

Dimensions of Services Quality Affect the Satisfaction and Their Implication on Loyalty (A Survey of Private College Students in Banda Aceh City)

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Abstract

The objective of the present research was to determine the effect of the dimensions of services quality on the satisfaction and in turn the effect of satisfaction on the loyalty of private college students in Banda Aceh City. Data collection was conducted by questionnaire, interview, and observation. The sampling technique applied was an accidental sampling by a sample of 100 respondents. The hypothesis test used a path analysis by a multiple regression method. The result of regression analysis showed that the five dimensions of services quality affected positively student satisfaction. Of the five variables researched, tangible variable has a most predominant effect on satisfaction and in turn the satisfaction affects positively loyalty. There was some indirect effect of the five dimensions of services quality on loyalty via student satisfaction.

Keywords: services quality, satisfaction, loyalty.

Introduction

Service sector has currently grown more rapidly than that in the last decade. It can be seen from the contribution of service sector to world economy, now having reached around two third. However, the rapid growth in service sector has often come with so bad quality of services delivered. Various complaints have been expressed by customers on the poor quality of services they received. Services quality is a judgment of customers on the service level that they received (perceived services) against the service level that they expected (expected services) (Kotler, 2013). The concept of services quality focuses on the measures of satisfying customers' desires or demands in accordance with their expectation.

College as a service-oriented institution should be capable of meeting its customers' needs and satisfaction. It is required to successfully compete against other colleges. The very intensive growth of colleges, particularly private ones, and uneven distribution of students make the competition even more intense. Such condition demands a commitment of any college to satisfying its customers, one of which by steadily enhancing its quality. Thus far, the assessment of a college's services quality has relied more on external assessments (e.g., by National Accreditation Agency). Meanwhile, the central point of a college management is students as primary customers. Therefore, it is crucial for the management of any private college to receive feedbacks on the quality of the services it delivers on a basis of the judgment of its students. As Kotler suggested (2013), quality should begin and end at customers.

Evaluation of the services quality in private colleges is needed to find out what are really expected and what are thus far perceived by the students. Too often there are some differences or gaps between the expected services quality and the perceived one, and it affects the students' satisfaction levels.

The present research evaluated services quality and focused on private colleges in Banda Aceh City based on the assessments by students. The services quality assessed included five dimensions, consisting of:

1. Tangibles
2. Reliability
3. Responsiveness
4. Assurance
5. Empathy

Founded on the description above, the research problems were as follows:

1. How is the effect of the dimensions of services quality consisting of tangibles, reliability, responsiveness, assurance, and empathy on the satisfaction of private colleges' students in Banda Aceh City?
2. How is the effect of satisfaction on the loyalty of private colleges' students in Banda Aceh City?

Review of the Literature and Hypothesis

A research by McDougall and Levesque (2000) was the primary reference of the present research. McDougall (2000) used services qualities consisting of core quality, relational quality, and perceived value on customer satisfaction, switching intentions, and loyalty intentions. On the other side, the present research used five services quality consisting of tangibles, reliability, responsiveness, assurance, and empathy on student satisfaction. Other difference was analysis unit. McDougall's research (2000) included dentists, automotive shops, restaurants, and hairs dressers. On the other side, the analysis unit of the present research was private

colleges in Banda Aceh City. Similarly, Salehuddin (1999) also used five dimensions of services quality on both satisfaction and loyalty by a path analysis and multiple regression analysis, but he didn't investigate the effect of satisfaction on loyalty.

Moreover, Hadioetomo's research (2001) used the servqual that Dabholkar suggested by a structural equation model on customer satisfaction and behavioral intentions. Hadioetomo's (2001) differed from the present research in both servqual variable used and research location because he researched supermarket. Likewise, Nasional's research (2001) was also similar to the present research but he investigated only the effect of services quality on services satisfaction, whereas the current research went further to investigate the effect of satisfaction on loyalty. Other difference was the use of the dimensions of services quality where Nasional (2001) employed the dimensions of services quality that Gronroos suggested, namely professionalism and skills, attitudes and behavior, accessibility and flexibility, reliability and trustworthiness, recovery, and reputation and credibility. The research framework of thought:

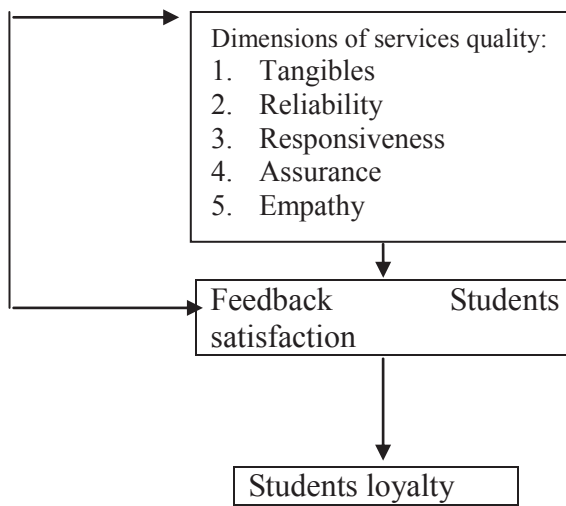


Fig. 1. Framework of Thought

Based on the framework of thought above the research model was as follows:

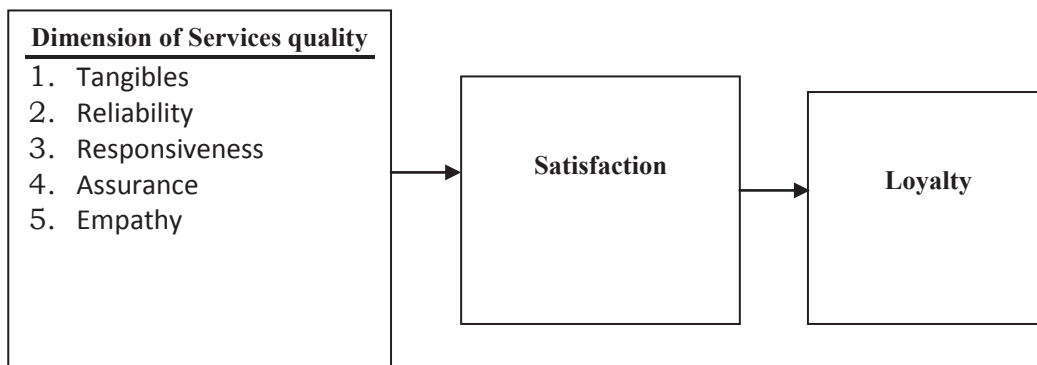


Fig. 2. Research Model

Hypotheses:

1. Dimensions of tangibles, reliability, responsiveness, assurance, and empathy affect positively the satisfaction of private colleges' students in Banda Aceh City.
2. Satisfaction affects positively the loyalty of private colleges' students in Banda Aceh City.

Methodology and Data

Population, Sample, and Sampling Technique

The research population was all students of the accounting departments of private colleges in Banda Aceh City. To determine the number of sample, Slovin formula (Umar, 2002) was applied, that is:

$$n = \frac{N}{1 + Ne^2} = \frac{19.108}{1 + 19.108 (0.1)^2} = 99.48$$

where:

n = Number of sample

N = Number of population

e = Percentage of acceptable error (10%)

Based on the formula above it was found that the number of sample was 99.48, rounded up to 100 respondents. The sampling technique used was an accidental sampling, i.e., a sampling method conducted by chance (Cooper and Emory, 2000).

Data collection was carried out by questionnaire, interview, and observation. The measurement scale applied to measure the research variables was Likert scale.

The analysis instrument used in the research was a path analysis. Path analysis was intended to determine both direct and indirect affects between several variable (Piercy, 1994). It is a regression analysis by standardized variables (Solimun, 2002).

Results and Discussion

Validity and Reliability Tests

The result of validity and reliability tests of the instrument where the value of r_{table} for $n = 1000$ and $\alpha = 5\%$ was 0.195. Thus, it could be concluded that all question items were valid because the value of $r_{count} > r_{table}$. Furthermore, it was found that the reliability value of instrument $r_{11} = 0.9817$, and thus it could be concluded that questionnaire data was reliable.

Normality Test

For this test, normality test of Liliefors, similar to Kolmogorov-Smirnov test, was used. Computed in the test was the statistical value of Liliefors, then compared to the value of L_{table} of Liliefors. A data is said as normally distributed if $L_{count} < L_{table}$. The result of test revealed that the value of L_{count} was 0.06 and that of L_{table} 0.0886; therefore, $L_{count} < L_{table}$, meaning that the data was normally distributed.

Multicollinearity Test

The test was conducted to find VIF (Variance Inflation Factor) value. If VIF value < 4 , that there is no multicollinearity. The result of multicollinearity test was as shown in the table 1 below:

Table 1. The Result of Multicollinearity Test

Independent Variable	VIF	Explanation
Model 1:		
Tangibles (X1)	1,587	Non-multicollinearity
Reliability (X2)	1,592	Non-multicollinearity
Responsiveness (X3)	1,484	Non-multicollinearity
Assurance (X4)	1,312	Non-multicollinearity
Empathy (X5)	1,512	Non-multicollinearity
Model 2:		
Satisfaction (Y1)	1,000	Non-multicollinearity

Source: Processed primary data, 2014

Heteroscedasticity Test

A heteroscedasticity test was conducted by using a Goldfeld-Quandt Test method. The procedure of test by the method begins with ordering the data according to one of the independent variables and then the observation data in the middle (determined a priori) is discarded. Next, a regression on the data groups of small and large independent variables is conducted. The computation of F value, a ratio of mean square residual of the second group to that of the first group, is then conducted, and compared with F_{table} . If the value of F test $< F_{table}$ then there is no heteroscedasticity problem.

Table 2. The result of F test computation

	F_{table}		F test	Result	Comment
Model 1	$F(0.05;31;31)=1.82$	2.872/2.998	0.958	F test $< F_{table}$	Non-hetero
Model 2	$F(0.05;35;35)=1.76$	0.297/0.369	0.805	F test $< T_{table}$	Non-hetero

Source: Processed primary data, 2014

Hypothesis Test

Direct Effect of Tangibles (X1), Reliability (X2), Responsiveness (X3), Assurance (X4), and Empathy (X5) on Satisfaction (Y1)

The result of first regression analysis yielded the following equation:

$$Z_{Y1} = P_1X_1 + P_2X_2 + P_3X_3 + P_4X_4 + P_5X_5 + P_{e1}X_e$$

Table 3. The result of an analysis of the direct effect of X1-X5 variables on Y1 variable

Dependent variable	Standardized Coefficients Beta	t	Sign
Constant		0.613	0.541
Tangibles (X1)	0.227	2.663	0.009
Reliability (X2)	0.207	2.428	0.017
Reliability (X3)	0.185	2.242	0.027
Responsiveness(X3)	0.208	2.682	0.009
Empathy (X5)	0.207	2.491	0.015
Dependent variable: Satisfaction (Y1)			
R square (R ²) = 0.570			
F _{count} = 24.929			
Sign. F = 0.000			
Alpha = 0.05			

Source: Processed primary data

Based on the table 3 above, a first equation was obtained as follows:

$$Z_{Y1} = 0.227X_1 + 0.207X_2 + 0.185X_3 + 0.208X_4 + 0.207X_5 + 0.655X_e$$

Thus, the first hypothesis of the research that the dimensions of services quality consisting of tangibles, reliability, responsiveness, assurance, and empathy affect positively the satisfaction of private colleges' students in Banda Aceh City was accepted.

Direct effect of satisfaction (Y1) on loyalty (Y2)

The result of the second regression analysis produced the following equation:

$$Z_{Y2} = P_6Y_1 + P_2Y_e$$

Table 4. The result of an analysis of the direct effect of satisfaction variable (Y1) on loyalty variable (Y2)

	Standardized Coefficients Beta	t	Sign
Constant of satisfaction (Y1)	0.707	2.456	0.016
		9.892	0.009
Independent variable: Loyalty (Y2)			
R square (R ²) = 0.500			
F _{count} = 97.859			
Sign. F = 0.000			
Alpha = 0.05			

Source: Processed primary data

Based on the table 4 above, a second equation was obtained as follows:

$$Z_{Y2} = 0.707Y_1 + 0.707Y_e$$

Thus, the second hypothesis of the research that satisfaction affects positively the loyalty of private colleges' students in Banda Aceh City was accepted.

After determining the direct effect of each independent variable on the dependent variable both in the first and the second regression equation models, then the indirect effect was computed. Therefore, a trajectory model in a path analysis was developed firstly as follows:

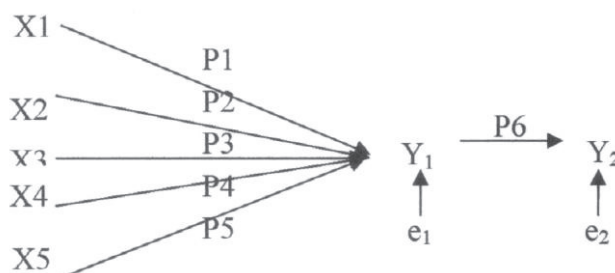


Fig. 3.A Trajectory Model of Path Analysis

Thus, the indirect effect of each of the independent variables (X1-X5) on the independent variable (Y2) via Y1 variable could be computed as follows:

$$\text{Indirect Effect X1-Y2} = 0.227 \times 0.707 = 0.160$$

$$\text{Indirect Effect X2-Y2} = 0.207 \times 0.707 = 0.146$$

$$\text{Indirect Effect X3-Y2} = 0.185 \times 0.707 = 0.130$$

$$\text{Indirect Effect X4-Y2} = 0.208 \times 0.707 = 0.147$$

$$\text{Indirect Effect X5-Y2} = 0.207 \times 0.707 = 0.146$$

To solve the first research problem on the effect of the five dimensions of quality on the student satisfaction, a multiple regression analysis was carried out. The research results showed that the five variables above simultaneously affected the student satisfaction by 75.5% and partially also affected significantly the student satisfaction. The findings of the present research were in agreement with that of McDougall (2000), Hadioetomo (2001), Nasional (2001), and Shalehudin (1999) that services quality affects satisfaction even though by different dimensions of services quality. However, there were some differences, one of which was that in the most predominant variable that affected satisfaction. The most predominant variable in the present research was *tangibles*, while in McDougall (2000) it was *relational serqual*, in Hadioetomo (2001) *problem solving*, in Nasional (2001) *reliability and trustworthiness*, and in Shalehudin (1999) *responsiveness*.

Moreover, a regression analysis was also conducted to solve the second research problem on the effect of satisfaction on loyalty. The result of the regression analysis revealed that satisfaction affected significantly loyalty by 70.7%. The result was in agreement too with that of McDougall (2000)'s research.

The result of research by a path analysis showed that the five dimensions of services quality affected indirectly loyalty via satisfaction, i.e., X1 variable (tangibles), X2 variable (reliability), X3 variable (responsiveness), X4 variable (assurance), and X5 variable (empathy) affected indirectly by 0.160, 0.146, 0.130, 0.147, and 0.146, respectively. The result was in agreement with that of McDougall (2000) that revealed that services quality affected indirectly loyalty, which were favorable behavioral intentions.

Implications

The result of the present research essentially suggested that:

1. There was a very close relationship between services quality and student satisfaction.
2. There was a very close relationship between student satisfaction and loyalty.
3. Services quality also affected indirectly student loyalty.

Accordingly, the management of private colleges should recognize and enhance the quality of services they deliver to their students so as to increase both the satisfaction and loyalty of the students that in turn affect their long term advantages.

Conclusion and Recommendation

The result of the regression analysis revealed that the five services quality affected positively student satisfaction. Of the five variable researched, the tangible variable has the most predominant effect on student satisfaction. Satisfaction has a positive effect on student loyalty and also there was some indirect effect of the five dimensions of services quality on loyalty via student satisfaction. Loyalty was expressed by saying something positive to others on private colleges in Banda Aceh City, by recommending, by recruiting new employees from their graduates, and by being prepared to contribute some aid if needed (e.g., when asked to teach).

To enhance the quality of services of private colleges in Banda Aceh City, the management should prioritize the quality of services that according to the students had not been implemented appropriately, whereas it was really crucial. To know the services quality in each private college in Banda Aceh City, any separate research, a kind of case study, should be conducted in the private college.

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