Quality Academic Services Antecedent towards the Level of Students Satisfaction in Distance Learning Program Unit *Universitas Terbuka* Jayapura

Milcha Handayani Tammubua[1], Victor Pattiasina[2]

Keywords	Abstract
Responsiveness; *Tangibility;* *Reliability;* *Assurance;* *Empathy;*	This study examines the antecedents of the quality of academic services toward the level of students' satisfaction. It was conducted in *Distance Learning Program Unit* (DLPU), Universitas Terbuka- Jayapura, Indonesia. The test was conducted on a sample of 226 respondents. The sample method used was purposive sampling. Data was collected through direct survey. Furthermore, hypothesis examination was conducted empirically using multiple regression. The results showed that all dimensions of service quality, consisted of reliability, responsiveness, assurance, empathy, and tangibles, simultaneously proven to affect the level of students' satisfaction at DLPU of Universitas Terbuka Jayapura. Dimensions of service quality, partially, proven to have a positive and significant effect on the level of stundents' satisfaction.

1. Introduction

Demands of globalization, in the industrial revolution 4.0, do not only influence on the industrial sector, but also influence in various fields including educational field. As the impact, educational organizations should optimize all resources in order to produce quality products. Related to the issue, *Universitas Terbuka* (UT) has provided quality of its services. In UT, academic services is identified through customer satisfaction, in this case, students' satisfaction. This success is demonstrated by the achievement of ISO 9001: 2015 Provision of Nationally Distance Learning for Higher Education and Study Programs (https://www.ut.ac.id/ guarantee-quality / certificate-iso).

According to Handayani & Yermias (2003), to achieve a high level of satisfaction, an understanding of consumers' desire in an institution is needed. It is a must in order to meet the needs of the consumers concerned. The above statement is in line with the statement of William & William (1987). They state that

[1] **Universitas Terbuka, Papua- Indonesia**

[2] **Universitas Yapis, Papua - Indonesia**

distance education is known as education that requires academic services for students beyond what is given by conventional lecturers.

The current phenomenon related to competition between universities, both government and private universities. This competition is relatively in the aspect of service provision. It means that the community will be relatively inclined to choose service providers with better service levels (Silalahi, 2007). The higher level of competition will cause customers to search more alternative products, cheaper prices, and better quality (Kotler, 2005).

Goetsch Davis (1994), in Apriliana, et al. (2014), reveal that quality is a dynamic condition related to products, services, people, processes, and the environment that meets or exceeds expectations (Yamit, 2005). Service quality reflects the comparison between the level of service delivered by the company compared to customer expectations. It is realized through meeting the needs and desires of customers, as well as the accuracy of delivery in balancing or exceeding customer expectations (Tjiptono, Chandra, & Adriana, 2008).

The reality, undeniable, is that many members of the public complain and are dissatisfied with the quality of services provided by education services. This shows that there are still many weaknesses in providing services. As the results, they cannot meet the quality expected by the community. Dissatisfaction of the educational services experienced by students will lead to conflicts within prospective students and their families in choosing a university.

Empirical studies conducted by Rinala ;, Yudana ;, & Nataya (2013); Susanto (2014), Apriliana et al., (2014) and Suwitro (2013) show that the five dimensions forming service quality, namely reliability, responsiveness, assurance, empathy, and tangibility, have been proven to have a significant effect on service quality. The strongest dimension, in explaining successive service quality, is reliability, responsiveness, assurance, empathy , and tangibility. The results of the studies were also supported by Yudhi & Suhendra (2010) which stated that all service quality variables (tangible, responsiveness, assurance, reliability, and empathy), either partially or jointly, had a significant effect on customer satisfaction.

The study conducted by Susanto (2014), about the effect of academic services on the satisfaction of UT Postgraduate Students in the DLPU of Mataram, has shown results as follows. Partially, dimensional indicator of reliability, responsiveness, and assurance do not significantly affect student satisfaction. The results also showed that tangibles and empathy, partially, had a significant effect on student satisfaction. Furthermore, it also resulted simultaneously in the quality of academic services consisting of tangibility, reliability, responsiveness, assurance, and empathy.

Next, the results of the above studies are in line with the results of study conducted by Apriliana; et al. (2014) and Rinala et al. (2013). It shows that academic service quality has a significant effect on student satisfaction, and student satisfaction has a significant but weak effect on student loyalty at STP Nusa Dua Bali. Furthermore, the quality of academic services, directly, does not have a significant effect. In the other hand, satisfaction, indirectly, has a significant effect on student loyalty at STP Nusa Dua Bali. Next, tangible factors, reliability, responsiveness, and empathy, based on the analysis, are stated as factors that have a strong effect. The results of study conducted by Zahir & Saputra (2015) also support the other previous studies.

Based on the description of empirical studies that support the current research, it can be seen that there is a similarity in the selection of predictor levels of satisfaction. The similarity is that the level of public satisfaction, especially the users of academic services, is relatively determined by the dimensions of service quality consisting of reliability, responsiveness, assurance, empathy, and tangibility .

However, using predictors of the same level of satisfaction as the empirical studies above, there is a research gap that viewed by researchers. There is no antecedent that examined in the previous studies. Therefore, the authors are interested in replicating the above empirical study in order to examine the existing research gap namely antecedents of academic service quality towards students level in DLPU, Jayapura UT. The scientific questions of the current research are (1) do reliability, responsiveness, assurance, empathy, and tangibility, partially affect the satisfaction of DLPU students in UT Jayapura? (2) do they simultaneously affect the satisfaction of the UT students? (3) which one has affected the most?

2. Materials and Methods

Marketing and Educational Services

Marketing is one of the main activities carried out by a company with an effort to maintain survival as well as to develop and to make a profit. Furthermore, the marketer itself is a commercial philosophy, in which, customers are the starting and ending points of the business. This means, all who regulate or directly serve the interests of customers are included in the marketing concept that aims to provide satisfaction to the desires and needs of consumers or customers themselves.

In the marketing literature, there are various views proposed by experts. Kotler (2005) defines marketing as an analysis, planning, implementation and control of carefully designed programs to create value exchanges voluntarily with target markets so that organizational goals can be achieved. Wijaya (2012) states that marketing education services is a way to do things where students, parents, school employees, and the community consider the school as a community support institution that dedicated to serve the needs of education service customers.

Student Satisfaction

Student satisfaction is the main goal of every educational organisation. Satisfied students can be a source of competitive advantage that will produce benefit, student retention, and loyalty (Arambewela & Hall, 2009). Indicators of consumer satisfaction (in this case, student), according to the proposal of Tjiptono et al. (2008), are first conformity of expectations. It is the level of conformity between product performance expected by consumers and experienced by consumers. Second, an interest to re-visit. It is the willingness of consumers to re-visit or re-purchase related products. Third, willingness to recommend. It is the willingness of consumers to recommend products that they have felt to friends or family. Since the current research is related to education, students are viewed as consumers who experience product of education in UT Jayapura.

Service Quality

According to Kotler (2005), the quality of service is a model that describes the condition of customers in the form of expectations of services from past experiences, word of mouth promotion, and advertising by comparing the services they expect with what they receive/feel. Service quality is the expected level of excellence and control over the level of excellence to meet customer desires (Nasution, 2004). Indicators of service quality according to thought developed by Parasuraman *et al.* , in (Lupiyoadi, 2006), as follows:
1. Tangibles

Physical evidence (tangible) is the ability of a company to show its existence to external parties. The appearance and capability of the company's physical facilities and infrastructure as well as the condition of the surrounding environment are tangible evidence of the services provided by the service provider. It includes physical facilities (buildings, warehouses, etc.), equipment and technology, as well as the appearance of its employees.
2. Reliability

Reliability is the company's ability to provide services as promised accurately and reliably. Performance must be in accordance with customer expectations.
3. Responsiveness

Responsiveness is a willingness to help and provide fast and responsive services to customers, by delivering clear information. Letting consumers wait without a clear reason causes a negative perception of service quality.
4. Assurance

Assurance is the knowledge, politeness, and ability of company employees to grow the trust of customers to the company. It consists of several components, among others, communication, credibility, safety, competence, and politeness.

5. Empathy

Empathy is a personal attention given to customers by trying to understand consumer desires. The company is expected to have understanding and knowledge about customers, to understand customer needs specifically, and to have a comfortable operating time for customers.

Academic Service Quality

According to Pakpahan (2015), academic service quality is an explanation of the expected quality of academic services and the quality itself. Meanwhile, according to Lupiyoadi (2006), the quality of academic services is the value provided by stakeholders to the customers, in accordance with customer expectations.

Population and Research Samples

According to Sugiyono (2017), population is a generalization area that consists of objects/subjects. It has certain qualities and characteristics determined by researchers to be studied. The population that is the object of research is the satisfaction of UT Jayapura. Since the population of this study was unknown, the sampling technique was carried out using non-probability sampling with a purposive sampling technique. To define respondents more clearly, researchers used the criteria of respondents, namely:
1. Students are users of academic services who currently are having services in the Distance Learning Program (DLPU) of Jayapura UT
2. Students are users of academic services who currently are having services at the Wamena UT Distance Learning Program (DLPU)
3. Students are users of academic services who currently are using services in the Distance Learning Program (DLPU) of Biak UT

Research Samples

According to Sugiyono (2017), in quantitative research, the sample is part of the number and characteristics possessed by the population. The sample is used as a step to determine the size of the sample to be taken in carrying out a study. Then, the sample size is usually measured statistically or research estimates. It also noted that the samples should be selected as a representative. In other words, all population characteristics should be reflected in the selected sample. To calculate the number of samples from a particular population, the Slovin formula is used as follows:

$$n = \frac{N}{1 + Ne^2}$$

Note:
> *n: Samples*
> *N: Population*
> *e: The degree of error or critical value*

This sample was taken at a 90% confidence level or a critical value of 10% so that the sample size can be calculated as follows:

$$= \frac{270}{1 + 270 \ (10\%)^2}$$
$$= \frac{270}{1 + 250 \ (10)^2}$$
$$= \frac{270}{1 + 0.015}$$
$$= \frac{270}{1.15}$$
$$= 234$$

Based on these criteria, the respondents who were questioned for being used as research samples were 234 respondents. Referring to the opinion of Hair et al. (1998), the sample size of at least 50 respondents or the best is more than 100 respondents. The size of the sample of this study is considered feasible for further analysis. The population in this study were 150 respondents. The researchers took 50 people for each Distance Learning Program (DLPU) of the UT in Jayapura, Biak, and Wamena. All them were 130 respondents.

The Current Research Samples

According to Sugiyono (2017), the sample is part of the number and characteristics possessed by the population. The sample is used as a sample size where the sample size is a step to determine the size of the sample to be taken in carrying out a study. Then the sample size is usually measured statistically or research estimates. It also noted that the samples should be selected, *representative*. This means that all population characteristics should be reflected in the selected sample. To calculate the number of samples from a particular population, the Slovin formula was used. The result of the formula application is displayed as follows:

$$= \frac{270}{1 + 270 \, (10\%)^2}$$
$$= \frac{270}{1 + 250 \, (10)^2}$$
$$= \frac{270}{1 + 0.015}$$
$$= \frac{270}{1.15}$$
$$= 234$$

Method of collecting data

Data collection techniques used in this study were library research. According to Sunyoto (2016), library research is a data collection technique conducted by studying books or literature that have a relationship with research objects or other sources that support research.

Test Research Instruments

Validity test
Validity test shows the extent of the effectiveness of measuring devices in making measurements (Augusty, 2006). Validity test in this study used the Product Moment Person correlation formula. The validity of the instrument can be determined by comparing the Product Moment Person correlation index with a significant 5%. This means that if the probability of a correlation result is less than 0.05 then the instrument is declared invalid and vice versa if the correlation result is greater than 0.05 then the instrument is declared valid. The Product Moment Person correlation formula is as follows.

$$r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2][n \sum Y^2 - (\sum Y)^2]}}$$

Note:

       n = number of samples
       X = value or X score
       Y = value or Y score

Reliability Test
Reliability is an index that shows the extent to which a measuring instrument can be trusted or relied upon. In this study, reliability testing used Cronbach Alpha. According to Suharsimi (2017), the formula is used to look for the reliability of instruments whose scores are not 1 and 0, for example, the budgets or the matter of description form. The formula is presented as follows.

$$r11 = \left(\frac{k}{k-1}\right)\left(1 - \frac{\sum \delta b^2}{\delta 1^2 t}\right)$$

Note:

r11 = Instrument reliability

k = number of statement items or number of questions

$\sum \sigma^2 b$ = the number of grain varieties

$\sigma 1^2$ = total varians

On the formula, an instrument can be stated to be reliable if it has a reliability coefficient greater than or equal to 0, 6 meaning that if α = 0.6.

Classic Assumption Test

Normality test

The purpose of assuming data normality is to test whether the independent variable and the dependent variable or both in a regression model, are normally distributed. The regression model can be stated as good if the variable data is near normally distributed (Sunyoto, 2016). One way to detect normality of data is to use a normal probability plot, which in principle, is stated to be normally distributed if the real data follows a diagonal line.

Multicollinearity Test

Multicollinearity means that there is a perfect or certain relationship between some or all variables that explain the regression line. A good regression model should not occur the correlation between independent variables. The way to detect the presence or absence of multicollinearity symptoms is to look at the value of *Variance Inflation Factor* (VIF) or factor increase in variance. If the VIF value is greater than 10 then multicollinearity occurs*,* vice versa if the VIF is smaller than 10 then there is no multicollinearity*.*

Heteroscedasticity Test

The purpose of the Heteroscedasticity assumption is to test whether in a regression model there is an unequal variance from one observation to another. If the residual variance from another observation is fixed, then it is called homoscedasticity. If the variance is different, it is called heteroscedasticity.

Priyatno (2014) states that a good regression model should not occur heteroscedasticity. Testing heteroscedasticity in this study is to look at the distribution of points on *scatterplot* charts whose criteria are; (a) If there are certain patterns such as the points that form a certain pattern that is regular (wavy, widened and then narrowed), then heteroskedasticity occurs; and (b) If there is no clear pattern, and the points spread above and below the number 0 on the Y axis, then there is no heteroskedasticity.

Multiple Regression Analysis

According to Sugiono (2017) multiple regression analysis is used by researchers, if researchers intend to predict how the state (ups and downs) of the dependent variable if two or more independent variables as predictor factors are manipulated (raised the value down). This method is used to determine the dominant variable contributing to the dependent variable and to determine the effect between two or more variables, namely the independent variable and the dependent variable. The formula (unstandardized coefficients) is displayed as follows.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Note:

Y = satisfaction

α = *Intercept*

β = regression coefficient

X_1 = *reliability*

X $_2$ = *responsiveness*
X $_3$ = *assurance*
X $_4$ = *empathy*
X $_5$ = *tangibles*
ε = residual

Research Hypothesis Test

Hypothesis testing, in the current study, used a t-test with a significance level of 5 %. The testing criteria are as follows. If t $_{arithmetic}$ > t $_{table}$ then H $_{0\ is}$ rejected and Ha $_{a\ is}$ accepted meaning that there is an influence of the dimensions of academic service quality on the Student Satisfaction of Distance Learning Program Unit (DLPU) of Jayapura, Biak and Wamena UT. Another hypothesis test used in this study also is to use the F test with a significant level of 5%. The testing criteria are; if F $_{arithmetic}$ > F $_{table}$ then H0 is rejected and Ha is accepted it means that there is an influence of academic service quality on the Student Satisfaction of Distance Learning Program Unit (DLPU) of UT Jayapura, Biak and Wamena.

Research Instrument Quality Test

Testing instruments of the current study are intended to test the validity or validity of the questionnaire used by researchers. Furthermore, this test will is discussed in two parts, namely the validity test and the reliability test in the below section.

3. Results and Discussion

Validity Test

Validity testing in this study used Product Moment Person correlation. The validity of the instrument can be determined by comparing the Product Moment Person correlation index with a significant 5%. The following table (1) shows the result of the validity test.

Table 1
Validity Test Results

Variable	Item	r	sig	Note
Reliability (X $_1$)	X $_{1.1.}$	0.430	0,000	Valid
	X $_{1.2}$	0.511	0,000	Valid
	X $_{1.3}$	0810	0,000	Valid
	X $_{1.4}$	0.803	0,000	Valid
	X $_{1.5}$	0.808	0,000	Valid
	X $_{1.6}$	0.773	0,000	Valid
	X $_{1.7}$	0.699	0,000	Valid
	X $_{1.8}$	0.735	0,000	Valid
	X $_{1.9}$	0.692	0,000	Valid
	X $_{1.10}$	0.777	0,000	Valid
	X $_{1.11}$	0706	0,000	Valid
Responsivenes (X $_2$)	X $_{2.1}$	0.741	0,000	Valid
	X $_{2.2}$	0.804	0,000	Valid
	X $_{2.3}$	0885	0,000	Valid
	X $_{2.4}$	0848	0,000	Valid

Variable	Item	r	sig	Note
	X $_{2.5}$	0.861	0,000	Valid
Assurance (X $_3$)	X $_{3.1}$	0819	0,000	Valid
	X $_{3.2}$	0819	0,000	Valid
	X $_{3.3}$	0837	0,000	Valid
	X $_{3.4}$	0848	0,000	Valid
	X $_{3.5}$	0717	0,000	Valid
Emphaty (X $_4$)	X $_{4.1}$	0834	0,000	Valid
	X $_{4.2}$	0.893	0,000	Valid
	X $_{4.3}$	0848	0,000	Valid
	X $_{4.4}$	0885	0,000	Valid
Tangibles (X $_5$)	X $_{5.1}$	0857	0,000	Valid
	X $_{5.2}$	0.851	0,000	Valid
	X $_{5.3}$	0.884	0,000	Valid
	X $_{5.4}$	0818	0,000	Valid
Satisfaction (Y)	Y $_{1.1}$	0730	0,000	Valid
	Y $_{1.2}$	0742	0,000	Valid
	Y $_{1.3}$	0821	0,000	Valid
	Y $_{1.4}$	0838	0,000	Valid
	Y $_{1.5}$	0865	0,000	Valid
	Y $_{1.6}$	0.783	0,000	Valid
	Y $_{1.7}$	0711	0,000	Valid

Source; Research data processing (2019)

The results of the validity testing above show that overall the variables of this study can be said to be valid because the magnitude of the correlation value is more than 0.3 and the significance level is less than 0.05.

Reliability Test

The reliability testing of this study used alpha Cronbach. An instrument is stated to be reliable if it has a reliability coefficient value greater than or equal to 0.6. If α = 0.6 then the instrument is stated to be reliable with the following results.

Table 2
Reliability Test Results

Variable	Alpha coefficient	Note
Reliability	0.900	Reliable
Rensponsivenes	0874	Reliable
Assurance	0862	Reliable
Empathy	0888	Reliable
Tangibles	0874	Reliable
Satisfaction	0894	Reliable

Source; Research data processing (2019)

All the variables examined in this study turned out to have a correlation coefficient above 0.60 so that all of the research data could be said to be reliable, meaning that this data was feasible to proceed for the next stage of data processing.

Classic Assumption Test

Normality

Normality test aims to test the normal distribution of dependent variables and independent variables. Data normality test in the study was carried out using *normal probability plot* graphs by looking at the tendency of the data distribution to the regression line. The results of the normal probability plot graph is shown in the following figure.
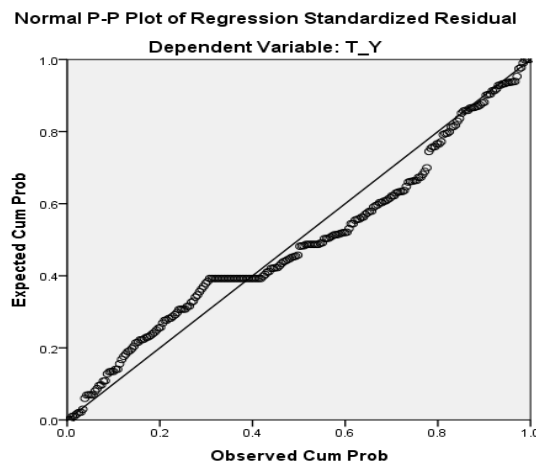

Figure 1
Test Chart Normality With *Normal PP Plot*

The graph of normal probability plots in Figure 1 above shows that the data points spread around the diagonal line, as well as its distribution, follow the diagonal line direction, thus the distribution of the data can be said to be normally distributed so that it can be done regression model multiple linear.

Heteroscedasticity Test

The purpose of the heteroscedasticity assumption is to test whether, in a regression model, there is an unequal variance from one observation to another. Priyatno (2012) states that a good regression model should not occur heteroscedasticity. Heteroscedasticity test in this study is to look at the distribution of points on *scatterplot* charts whose criteria are as follows;
a. If there are certain patterns such as dots that form a certain regular pattern (wavy, widened and then narrowed), then heteroskedasticity occurs.
b. If there is no clear pattern, and the points spread above and below the number 0 on the Y axis, then there is no heteroscedasticity. The following results of heteroskedasticity testing are seen in the following figure.
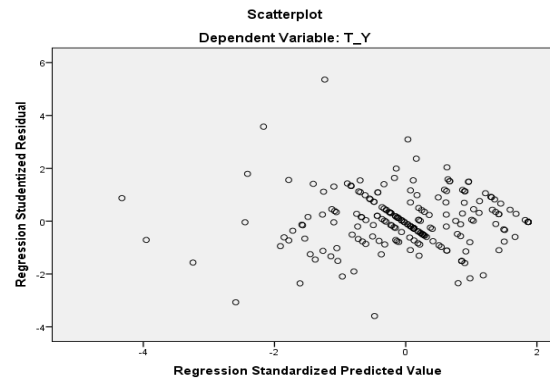
Figure 2
Graph of Heroceadticity Test with *Scatterplot*
Source; Data Processing Results, (2019)

From the scatterplot graph above it can be seen that the points spread randomly and are spread both above and below the number 0 on the Y-axis. This shows the rules of heteroscedasticity in this research model are fulfilled.

Multicollinearity

The multicollinearity testing of this study uses looking at the value of the *Variance Inflation Factor* (VIF). If the VIF value is greater than 10 then multicollinearity occurs, vice versa if the VIF is smaller than 10 then there is no multicollinearity. The following are the results of multicollinearity testing as seen below;

Table 3
Multicollinearity Testing

Model	Collinearity Statistics	
	Tolerance	VIF
Reliability	0.624	1,603
Rensponsivenes	0.385	2,596
Assurance	0.282	3,546
Emphaty	0.329	3,039
Tangibles	0.245	4,075

Source; Research data processing (2019)

The data above shows that the *tolerance* value is close to 1 and the VIF value is below 10 which means there is no multicollinearity between independent variables in this study.

Multiple Regression Test

In this study, multiple linear regression analysis is used by researchers to determine the effect of the influence of independent variables on the dependent variable. The following are the results of the multiple linear regression analysis shown below.

Table 4
Results of Multiple Linear Regression Analysis

Variable	Coefficients	t count	Sig	Information
Constant	2,075			
Reliability	0.172	7,091	0,000	Significant
Rensponsivenes	0.102	1,289	0.199	Not significant
Assurance	0.227	2,416	0.016	Significant
Emphaty	0.453	4,636	0,000	Significant
Tangibles	0.321	2,737	0. 007	Significant
Adjusted R Square	0729			
T-table	1,651			

Source; Research data processing (2019)

The above data shows a constant value of 2,075. It means, if there is no increase in the value of reliability, then, the responsiveness, assurance, empathy, tangibles, as well as the amount of the satisfaction value is at 2,075. The coefficient of reliability for 0172 indicates that the value of reliability increases or better than the satisfaction. Based on the result, it is assumed that the value of responsiveness, assurance, empathy, and tangibles has been fixed.

The regression coefficient responsiveness for 0102 indicates that any value responsiveness increased or better than the satisfaction. In other words, the increase in satisfaction takes value responsiveness by 0102. It is assumed that the value of reliability, assurance, empathy, and tangibles, is fixed or constant. Next, it also shows that every value assurance increased or better, then, the satisfaction will be increased by the value of the regression coefficient. In other words, an increase in satisfaction takes the value of assurance for 0227, assuming the value of reliability, responsiveness, empathy, and tangibles are not change.

Furthermore, the next coefficient is empathy. The score is 0435. It indicates that empathy values increases, or even better, then, the satisfaction will be increased by the value of the regression coefficient. In other words, an increase of satisfaction takes the value of empathy for 0435, assuming the value of reliability, responsiveness, assurance and tangibles is unchanged.

The next coefficient is tangibles for 0321. It indicates that any value of tangibles increased, then the satisfaction will be increased by the value of the regression coefficient. In other words, an increase in satisfaction takes the value of tangibles by 0321. It is assumed that the value of reliability, responsiveness, assurance, and empathy, is not changed.

The data above also shows that the conceptual model of the research that is built is feasible because it is proven that student satisfaction in DLPU of UT Jayapura can be explained well by reliability, responsiveness, assurance, empathy, and tangibles, with a value of determination or feasibility level of 0 .729 or by 72.9 %. The other 27.1 % is explained by other variables that are not analyzed in the current research.

The results of the analysis through the linear analysis above shows that all responsiveness variables are proven to have a significant positive effect on the level of student satisfaction in DLPU of Jayapura UT. While other variables, namely reliability, assurance, empathy and tangibles, proved to have a positive and significant effect on the level of student satisfaction at the DLPU of the Jayapura UT. The reliability variable in this study is based on the results of testing the hypothesis that reliability has a T $_{calculated}$ value of 7.091 which is greater than the T $_{table}$ value of 1.651 (7,091> 1,651). It means that Ha is accepted and H0 is rejected. These results indicate that reliability has a positive and significant effect on student satisfaction at theDLPU of Jayapura UT.

In the other side, reliability influences significantly and positively towards student satisfaction. This finding, indirectly, illustrates a number of things. First, lecturers of UT have delivered teaching accordingly to the plan set out. Another thing that can be illustrated through this finding is that lecturers, in the lecture process, have already implemented a learning plan that is contained in Syllabus. These findings support the results of empirical studies conducted by Yudhi & Suhendra (2010); Suwitro (2013); Rinala et al., (2013), and Zahir & Saputra (2015). Reliability has a positive and significant effect on satisfaction.

The results of the second hypothesis test show that the responsiveness measured through the five items of the research statement. The $T_{calculated}$ value is 1.289. It is greater than the T_{table} value of 1.651 (1.289 > 1.651), with a sig value of 0.199 (0.199> 0.05). It means that Ha is rejected and H0 is accepted. Responsiveness has a positive but not significant effect on student satisfaction in DLPU of the Jayapura UT.

The reason for the insignificant influence of responsiveness on satisfaction is more likely to be influenced by student dissatisfaction due to the lack of scholarship allocations provided by the manager of the Jayapura UT DLPU to underprivileged (item $X_{2.1}$). This finding shows that there is a gap between the high expectations of students is different from the fact. This finding means that the response of the Jayapura UT DLPU manager to the high interest of students in scholarships can be said to be not good. This finding is in line with the results of previous studies conducted by Yudhi & Suhendra, (2010); Suwitro (2013); Rinala et al. (2013); and Zahir & Saputra (2015).

Next, the results of the third hypothesis examination proved that assurance has a value of t_{count} 2. 416, greater than t_{table}, 1,651 (2 , 416 > 1,651). The sig amounted to 0.016 (0.016 <0.05), which means that the assurance positive and significant impact on student satisfaction at DLPU of UT Jayapura. This finding supports the results of an empirical study conducted by Yudhi; & Suhendra (2010); Suwitro (2013); Rinala et al. (2013); and Apriliana; et al. (2014), but contrary to the results of a study conducted by Susanto (2014).

The further hypothesis examination shows that empathy has a value of t_{count} 4 .636, greater than t_{table}, 1,651 (4 .636 > 1651), which means that Ha is accepted while H0 is rejected. This indicates that empathy has a positive and significant effect on student satisfaction at DLPU of Jayapura UT.

Influential empathy towards student satisfaction (through the results of the descriptive analysis of the distribution of respondents) were more influenced by students' satisfaction. The finding is an evidence that tells the manager of Jayapura UT to be serious in providing facilities and infrastructure in order to support lectures such as the availability of student handbooks, the availability of internet access, the availability of sports, music, and religious infrastructure, that can be enjoyed by students overall.

The finding is in line with the results of previous studies conducted by Rinala et al. (2013); Apriliana et al. (2014), Suwitro (2013), Pattiasina (2011), and Yudhi & Suhendra (2010) , which prove that one of the elements of service quality, namely empathy, has a positive and significant influence on satisfaction levels.

The next hypothesis examination of the current this study shows that the tangibles have a value of $T_{arithmetic}$ amounted to 2 .737, greater than T_{table}, 1,651 (2 .737 > 1,651), with significance value of 0.007 (0.007 <0.05), which means that the tangibles affect positive and significant impact on student satisfaction at the Jayapura UT in DLPU. This result is more influenced by the contribution of item $X_{4.4}$ which shows that DLPU of Jayapura UT's students are satisfied with the facilities and infrastructure of lectures.

This finding proves that DLPU of Jayapura UT has successfully demonstrated its existence to external parties (especially to students), through the availability of physical facilities (infrastructure and facilities). Another understanding that can be obtained is that, in addition, related to physical facilities of DLPU in Jayapura UT. The UT has provided a good surrounding environment (clean, rapid and comfortable). This finding is in line with the results of the study conducted by Rinala, et al. (2013); Apriliana et al. (2014); Suwitro (2013); Yudhi & Suhendra (2010), and Zahir & Saputra (2015).

4. Conclusion

Based on the discussion of research results presented in the previous section, it is concluded that (1) all dimensions of service quality, consist of reliability, responsiveness, assurance, empathy, and tangibles, simultaneously proved to affect the level of satisfaction of student satisfaction in the DLPU of the Jayapura UT. It is positive and significant. Thus, it is stated that reliability, responsiveness, assurance, empathy, and tangibles, increase the level of satisfaction.

Service quality dimensions, consisting of reliability, assurance, empathy, and tangibles, partially proved to have a positive and significant effect on the level of patient satisfaction. Only responsiveness has been proven to have a positive but not significant effect on student satisfaction in DLPU of UT Jayapura. The results of the analysis show that empathy is the most dominant variable affecting the level of student satisfaction in the DLPU of Jayapura UT.

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References

Apriliana A. F. B., Santoso;, S., & Sumaryati, S. (2014). Pengaruh Kualitas Pelayanan Akademik Terhadap Kepuasan Mahasiswa BKK Pendidikan Akuntnsi Program Studi Pendidikan Ekonomi Fakultas Keguruan Dan Ilmu Pendidikan Universitas Sebelas Maret Surakarta. Jupe UNS, 2(3).

Arambewela, R., & Hall, J. (2009). An Empirical Model of International Student Satisfaction. Asia Pacific International Journal of Marketing. Emeraldinside, 555–569.

Augusty, F. (2006). Metode Penelitian Manajemen: Pedoman Penelitian untuk Skripsi, Tesis dan Disertasi Ilmu Manajemen. Semarang: Badan Penerbit Universitas Diponegoro.

Bendriyanti, R. P. (2015). Manajemen Mutu Layanan Dalam Meningkatkan Kompetensi Lulusan Di Perguruan Tinggi Swasta Di Provinsi Bengkulu. Tarbawi, 1(1), 1–22.

Handayani, R., & Yermias, T. K. (2003). Analisis Kepuasan Pemakai Terhadap Pelayanan Perpustakaan Nasional Provinsi Daerah Istimewa Yogyakarta. Sosiosains, 17(2), 88–98.

Kotler, P. (2005). Manajemen Pemasaran. (Penerjemah, Ed.) (Benyamin M). Jakarta: PT. Indeks.

Lupiyoadi, R. (2006). Manajemen Pemasaran Jasa. Jakarta: Salemba Empat.

Nasution, M. N. (2004). Manajemen Jasa Terpadu. Bogor: Ghalia Indonesia.

Nismawati. (2012). Pengaruh Pelayanan Administrasi Akademik Terhadap Kepuasan Mahasiswa Pada Fakultas Ekonomi Dan Bisnis Islam Uin Alauddin Makassar. Skripsi Fakultas Ekonomi dan Bisnis Islam UIN Alauddin Makassar.

Pakpahan, S. P. (2015). Persepsi mahasiswa DLPU-UT Medan Tentang Pelayanan Akademik Dan Non-Akademik Yang Diberikan Oleh DLPU-UT Medan. Jurnal Pendidikan Terbuka Dan Jarak Jauh, 5(1).

Pattiasina, V. (2011). Pengaruh Gaya Kepemimpinan Transformasional terhadap Kinerja Pelayanan dengan Budaya Kerja dan Penerapan Good Corporate Governance sebagai Variabel Moderasi (Studi pada Rumah Sakit di Kota Ambon). Universitas Brawijaya Malang. Retrieved from http://repository.ub.ac.id/id/eprint/159718

Priyatno, D. (2014). SPSS 22 Pengolah Data Terpraktis. (Andi, Ed.). Yogyakarta.

Rinala, I. N., Yudana;, I. M., & Nataya, I. N. (2013). Pengaruh Kualitas Pelayanan Akademik Terhadap Kepuasan Dan Loyalitas Mahasiswa Pada Sekolah Tinggi Pariwisata Nusa Dua Bali. E-Journal Program Pascasarjana Universitas Pendidikan Ganesha, 4.

Silalahi, M. (2007). Analisis Pengaruh Kualitas Pelayanan Dalam Kaitannya Dengan Loyalitas Pasien Rawat Inap di Rumah Sakit Islam Malahayati Medan. Universitas Sumatera Utara.

Sugiono. (2017). Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: Alfa Beta.CV.

Suharsimi, A. (2017). Prosedur Penelitian Suatu Pendekatan Praktik. Jakarta: Rineka Cipta.

Sunyoto, D. (2016). Teori Kuisioner dan Analisis Data untuk Pemasaran dan Perilaku Konsumen. Jakarta: Graha Ilmu.

Susanto, H. (2014). Program Pascasarjana Universitas Terbuka Pada Unit Program Belajar Jarak Jauh (DLPU) Mataram. Jurnal Pendidikan Terbuka Dan Jarak Jauh, 15(2), 1–98.

Suwitro. (2013). Analysis of the Academic ' S Service Quality and Admisnistration To, 3(4), 422–432.

Tjiptono;, F., Chandra;, G., & Adriana, D. (2008). Pemasaran Strategik (2nd ed.). Yogyakarta: Andi Offset.

Wijaya, D. (2012). Pemasaran Jasa Pendidikan. Jakarta: Salemba Empat.

William, J., & William, M. (1987). Student operated network for diatance learners. I.C.D.E Bulletin, 13, 51–64.

Yamit, Z. (2005). Manajemen Kualitas: Produk Dan Jasa. Yogyakarta: Ekonisia.

Yudhi, F., & Suhendra, S. (2010). Analisis Pengaruh Kualitas Pelayanan Terhadap Kepuasan Nasabah Kredit (Studi kasus BPR Arthaguna Sejahtera). Pasca Sarjana Manajemen Perbankan Universitas Gunadarma.

Zahir, A., & Saputra, S. (2015). Analisis kualitas layanan akademik universitas cokroaminoto palopo, 02(1), 646–656.

https://www.ut.ac.id/jaminan-kualitas/sertifikat-iso

Biography of Authors

Milcha Handayani Tambua *is a lecturer in Universitas Terbuka Jayapura, Indonesia. Besides teaching, she is active in conducting researches. She is interested in the Management field. Her researches have been published in several reputable journals in Indonesia. She has also got experiences in speaking at several conferences in Indonesia.*

Email: milcha2803@gmail.com

Victor Pattiasina *is a lecturer, as well as a senior researcher in the Accounting Department- Faculty of Economics at Yapis Papua University. He has conducted a lot of academic researches. The researches have been published in both reputable International Journals, and National Journals of Indonesia. He has also delivered his researches in some national conferences in Indonesia.*

Email: victorpattiasina6@gmail.com