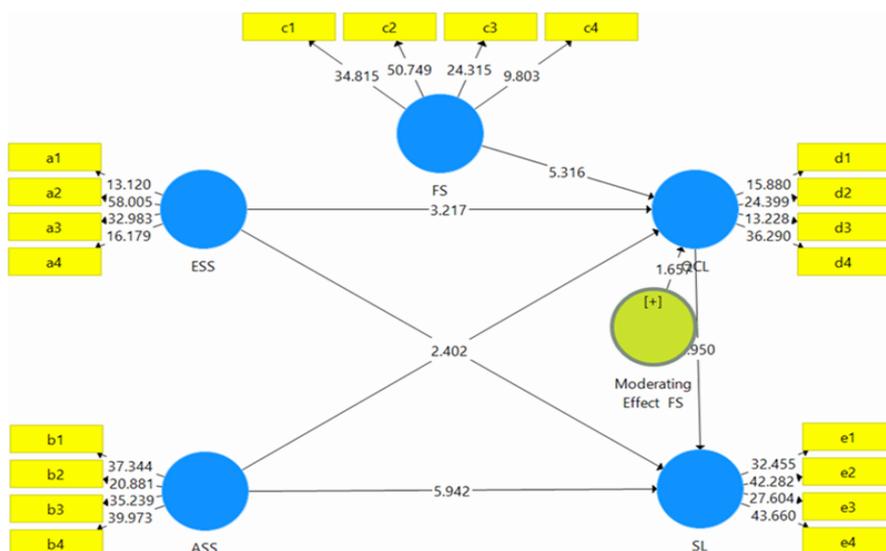
Table 2. Direct Effect Hypothesis Test Results

Direct/Indirect/Moderating Effects	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T statistics (|O/STDEV|)	P value
Administrative Service Satisfaction -> Quality of College Life	0.177	0.185	0.075	2,365	0.018
Administrative Service Satisfaction -> Student Loyalty	0.405	0.398	0.065	6,261	0
Educational Service Satisfaction -> Quality of College Life	0.243	0.238	0.076	3,195	0.001
Educational Service Satisfaction -> Student Loyalty	0.342	0.345	0.066	5.18	0
Facility Satisfaction->Quality of College Life	0.36	0.361	0.066	5,482	0
The Moderating Effect of Facility Satisfaction on Education Service Satisfaction->Quality of College Life	0.081	0.065	0.052	1,563	0.119
Quality of College Life -> Student Loyalty	0.187	0.191	0.062	3.02	0.003

The research findings revealed several significant direct impacts and moderating effects. First, Administrative Service Satisfaction shows a positive direct impact on the Quality of Higher Education Life (coefficient = 0.177, p-value = 0.018) and Student Loyalty (coefficient = 0.405, p-value = 0). Likewise, educational service satisfaction also has a positive effect on Quality of College Life (coefficient = 0.243, p-value = 0.001) and Student Loyalty (coefficient = 0.342, p-value = 0). Facility Satisfaction shows a direct positive impact on Quality of Life in Higher Education (coefficient = 0.36, p-value = 0). Apart from that, the Quality of College Life has a direct and positive effect on Student Loyalty (coefficient = 0.187, p-value = 0.003). Furthermore, there is evidence of a moderation effect, where Facility Satisfaction moderates the impact of Education Service Satisfaction on the Quality of Life in Higher Education (coefficient = 0.081, p-value = 0.119). These findings indicate that satisfaction with administrative services, education, and facilities has a positive effect on students' perceptions of the quality of campus life and their loyalty to the institution. In addition, the quality of campus life significantly influences student loyalty. The moderation effect implies that facility satisfaction can increase the impact of educational service satisfaction on the quality of campus life, although the level of significance is small. Overall, these results highlight the importance of various aspects of service satisfaction in shaping student perceptions and loyalty in the higher education environment.

4.4 Discussion

The findings presented above highlight the complex dynamics between various aspects of service satisfaction and their impact on students in the higher education environment. First, these results underscore the important role of administrative and educational services in influencing students' perceptions of their college experience. Higher levels of satisfaction with administrative and educational services are positively correlated with students' perceptions of the quality of campus life and their loyalty to the institution. This highlights the importance of effective administrative and educational support in fostering a positive college environment and fostering student loyalty. Additionally, the direct impact of facility satisfaction on the quality of campus life further emphasizes the importance of physical infrastructure and facilities in shaping students' overall satisfaction with their college experience. These findings suggest that higher education institutions need to prioritize providing satisfactory administrative services, education, and facilities to

improve students' perceptions of their campus life and foster long-term loyalty.

Second, the research results also reveal the moderating influence of facility satisfaction on the relationship between educational service satisfaction and the quality of campus life. Although satisfaction with educational services has a direct influence on the quality of campus life, satisfaction with facilities can magnify this impact, albeit to a smaller extent. This shows that although educational services play an important role in shaping the student experience, the quality of facilities and infrastructure can increase the effectiveness of educational services in improving the overall college experience. However, the marginal level of significance suggests that although facility satisfaction has the potential to moderate the impact of educational service satisfaction, other factors may also contribute to the quality of campus life. Overall, these findings underscore the diverse nature of student satisfaction in the higher education environment, emphasizing the need for higher education institutions to address multiple aspects of service provision to ensure a positive and enriching experience for their students.

The findings underscore the pivotal role of comprehensive service provision, encompassing administrative, educational, and facility-related aspects, in shaping students' perceptions of their college experience. Effective administrative support and high-quality educational programs emerge as key determinants of student satisfaction and engagement, emphasizing the need for institutions to prioritize investments in service quality improvement initiatives. Moreover, the significance of physical infrastructure in fostering a positive learning environment cannot be overstated, as well-maintained facilities contribute to a sense of belonging and enhance overall satisfaction among students.

4.5 Managerial Implications

These findings have significant managerial implications for higher education administrators and decision-makers aiming to increase student satisfaction and foster loyalty within their institutions. First, administrators must prioritize investments and improvements in administrative services, education, and facilities, as these aspects directly influence students' perceptions of their college experience. This can include improving administrative efficiency, providing high-quality educational resources and support, and maintaining well-equipped and comfortable facilities. By addressing these areas, colleges can create positive environment that increases student satisfaction and loyalty.

Furthermore, by realizing the moderating influence of facility satisfaction on the relationship between educational service satisfaction and the quality of campus life, managers must pay attention to the synergy between various service aspects. This suggests that improving facilities and infrastructure can complement educational services, thereby increasing their impact on the overall student experience. Therefore, strategic planning must involve an integrated approach that considers the interconnectedness of various service domains. Additionally, higher education institutions can implement regular feedback and assessment mechanisms to continuously monitor and improve the quality of services, ensuring alignment with students' evolving needs and preferences.

Additionally, understanding the direct impact of service satisfaction on student loyalty underscores the importance of building strong relationships and fostering a sense of belonging among students. Administrators should prioritize efforts to engage with students, address their concerns, and create opportunities for engagement and participation in the college community. By creating a supportive and inclusive environment, colleges can strengthen students' emotional attachment and commitment to the institution, ultimately increasing retention rates and long-term loyalty. Overall, these managerial implications highlight the need for higher education institutions to adopt a holistic approach to service provision, with a focus on improving multiple aspects of the student experience to increase satisfaction, loyalty, and overall institutional success.

CONCLUSION

In conclusion, the findings of this study underscore the significant influence of service satisfaction on students' perceptions of the quality of life in higher education and their loyalty to the institution. This study reveals that satisfaction with administrative services, education, and facilities has a direct impact on students' perceptions of their college experience, highlighting the important role of effective service provision in shaping student satisfaction and loyalty. In addition, the research results show the moderating influence of facility satisfaction on the relationship between educational service satisfaction and the quality of campus life, indicating the importance of an integrated approach to service improvement.

These findings have several implications for higher education administrators and decision-makers seeking to increase student satisfaction and foster loyalty within their institutions. First, prioritizing investments and improvements in administrative services, education, and facilities is critical to creating a positive college environment that increases student satisfaction and loyalty. In addition, by recognizing the interconnectedness of various aspects of services, managers must adopt an integrated approach that considers synergies between administrative, educational, and facility services. Additionally, efforts to engage with students, address their concerns, and foster a sense of belonging in the college community are critical to building strong relationships and increasing student loyalty.

Overall, this research highlights the importance of providing comprehensive services in enhancing the college experience and fostering student loyalty. By addressing various aspects of service satisfaction and fostering a supportive and inclusive environment, higher education institutions can strengthen student satisfaction, loyalty, and ultimately institutional success.

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