The Effect of Service Quality Dimensions on Student Satisfaction in Higher Education X

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Keywords: Service Quality, Satisfaction, Academic Services

Abstract: Higher Education X as part of the higher education system is faced with various challenges both in the development of science and technology, globalization and competition with other educational institutions. Therefore, management improvements, customer orientation, and the implementation of quality management are demands to be able to survive and be able to compete in the future. One important step that must be done to start making changes is the need to know how satisfied students are. This study aims to determine and analyze the effect of service quality dimensions on student satisfaction. This research was conducted in X college. Data collection techniques were questionnaires. Data is processed using the SEM-Partial Least Square-Smart PLS application. The results showed that, 65.85% of student satisfaction could be explained by lecturer competence, leadership commitment, lectures, physical facilities, supporting facilities, administrative and student services. Lecturer competence, lectures, physical facilities, supporting facilities, administrative services, and student affairs have a positive influence on student satisfaction.

1 INTRODUCTION

Produce qualified graduates who are able to develop science, technology, humanities, and arts, based on religious morality. Being able to compete at the national and international levels, is one of the missions of X universities. In an effort to realize the mission and goals, without exception all faculties, and study programs must be able to carry out their functions and objectives. This is intended to be able to produce qualified students who are competent in their field. Thus, they can make good name and image of the university, and be calculated by prospective students, users and recruiter. Various efforts have been carried out to improve the quality of education services.

In accordance with the new paradigm of higher education management as a service industry, it is necessary to improve the quality of services. Service quality consists of curricular services, research services, community service, administrative services and extra-curricular services. One form of curricular services is the implementation of lectures, among others: curriculum, lecture design, syllabus, lecture material, lecture process and evaluation. Curriculum services will be quality if supported by adequate facilities and infrastructure. As a service industry, customer satisfaction is an indicator of the success of educational institutions in carrying out their functions.

In addition, customer satisfaction is an essential factor in the application of Total Quality Management (TQM). Therefore, education and training institutions in this case universities must identify customers and their needs carefully and try to satisfy them. The main step that must be done in implementing Total Quality Management is to view students as the main customers who must be served (Ivancevich, 2014). Through sustainable service development programs will be able to be presented and provided educational services in accordance with customer needs so that customer satisfaction will be created. Higher Education X as part of the higher education system is faced with various challenges both in the development of science and technology, globalization and competition with other educational institutions.

Therefore, management improvements, customer orientation, and the implementation of quality management such as quality assurance, are demands to be able to survive and be able to compete in the future. One of the important steps that must be done to start making changes is the need to know how

satisfied students are in academic and non-academic services so far. Without these initial steps, it is difficult to make further improvements. Therefore, the purpose of this study was to find out and analyze the factors that influence the satisfaction of college students X. The problems are formulated as follows: How is the influence of service quality dimensions on student satisfaction?

2 CUSTOMER SATISFACTION THEORY AND SERVICE QUALITY IMPROVEMENT

Customer satisfaction according to Gerson (2014), is "customer perception that expectations have been met or exceeded". Based on this theory, customer satisfaction lies in customer expectations of a product. Customers will feel satisfied if the product they consume is the same as the customer wants the product. Mowen and Kotler stressed that customer satisfaction lies in the attitude shown by customers after they use a product that attitude can indicate they are happy or they are disappointed. This customer pleasure is indicated that the customer is satisfied, on the contrary if the customer is disappointed it can be said that they are not satisfied.

Kotler (2011) argues that: Customer form expectations about the value and satisfaction that market offers will deliver and buy accordingly. Satisfied customers buy again and tell others about their good experience. The theory states that customers who are satisfied with a product, it is certain that the customer will make a repeat purchase. And the other thing that is done by a satisfied customer is word of mouth marketing about an experience that satisfies him. Customer satisfaction is a situation where the wishes, expectations, and needs of customers are met. While a service is considered satisfactory if the service can meet customer needs and expectations. So the relationship between satisfaction and service quality is: if the quality of service is high or high, customer / customer satisfaction will increase or be high. In other words, the customer / customer will be satisfied or very satisfied if the quality or quality of service can be trusted, relied on and tested. Satisfaction and quality of service delivery are two inseparable things. Some experts have succeeded in identifying the 10 main factors that determine service quality, including: reliability, responsiveness, competence, access, courtesy,

communications, credibility, security, understanding / knowing the customer and tangibles.

Referring to these definitions, student satisfaction means a feeling of pleasure, satisfaction and the relief of learners in higher education for what they need during the study. Students are said to be customers because he pays education services to study. This is certainly accompanied by the desired expectations in the education process such as service, facilities, quality of lecturers, and leadership. Referring to these expectations, of course, every student has different perceptions from one another. There are those who perceive with high standards so that they cannot be fulfilled by the institution, some are moderate and some are low.

3 MEASUREMENT OF CUSTOMER SATISFACTION

In measuring customer satisfaction Kurtz and Louis (2009) argue that: "Satisfaction can be measured in terms of the gaps between what customers expect and what they perceived they have received. This theory can be concluded that real satisfaction can be measured, by looking at customer expectations of a product and how the company meets these expectations. If positive results and customers feel fulfilled, then it can be said that customers are satisfied. Zeithaml, Mary and Gremler (2013) argue that:"Customer satisfaction is influenced by spesific product or service features, perception of product and service quality, and price". According to this theory that customer satisfaction can be influenced of product specifications , there is a perception of a product and service quality and how much the company gives to the product. Dann argue that: Customer loyalty is seen by Whitwell, Lukas and Doyle (2003) as being influenced by satisfaction with the quality of the value offering, which in turn is affected by five factors: (1) Realiability(2) Responsiveness (3) assurance(4) empathy (5) tangibles.

4 RESEARCH METHODS

4.1 Research Location, Samples and Data Collection Techniques

This research was conducted in X college, with a total sample of 640 students with proportional randomized composition based on the Faculty. Data

collection techniques in this study are questionnaires or questionnaires.

4.1 Analysis Technique

The research data was processed using the SEM - Partial Least Square (PLS) application of the SmartPLS application. Measurement of satisfaction using the Likert-Scale based on the instructions of Riduwan and Sunarto, (2013).

4.3 Conceptual Research Model and Research Instrument

The conceptual model in this study is a modification of the total quality management model, while the instrument used to measure the quality of higher education service refers to in-depth literature review of previous research, interviews with several students and deans, as well as a combination of Team Student Satisfaction FIU (2002), Ardi R (2011) and Singgih M (2008), Wibisono, (2012).

5 RESULTS AND DISCUSSION

5.1 Identification of Service Quality Attributes

The FGDs were conducted for students in 2016, the materials presented were services thought out by students, positive aspects experienced by students during the service, negative aspects experienced by students , ideal service in the eyes of students. Based on the results of the FGD, there were general themes related to the quality of higher education services. Further review of the themes that emerge yields 62 attributes of higher education service quality.

5.2 Formulation of Service Quality Measurement Instruments

Each statement is measured using a Likert scale with a range of 1-5, where 1 shows strongly disagree and 5 shows strongly agree to the features in the statement. Model Structural.Analysis

5.3 Outer Model Instrument/Analysis Testing

Good instruments are valid and reliable instruments. To test the validity and reliability of an instrument,

the dimensional of the instrument must be fulfilled. The dimensional can be seen from the loading factor of each variable. Outer model analysis is carried out to ensure that the measurement used is feasible to be used as a measurement (valid and reliable). Outer analysis of this model specifies the relationship between latent variables and their indicators. Tests carried out on the outer model are:

5.3.1 Convergent Validity

The converging values of validity is the value of the loading factor on the latent variable with the indicators. Expected values > 0.6. Outer Loadings (measurement model) or convergent validity are used to test the uni dimensional of each construct. According to Chin (1998), the indicator loading factors which are greater or equal to 0.5 can be said to be valid. SmartPLS output for loading factor gives results as in Figure 1 and Table 1.

Figure 1 shows that the item A-8,C-6,C-9,D-1,E-5,E-6,E-7,F-7,F-8,F-9,G-1,G-4,H-6 dan H-7 has a factor loading below 0.6. Therefore, it must be removed from the model. Thus, the model used is as shown in Figure 2.

Validity testing for reflective indicators uses correlations between item scores and their construct scores. Measurements with reflective indicators indicate changes in an indicator in a construct if other indicators in the same construct change (or are removed from the model). Reflective indicators are suitable for measuring perception so that this study uses reflective indicators. Table 2 shows that the loading factor gives a value above the recommended value of 0.5. The smallest value is 0.640 for the G3 indicator, namely soft skill development. This means that the indicators used in this study are valid or have met convergent validity. The following is a diagram of the loading factor of each indicator in the research model:

5.3.2 Discriminant Validity

This value is a cross loading value factor that is useful to find out whether the construct has adequate discriminant that is by comparing the loading values in the intended construct must be greater than the loading value with another construct.
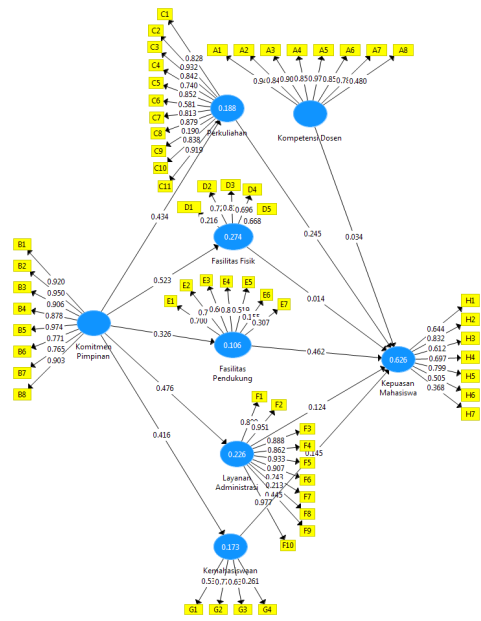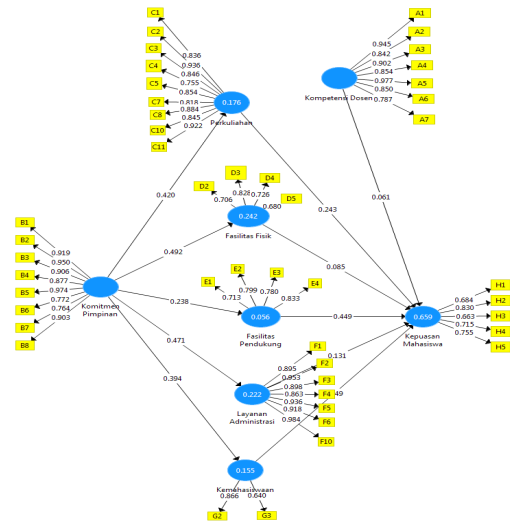
Source: Output SmartPLS 2017

Figure 1. Loading Diagram Factors Affecting Service Quality Dimensions Against Student Satisfaction at Higher Education

Table 1: Outer Model (Weights or Loadings)

	Original Sample		Original Sample
A_1 <- A	0.945	C_{11} <- C	0.922
A_2 <- A	0.842	D_2 <- D	0.706
A_3 <- A	0.902	D_3 <- D	0.826
A_4 <- A	0.854	D_4 <- D	0.726
A_5 <- A	0.977	D_5 <- D	0.680
A_6 <- A	0.850	E_1 <- E	0.713
A_7 <- A	0.787	E_2 <- E	0.799
B_1 <- B	0.919	E_3 <- E	0.780
B_2 <- B	0.950	E_4 <- E	0.833
B_3 <- B	0.906	F_1 <- F	0.895
B_4 <- B	0.877	F_2 <- F	0.953
B_5 <- B	0.974	F_3 <- F	0.988
B_6 <- B	0.772	F_4 <- F	0.863
B_7 <- B	0.764	F_5 <- F	0.936
B_8 <- B	0.903	F_6 <- F	0.918
C_1 <- C	0.836	F_{10} <- F	0.984
C_2 <- C	0.936	G_2 <- G	0.866
C_3 <- C	0.846	G_3 <- G	0.640
C_4 <- C	0.755	H_1 <- H	0.684
C_5 <- C	0.854	H_2 <- H	0.830
C_7 <- C	0.818	H_3 <- H	0.663
C_8 <- C	0.884	H_4 <- H	0.715
C_{10} <- C	0.845	H_5 <- H	0.755

Source : Output SmartPLS 2017

Source : Output SmartPLS 2017

Figure 2. Loading Diagram Factors Influencing Service Quality Dimensions Against Student Satisfaction At Higher Education (revised)

Table 2: Discriminant Validity

	A	B	C	D	E	F	G
A	0.881						
B	0.437	0.886					
C	0.346	0.419	0.856				
D	0.483	0.492	0.377	0.737			
E	0.384	0.237	0.275	0.594	0.782		
F	0.441	0.470	0.357	0.440	0.278	0.921	
G	0.315	0.393	0.326	0.547	0.461	0.303	0.761
H	0.439	0.413	0.509	0.612	0.695	0.461	0.552

Source : Output SmartPLS 2017

From Table 3 it can be seen that the loading value of each item on the construct is greater than the cross loading value. From this analysis it can be stated that there are no problems with discriminant validity.

5.3.3 Unidimensionality Test

Unidimensionality test is done by using the Composite Reliability and Alpha Cronbach indicators. Data that has a composite reliability > 0.7 has high reliability.

Table 3: Composite Reliability

	Composite Reliability
Lecturer competence	0.9605
Leadership commitment	0.9667
Lecture	0.9611
Physical facilities	0.8257
Supporting facilities	0.8630
Administrative Services	0.9753
Student Affairs	0.7291
Student Satisfaction	0.8514

Source : Output SmartPLS 2017

Table 4. shows that all constructs have composite reliability values above 0.7. It can be stated that there is no reliability / uni dimensional problem in the model formed.Cronbach Alpha. Reliability tests are reinforced with Cronbach Alpha. Expected values > 0.6 for all constructs.

Table 4: Cronbach's Alpha

	Cronbach's Alpha
Lecturer competence	0.9516
Leadership commitment	0.9599
Lecture	0.9543
Physical facilities	0.7216
Supporting facilities	0.7919
Administrative Services	0.9702
Student Affairs	0.8886
Student Satisfaction	0.7807

Source : Output SmartPLS 2017

Table 4. shows that the Cronbach Alpha value for all constructs is > 0.6, meaning that there is no reliability / unidimensionality problem in the model formed. Next is to look at the value of Average Variance Extracted (AVE). Expected AVE value > 0.5.

Table 5: Average Variance Extracted (AVE)

	Average Variance Extracted (AVE)
Lecturer competence	0.7773
Leadership commitment	0.7853
Lecture	0.7338
Physical facilities	0.5436
Supporting facilities	0.6124
Administrative Services	0.8495
Student Affairs	0.5791
Student Satisfaction	0.5356

Source : Output SmartPLS 2017

Table 5. shows that the value of Average Variance Extracted (AVE). for all constructs is > 0.5, it means that there are no reliability/unidimensional problems found in the model.

5.4 Inner Model Analysis

Inner model analysis / structural analysis model is done to ensure that structural models are built robustly and accurately. Inner model evaluation can be seen from several indicators which include:

The coefficient of determination (R2)
The first time is to look at the R-Square Value. Assessment criteria for the R-Square Value are as follows:
- R-Square value of 0.67 is categorized as substantial
- R-Square value of 0.33 is categorized as moderate
- R-Square value of 0.19 is categorized as weak
- R-Square value of–> 0.7 is categorized as strong (Riduan, 2013)

Here at Table 6 are the R-Square values in the construct:

Table 6: R-Square (R^2)

	Nilai R-Square
Lecture	0.3761
Physical facilities	0.2425
Supporting facilities	0.2564
Administrative Services	0.2817
Student Affairs	0.1551
Student Satisfaction	0.6585

Source : Output SmartPLS 2017

R-Square value of student satisfaction is 0.6585. It can be explained that the influence of lecturer competence variables, leadership commitment, lectures, physical facilities, supporting facilities, administrative services and student affairs on student satisfaction gives a value of 0.6585 which can be interpreted that construct variables student satisfaction can be explained by constructing variable lecturer competence, leadership commitment, lectures, physical facilities, supporting facilities, administrative and student services 65.85%. While the remaining 34.15% is explained by other variables outside the one studied. Student R-Square value of 0.1551 can be explained that the influence of the leadership commitment variable on

student affairs is 0.1551. While the remaining 34.15% is explained by other variables outside the one studied.

Student R-Square value of 0.1551 can be explained that the influence of the leadership commitment variable on student affairs is 0.1551. The value of R-Square Administrative Services is 0.2817 can be explained that the influence of the leadership commitment variable on administrative services is 0.2817. The value of R-Square supporting facilities is 0.2564 can be explained that the influence of the leadership commitment variable on administrative services is 0.2564. The R-Square value of physical facilities is 0.2425 can be explained that the influence of the leadership commitment variable on administrative services is 0.2425. The value of the R-Square lecture is 0.3761 can be explained that the influence of the leadership commitment variable on lectures is 0.3761.

5.5 Hipothesis Testing

The Path Coefficient output, as shown in Table 7, looks at the significance of the influence of each variable. These variables are lecturer competence variables, leadership commitment, lectures, physical facilities, supporting facilities, administrative and student services by looking at the parameter coefficient (original sample).

Table 7: Path Coefficients

	Original Sample	Sample Mean	Standard Deviation	T-Statistics	P Values
A->H	0.3610	0.4667	3.6673	3.6673	0.5049
B->C	0.4197	0.4086	3.3437	3.4374	0.0006
B->D	0.4924	0.4878	4.5791	4.5791	0.0000
B->E	0.2376	0.2260	1.6326	2.6326	0.1032
B->F	0.4709	0.4726	4.6506	4.6506	0.0000
B->G	0.3939	0.3916	2.7085	2.7085	0.0070
C->H	0.2426	0.2352	0.0807	3.0049	0.0028
D->H	0.0851	0.1081	0.1034	0.8230	0.4169
E->H	0.4493	0.4431	0.0889	5.0570	0.0000
F->H	0.1310	0.1385	0.0910	3.4407	0.1503
G->H	0.1495	0.1386	0.0953	2.5681	0.1175

Source : Output SmartPLS 2017

The magnitude of the parameter coefficient for lecturer competence variables on student satisfaction is (original sample) 0.2610 which means there is a positive influence between the lecturers' competence on student satisfaction. Or it can be interpreted that the better the competency of the lecturer, the student satisfaction will increase. The t-statistic value is

0.6673 not significant (t 5% significance table = 1.96). Therefore, the t-value of statistics is smaller than the t-table of 1.96 (0.6673 <1.96). The parameter coefficient for the leadership commitment variable towards the original sample is 0.4197 which means there is a positive influence between the leadership commitment to the lecture. Or it can be interpreted that the better the commitment of the leader, the better the lecture will be. The t-statistic value of 3.4374 is significant (t table of 5% significance = 1.96). Therefore, the t-value of statistics is greater than the t-table of 1.96 (3.4374> 1.96). The parameter coefficient for the leadership commitment variable to the physical facility is (original sample) 0.4924 which means there is a positive influence between the leadership's commitment to physical facilities. Or it can be interpreted that the better the commitment of the leader, the better physical facilities will be. The value of t-Statistics of 2.6326 is significant (t table of significance 5% = 1.96). Therefore, the t-value of statistics is greater than the t-table of 1.96 (4.5791> 1.96). The parameter coefficient for the leadership commitment variable to the physical facility is (original sample) 0.4924 which means there is a positive influence between the leadership's commitment to physical facilities. Or it can be interpreted that the better the commitment of the leader, the better physical facilities will be. The value of t-Statistics of 2.6326 is significant (t table of significance 5% = 1.96). Therefore, the t-value of statistics is greater than the t-table of 1.96 (4.5791> 1.96). The parameter coefficient for the leadership commitment variable for supporting facilities is (original sample) 0.2376 which means there is a positive influence between the leadership commitment to the supporting facilities. Or it can be interpreted that the better the commitment of the leader, the better physical facilities will be. The value of t-Statistics of 2.6326 is significant (t table of significance 5% = 1.96). Therefore, the t-value of statistics is greater than the t-table of 1.96 (2.6326> 1.96). The parameter coefficient for the leadership commitment variable to the original administrative service is 0.4709 which means that there is a positive influence between the leadership commitment to administrative services. Or it can be interpreted that the better the leadership commitment, the better the administrative services. The value of t-Statistics of 4.6506 is significant (t table of significance 5% = 1.96). Therefore, the t-value of statistics is greater than the t-table of 1.96 (4.6506> 1.96). The parameter coefficient for the leadership commitment variable towards the original sample is 0.3939 which

means there is a positive influence between the leadership commitment to administrative services. Or it can be interpreted that the better the leadership's commitment, the better student affairs. The value of t-Statistics of 2.7085 is significant (t table of significance 5% = 1.96). Therefore, the t-value of statistics is greater than the t-table of 1.96 (2.7085> 1.96).

The parameter coefficient for lecture variables on student satisfaction is (original sample) 0.2426 which means there is a positive influence between the leadership commitment to administrative services. Or it can be interpreted that the better the leadership's commitment, the better student affairs. The value of t-Statistics of 3.0049 is significant (t table of significance 5% = 1.96). Therefore, the value of t-statistic is greater than t-table 1.96 (3.0049> 1.96). The parameter coefficients for physical facility variables on student satisfaction are (original sample) 0.0851 which means there is a positive influence between the leadership commitment to administrative services. Or it can be interpreted that the better the leadership's commitment, the better student affairs. The value of t-Statistics of 0.8230 is not significant (t table of significance 5% = 1.96).Therefore, the t-value of statistics is greater than the t-table of 1.96 (0.8230 <1.96). The parameter coefficient for supporting facility variables for student satisfaction is original sample 0.4493 which means there is a positive influence between the leadership commitment to administrative services. Or it can be interpreted that the better the leadership's commitment, the better student affairs. The value of t-Statistics of 5.0570 is significant (t-table of significance 5% = 1.96). Therefore, t-statistic value is greater than t-table 1.96 (5.0570> 1.96. The parameter coefficient for administrative service variables on student satisfaction is (original sample) 0.1310 which means there is a positive influence between the leadership commitment to administrative service. Interpreted that the better the commitment of the leader, the better the student affairs. T-value-Statistics of 3.4407 is significant (t table of 5% significance = 1.96). Therefore, t-statistic value is greater than t-table 1.96 (3.4407> 1.96. The parameter coefficient for student variables on student satisfaction is (original sample) 0.1495 which means there is a positive influence between leadership commitment to administrative services. Or it can be interpreted that the better the commitment of the leadership, the better the student affairs. T-Statistics value of 2.5681 is significant (t-table of 5% significance = 1.96).

There is a statistic value greater than t-table 1.96 (2.5681> 1, 96.

6 CONCLUSION

1) That the leadership commitment variable has a significant positive effect on lectures, physical facilities, supporting facilities, administrative services, while the positive student affairs are not significant.
2) Whereas the variables of lecturer competence, leadership commitment, lectures, physical facilities, supporting facilities, administrative and student services have a significant positive effect on student satisfaction.
3) The most dominant variable affecting student satisfaction is the variable supporting facilities and then the competence of lecturers
4) The influence of lecturer competence variables, leadership commitment, lectures, physical facilities, supporting facilities, administrative and student services on student satisfaction gives a value of 0.6585 which can be interpreted that the construct variable student satisfaction can be explained by constructing variable lecturer competence, leadership commitment, lecturer, physical facilities, supporting facilities, administrative and student services 65.85%. While the remaining 34.15% is explained by other variables outside the one studied. Based on the results of the research, it is advisable to X universities, namely:
1) Supporting facilities owned should be more considered, so that student satisfaction can increase
2) Lecturer competence should be further enhanced, for example by following training training in accordance with the field of science
3) The number of respondents in this study is still minimal so that the results obtained are less representative. To further improve the quality of the results of subsequent studies, the number of respondents is even more

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