



Academic Service Quality And Customer Lifecycle Management On Student Satisfaction

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Abstract

CLM being part of Customer Relationship Management (CRM) is an approach that focuses on managing and developing long-term relationships with customers. This research aims to (1) test the quality of academic services on student satisfaction; (2) testing customer lifecycle management on student satisfaction; and (3) testing the quality of academic services and customer lifecycle management on student satisfaction. The research method used is a descriptive-correlational quantitative method with multiple regression analysis techniques. The results of the research obtained are that there is an influence of academic service quality on student satisfaction, (2) there is an influence of customer life cycle management on student satisfaction, (3) there is an influence between the quality of academic services and customer life cycle management on student satisfaction. The Faculty's excellent service provided to students and the suitability of the student service process during their studies by paying attention to service rules and procedures will affect student satisfaction.

Keywords: Quality, Academic Services, Customer Lifecycle Management, Student Satisfaction

1. INTRODUCTION

World conditions in the era of disruption and the VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) Era refer to a rapidly changing and unpredictable environment, which can have a significant impact on various sectors, including higher education. There are some specific challenges faced by higher education in the VUCA era, namely the rapid development of technology that can change the way of learning and delivery, the adoption and integration of new technologies in higher education curriculum and infrastructure, higher education must accommodate various backgrounds, learning styles, protection of student personal data and security of higher education information systems, development of effective information security policies and practices and student needs and most importantly the provision of adequate services and support for students from diverse demographic groups [1] [2] [3] [4].

The transformation of higher education towards independence, competitiveness, and collaboration is an important effort in facing the dynamics of the VUCA era. Universities need to develop strategies, namely network development using

technology to build networks between students, alumni, and industry partners and explore the potential for collaboration with other higher education institutions [5] [6] [7] [8]. By combining aspects of independence, competitiveness, and collaboration, universities can create a dynamic, adaptive, and relevant educational ecosystem to prepare students for the challenges of the VUCA era.

The gap between service quality and Customer Lifecycle Management (CLM) can have a significant impact on student satisfaction and university reputation. CLM being part of Customer Relationship Management (CRM) is an approach that focuses on managing and developing long-term relationships with customers. Therefore, efforts and strategies are needed, namely conducting surveys to understand students' expectations of services and their experiences throughout the student lifecycle [9] [10] [11] [12]. In addition, it uses student lifecycle data to provide more personalized and tailored services and develop academic and non-academic support programme that students need [13] [14] [15] [16] [17]. The need to improve the ability to perform promised services in a reliable manner. Academic and non-academic services also need to customize the service in terms of staff courtesy to inspire student confidence and the emotional aspects of the service should be considered [18] [19] [20].

Based on the condition gap described, this study aims to (1) test the quality of academic services on student satisfaction; (2) test customer lifecycle management on student satisfaction; and (3) test the quality of academic services and customer lifecycle management on student satisfaction. This research is useful for (1) University leaders to be used as a reference and evaluation in formulating academic and non-academic service policies on campus; (2) University Educators & Education Personnel to be used as a reference and evaluation in providing academic services in lectures and academic and non-academic administrative services in campus offices; (3) Other researchers to be used as a reference for topics and further research studies with different methods. The aim is to answer the state of the art how much student satisfaction with the quality of academic services felt by students and see the quality of the lifecycle experienced by students from entry to graduation as alumni.

2. METHOD

This research uses descriptive-correlational quantitative method. This study consists of three variables, namely two independent variables and one dependent variable. The first independent variable is Academic Service Quality (X1) and the second independent variable is Customer Lifecycle Management (X2). While the dependent variable is Student Satisfaction (Y). This study has dependent variables and independent variables. The approach in this study was carried out deductively, which aims to test the theory through data collection and confirmed through the results obtained through research instruments, the instrument results were converted in the form of scores collected to be confirmed in theory [21]. The location of this research

is at the Faculty of Education, State University of Surabaya (Unesa) with research respondents who are students. Because students as users of academic services during their studies in higher education, are considered to better understand the quality of academic services and the life cycle in higher education. The description of the research design is presented in the following figure:

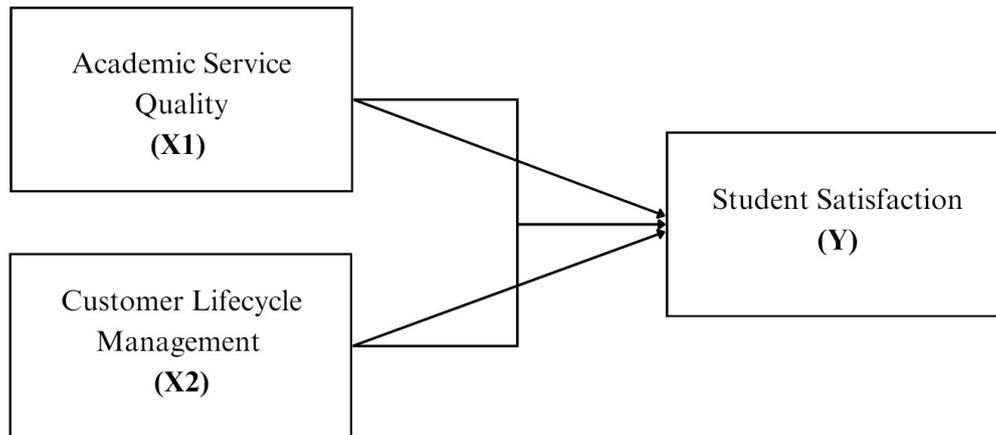


Figure 1. Research Design

The research process starts from identifying problems, preparing instruments, collecting data and finding conclusions as a whole. The following is the flow of the research process carried out:

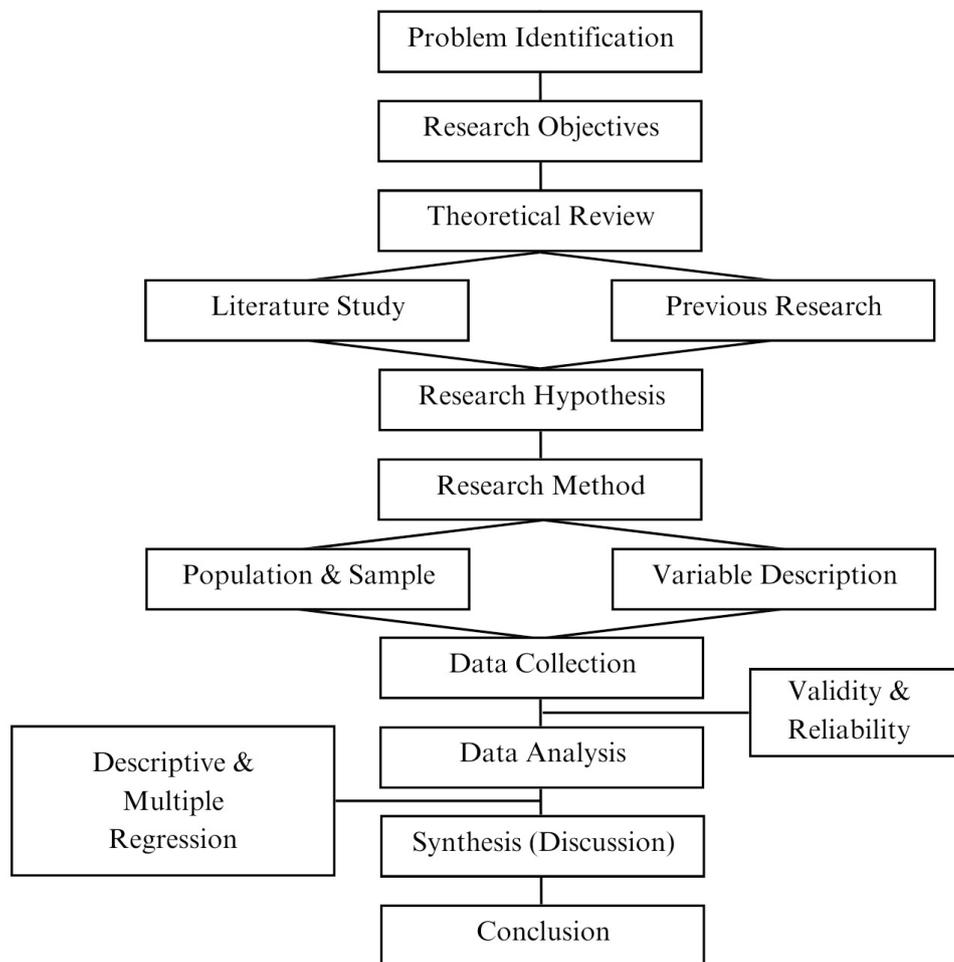


Figure 2. Research Process Flow

The following is a description of the research variables:

Table 1. Description of Research Variables

No	Variables	Sub-Variables	Indicators
1	Academic Service Quality (ServQual Theory - Parasuraman) [36]	Tangible Reliability Responsiveness	a. Physical aspects that can support student services a. Aspects of staff reliability in serving students a. Aspects of staff responsiveness in

No	Variables	Sub-Variables	Indicators
		Empathy	serving students a. Aspects of service quality seen from staff empathy in providing student services
		Assurance	a. Quality assurance aspects of student services according to standards
2	Customer Lifecycle Management (<i>CLM-AIDA - Elias St. Elmo Lewis</i>) [35]	Reach	a. Achievement of information to students
		Acquisition	a. Information communication channels that students can contact
		Conversion	a. Providing clear and easy information to students
		Retention	a. Provide credible and secure information storage for students b. Ensure consistency and professionalism of student services
		Loyalty	a. Testimonials of service use from students b. Diffusing the quality of service provided to others
3	Student Satisfaction (<i>Attribution Theory – Fritz Heider</i>) [33]	Personal Characteristic/Internal Factors	a. Ability of staff to provide student services (<i>ability</i>) b. Staff efforts in providing student services (<i>efforts</i>)

No	Variables	Sub-Variables	Indicators
		Situational Influences/External Factors	c. Positive staff personalities in providing student services (<i>positive personal traits</i>) a. Environment around the student service unit (environment) b. Circumstances around the student service unit (<i>circumstances</i>) c. Other people around the student service unit (<i>other people</i>)

The sampling technique of this study used incidental random sampling because in this study wanted to measure proportions based on the distribution of students in the Faculty of Education who were sampled. The total population based on data from the Directorate of Academic Affairs & Directorate of Information Technology, Communication and Cooperation of Unesa (2024) is 6.985 students, consisting of active students in the Class of 2019, 2020, 2021, 2022 and 2023. While in determining the number of samples taken by 5% of the total population with the technique of area/cluster sampling in each study program [22].

This study uses a primary data collection method (directly) and uses an instrument in the form of a questionnaire, in which there are questionnaire measurement criteria using a Likert Scale with 4 (four) answer choices (Strongly Agree; Agree; Disagree; Strongly Disagree). The instrument that has been prepared needs to be tested on a sample outside the selected sample. There are 2 (two) tests, namely validity test and reliability test. The validity test uses Pearson's Product Moment and the reliability test uses Cronbach's Alpha. The following are the results of the reliability and validity tests carried out on other faculties at State University of Surabaya:

Table 2. Reliability Test Results

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
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.881	.884	3
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Based on Table 4, it can be seen that the three research variables obtained a value of 0.881 > 0.600, which has exceeded the minimum standard of research using regression analysis and the data is reliable. While the validity results of the 36 statement items have exceeded > 0.3, so it can be concluded that all statement items are valid.

The data analysis used in this study is descriptive-correlational multivariate. The descriptive analysis uses Mean and correlation analysis using multiple linear regression through T-Test and F-Test while still fulfilling assumption/requirement tests including normality test using Kolmogorov-Smirnov, linearity test and multicollinearity test with each criteria set. The following formula is used:

+

Description:

- Y = Predicted value (Student Satisfaction)
- = Constant or if the price of X = 0
- = Regression coefficient for variable
- = Regression coefficient for variable
- = Value of independent variable (Academic Service Quality)
- = Independent variable value (Customer Lifecycle Management) [34]

The hypotheses in this study include: (1) there is an influence between academic service quality on student satisfaction; (2) there is an influence between customer life cycle management on student satisfaction; and (3) there is an influence between academic service quality and customer life cycle management on student satisfaction.

3. RESULTS AND DISCUSSION

Results

Respondent Description

Table 3. Crosstabulation of Gender and Respondent Force

		Forces					T otal
		2 019	2 020	2 021	2 022	2 023	
G ender	M ale	0	6	8	4	4	22

	F	1	4	5	2	2	1
	emale	1	4	2	6	7	50
	Total	1	0	5	0	3	1
			0	0	0	1	72

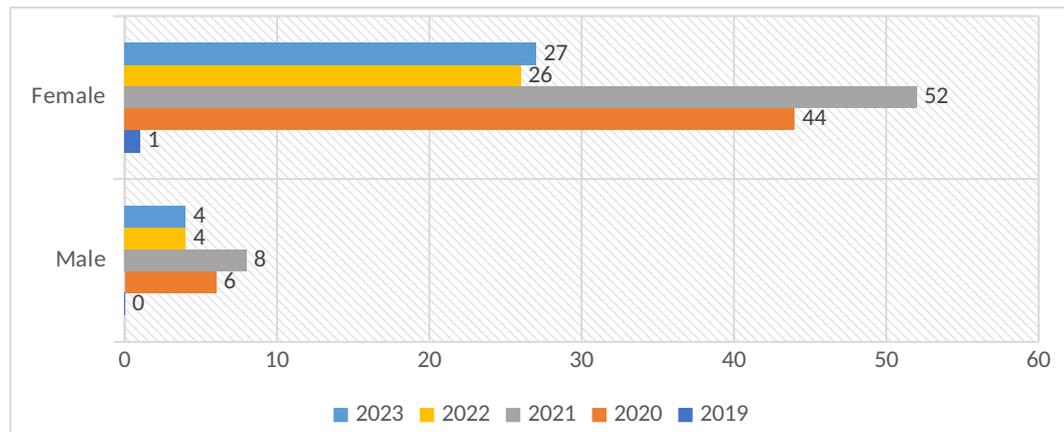
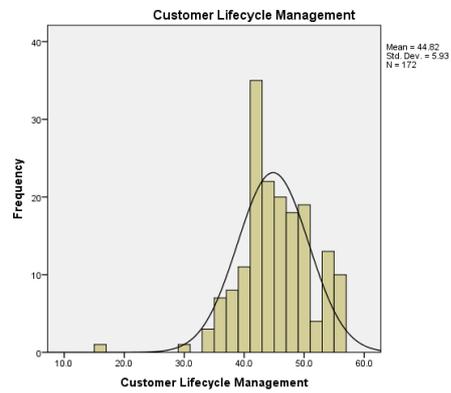


Figure 3: Gender and Generation of Respondents

Based on Table 3 and Figure 3, it can be seen that the research respondents are seen from the aspect of gender and class of respondents. The male respondents were 4 students of the Class of 2023, 4 students of the Class of 2022, 8 students of the Class of 2021, 6 students of the Class of 2020 and 0 students of the Class of 2019. Meanwhile, female respondents were 27 students of the Class of 2023, 26 students of the Class of 2022, 52 students of the Class of 2021, 44 students of the Class of 2020 and 1 student of the Class of 2019. The following are the results of descriptive analysis of the three variables using Mean data analysis:

Table 4. Descriptive Analysis Results

	N	Range	Minimum	Maximum	Sum	Mean	Std. Error
Academic Service Quality	50	8.0	2.0	40.0	355.0	7.100	1.134
Customer Lifecycle Management	50	4.0	6.0	10.0	709.0	14.180	4.820
Student Satisfaction	50	7.0	1.0	8.0	786.0	15.720	9.453
Valid N (listwise)	50						



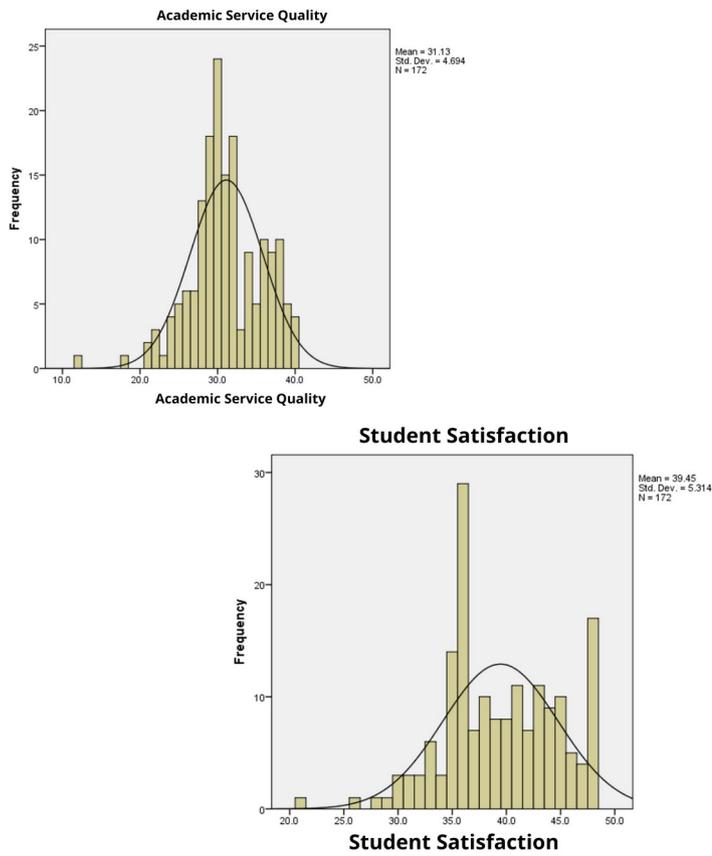


Figure 4. Histogram of Descriptive Analysis Results

Based on Table 4 and Figure 4, it can be concluded that the Mean value on the Academic Service Quality variable is 31.134, the Customer Lifecycle Management variable is 44.820 and the Student Satisfaction variable is 39.453, overall in the Moderate category.

Assumption Test / Research Prerequisites

Table 5. K-S Normality Test Results

Academic Service Quality	Customer Lifecycle Management	Student Satisfaction
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	N		172	172	172
Normal Parameters ^{a,b}	Mean		31.134	44.820	39.453
	Std. Deviation		4.6941	5.9301	5.3139
	Absolute		.107	.090	.120
Most Extreme Differences	Positive		.107	.068	.120
	Negative		-.084	-.090	-.073
	Test Statistic		.107	.090	.120
	Asymp. Sig. (2-tailed)		.000 ^c	.000 ^c	.000 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Table 6. D-W Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.790 ^a	.624	.620	3.2770	1.809

a. Predictors: (Constant), Customer Lifecycle Management, Academic Service Quality

b. Dependent Variable: Student Satisfaction

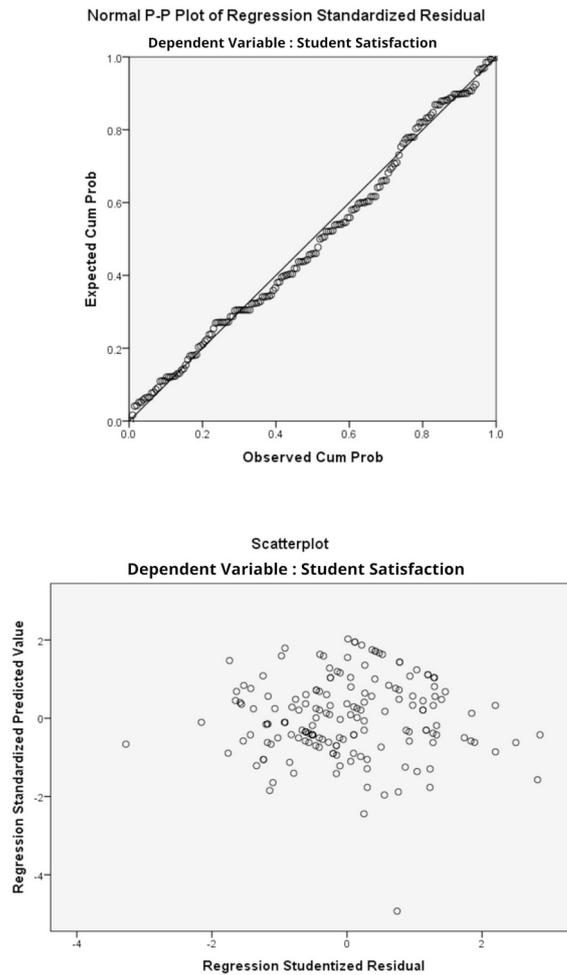


Figure 5. Results of P-P Plot of Normality and Scatterplot of Heteroscedasticity Data

Based on Table 5, Table 6 and Figure 5, it can be seen that of the three variables, the normality test using Kolmogorov-Smirnov (K-S) obtained sequential values of 0.107; 0.090; 0.120 > 0.05 and based on the P-P Plot that the plotting data follows the direction of the diagonal line, so it can be concluded that the data is Normally distributed. For the autocorrelation test, the results obtained through the Durbin-Watson (D-W) test are 1.809, while looking at the D-W table and the number of respondents obtained a value of 1.7741, it can be concluded that the D-W value = $1.774 < 1.809 < 2.225$ there are no symptoms of autocorrelation. While the results of

the heteroscedasticity test data obtained a pattern that spreads in the Scatterplot image, so it can be concluded that there is no heteroscedasticity.

Table 7. Results of Multiple Regression Tests (Partial) and Multicollinearity Tests

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
(Constant)	.617	.1965		3.1470	.001		
Academic Service Quality	.328	.075	.290	4.351	.000	.501	1.994
Customer Lifecycle Management	.500	.060	.558	8.383	.000	.501	1.994

a. Dependent Variable: Student Satisfaction

Based on the analysis results in Table 6, it can be seen that the multicollinearity of the data can be seen from the Tolerance value = 0.501 > 0.100 and the VIF value = 1.994 < 10, so it can be concluded that there are no symptoms of multicollinearity. While the T value on the Academic Service Quality variable is 4.351 (Sig: 0.00) and the Customer Lifecycle Management variable is 8.383 (Sig: 0.00), if using the number of respondents and Table T, a value of 4.225 is obtained. It can be concluded that in the Academic Service Quality variable (X1) the value of T = 4.351 > 4.225 and Sig = 0.00 < 0.05, so there is an influence between academic service quality on student satisfaction (H0 is rejected). Meanwhile, in the Customer Lifecycle Management (X2)

variable, the value of $T = 8.383 > 4.225$ and $\text{Sig} = 0.00 < 0.05$, so there is an influence between customer life cycle management on student satisfaction (H_0 is rejected).

Table 8. Multiple Regression Test Results (Simultaneous)

Model	Sum of Squares	df	Mean Square	F	Sig.
1	301.3807	2	150.6904	14.0326	.000 ^b
	Residual	181	10.739		
	Total	482			
		8.628	71		

a. Dependent Variable: Student Satisfaction

b. Predictors: (Constant), Customer Lifecycle Management, Academic Service Quality

Referring to the results of the analysis (simultaneously) in Table 7, it can be seen that the F value on the Academic Service Quality and Customer Lifecycle Management variables is 140.326 (Sig: 0.00), if you look at the number of respondents and Table F, a value of 3.048 is obtained. It can be concluded that in Academic Service Quality (X1) and Customer Lifecycle Management (X2) the value of $F = 140.326 > 3,048$ and $\text{Sig} = 0.00 < 0.05$, so simultaneously there is an influence between academic service quality and customer life cycle management on student satisfaction (H_0 rejected).

The Effect of Academic Service Quality on Student Satisfaction

Based on multiple regression tests (partial), the results show that there is an influence between the academic service quality on student satisfaction. There are several statement items that dominate the influence of the two variables, including statement item number 4 (0.537 & 0.501), namely "Education personnel (Faculty Office Staff) provide academic services with full sincerity", statement number 5 (0.536; 0.576 & 0.523), namely "Education personnel (Faculty Office Staff) provide academic services swiftly", statement number 7 (0.684 & 0.632), namely "Education personnel (Faculty Office Staff) are friendly in serving students" and statement number 8 (0.523 & 0.507), namely "Education personnel (Faculty Office Staff) always provide alternative problem solving to students when they get administrative problems". This is in line with the results of the study which state that strategies that focus on sustainable development (i.e. promoting university services) affect students' positive perceptions [23] [24] [25]. This shows that the quality of academic services,

especially in the personal realm of education personnel, namely excellent service, readiness and friendly attitude, is the main factor in students being satisfied with Faculty services.

The Effect of Customer Lifecycle Management on Student Satisfaction

Referring to the results of multiple regression analysis, the results obtained are that there is an influence between customer life cycle management on student satisfaction. As for some statement items that contribute to influencing both variables, including statement item number 5, namely “The faculty always provides academic information clearly to students”, statement number 7, namely “The faculty guarantees that students’ personal data is safe and controlled” & statement number 10, namely “The faculty continues to maintain the professionalism of education personnel by following the rules of excellent service”. These results are in line with research which states that strategic steps to strengthen the ‘position’ of the institution and simplify procedures to improve efficiency and interaction with customers [26] [27] [28]. Therefore, clear academic information services and the guarantee of student personal data security are the main aspects of student satisfaction with Faculty services.

The Effect of Academic Service Quality and Customer Lifecycle Management on Student Satisfaction

The results obtained based on multiple regression tests are that simultaneously there is an influence between the quality of academic services and customer life cycle management on student satisfaction. This is in accordance with research which states that Customer Relationship Management (CRM) is an important strategy to increase customer loyalty and to increase customer loyalty through quality service by implementing several strategies including understanding customer expectations, training and empowering education personnel to the maximum according to task, maintaining consistency and professionalism, building emotional relationships and resolving obstacles and complaints effectively and utilizing technology in providing excellent service [29] [30] [31] [32]. It can be concluded that the Faculty’s excellent service provided to students and the suitability of the student service process during their studies by paying attention to service rules and procedures will affect student satisfaction.

4. CONCLUSION

The quality of academic services, especially in the personal realm of education personnel, namely excellent service, readiness and friendly attitude are the main factors for students to be satisfied with Faculty services. In addition, clear academic information services and the guarantee of student personal data security are the main aspects of student satisfaction with Faculty services. In line with this, the Faculty’s

excellent service provided to students and the suitability of the student service process during their studies by paying attention to service rules and procedures will affect student satisfaction.

There is a significant influence between the quality of academic services and customer life cycle management on student satisfaction, of course there are still some things that need to be improved, especially for faculty leaders in improving accountability efforts for student academic service satisfaction results can be submitted openly through media that is easily accessible to students and media suggestions and criticisms of academic services for students. In addition, another improvement for education personnel is that there is a contact service that students can contact via WhatsApp when experiencing administrative problems.

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