

# THE EFFECT OF SERVICE QUALITY ON STUDENTS' SATISFACTION WITH THE IMPLEMENTATION OF UNIVERSITAS TERBUKA EXAMINATIONS AT UPBJJ OF MAKASSAR

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## ABSTRACT

*This research sought to examine: (1) students' perceptions of service quality which covers five dimensions – reliability, assurance, tangibles, empathy and responsiveness in the department of examination services; (2) the simultaneous and partial effect of those five dimensions of the service quality on the level of students' satisfaction; and (3) the dimension of the most significant service quality according to the students at Unit Program Belajar Jarak Jauh Makassar, Universitas Terbuka. The respondents of the research included 75 students of Basic Education and Non Basic Education programmes, registration period 2014.2 at the unit. Purposive sampling was used to collect the data, which was analysed using Multiple Linear Regression. The instruments to collect the data were a questionnaire (Likert scale) and an observation through descriptive and inferential statistics. The result of the research revealed that (1) the aspects of service quality, which are reliability, assurance, tangibles, empathy and responsiveness, met the students' expectations; (2) the students' satisfaction was affected by these five aspects of service quality; and (3) assurance was the most significant dimension of service quality according to the students at the unit in Makassar.*

*Keywords: quality services, reliability, assurance, tangibles, empathy, responsiveness, students' satisfaction*

## INTRODUCTION

Universitas Terbuka or UT has always endeavoured to improve its quality. This quality improvement covers the whole educational process, which is related to the improvement of internal management. Improvements in both areas will indirectly affect the improvement of students' participation and service establishment. The provision of learning materials and examination materials is a core business element in the implementation of distance education. Examination materials are developed to measure students' acquisition of the given skills and competencies. In addition to the traditional written-and-oral tests, UT offers an online examination service, better known as Online Examination System, which aims to give opportunities to those who have scheduling difficulties in attending the end of semester test known as UAS (*Ujian Akhir Semester*). These students are allowed to take the online

examination beyond the UAS schedule that has been set in UT's academic calendar (Universitas Terbuka, 2014).

There have been several issues related to the services of UAS at Unit Program Belajar Jarak Jauh (UPBJJ) at Makassar derived from the UAS officers' experiences. Among them are; (1) the participants do not bring their Examination Participant Identity Card (Kartu Tanda Peserta Ujian (KTPU)); (2) the participants are more than 30 minutes late; (3) the participants cheat during the examination; and (4) the registered courses are different from those registered in KTPU.

UAS officers manage these issues by informing the participants to check the payment information sheet (*Lembar Informasi Pembayaran*) upon registration and comply with the regulations of UAS; otherwise, they will face serious obstacles. For example, there will be a delay in the score release; tardy students will be marked absent on the attendance list and answer sheet; and test participants who do not show KTPU will be deemed as impersonating an examination candidate. Based on the above points, the researchers sought to inspect the dimensions of the examination services at UPBJJ, Universitas Terbuka in Makassar or UPBJJ-UT Makassar.

The satisfaction of the Non Basic Education students at UPBJJ-UT Makassar, with the examination services during 2014.1 is presented in Table 1.

Table 1: Students' Satisfaction with the Examination Services (2014.1)

No	Indicators	Dissatisfaction
1	The available information of examination implementation (examination locations, examination room plans, schedules and regulations)	10.61%
2	Accessible examination venues	19.55%
3	Proper examination places	14.07%
4	The availability of examination scripts	6.72%
5	Examination supervisors' professionalism	7.41%
6	The orderliness of the implementation of the examination	6.67%
7	The obtainable information of examination results	10.61%
8	The punctual announcement of examination results	15.15%
9	The complete exam grades on DNU (Exam Result List) based on the registered courses	9.21%
	<b>Total</b>	100.00%

Source: Primary Data 2014.1

Table 1 shows that the accessibility of the examination venue tops the list of dissatisfaction. The punctuality of the examination result announcement and proper examination places is next. This indicates that, in addition to the punctual information about the examination results, the students had most difficulty in dealing with the distance of UAS locations and the suitability of the exam locations.

The objective of the present research is to observe: (1) the students' perceptions of the dimensions of service quality of the examination – reliability, assurance, tangibles, empathy and responsiveness, (2) the simultaneous and partial effect of the dimensions of service quality of the examination on the students' satisfaction level, and (3) the most significant dimension of the service quality. The significance of this research is that it can improve the overall service quality of the examination and become a consideration in policy-making at UT Headquarters and most notably at UPBJJ-UT Makassar. The hypothesis formulation in this research is; (1) the dimensions of service quality: reliability, assurance, tangibles, empathy and responsiveness, meet the students' expectations; (2) the students' satisfaction is

affected by these dimensions; and (3) assurance is the most significant dimension in terms of student satisfaction of UT examinations.

## LITERATURE REVIEW

### Service Quality

Customers' perceptions of service quality are heavily emphasised in Zeithaml and Bitner's theory (1996), which asserts that service quality is classified into tangibles, empathy, reliability, assurance and responsiveness. These five dimensions are the fundamental concepts which affect the examination services investigated in this research.

#### **Reliability**

Reliability in the present research refers to students' perceptions of examination officers' ability to respond to students' needs at UT. The indicators are (a) agility and promptness in responding to students' inquiries, (b) willingness, preparation and readiness in assisting students, and (c) plain information about the examination implementation such as examination location, examination room plan, schedule and UAS regulations.

#### **Assurance**

Assurance is defined as precise knowledge about products, employees' manner in providing services, skill in providing information, ability in providing security and inspiring students' trust and confidence. The indicators are (a) punctual information about the implementation of examinations such as examination venue, examination room plan, schedule and UAS regulations, (b) punctual implementation of examination, and (c) punctual announcement of examination results.

#### **Tangibles**

Tangibles denote students' perceptions of physical evidences of services that refer to examination officers' appearance and the environment. The indicators are (a) clean and tidy appearance, (b) clean and tidy examination rooms, and (c) examination locations with fully-equipped facilities such as mosques and lavatories with clean water.

#### **Empathy**

Empathy represents students' perceptions of examination officers' ability to listen to and to comprehend students' complaints at UT. The indicators are (a) good manner in speech upon communicating with students, (b) readiness in accommodating students' inquiries or complaints, either on-site or by mobile phone, and (c) responsibility for the security and the continuity of the examination process.

#### **Responsiveness**

Responsiveness indicates examination officers' willingness and readiness in assisting and catering to students swiftly. The indicators are (a) solutions to such exam-related issues as examination identity cards, examination registration, etc., (b) preparation of special rooms for those who are not registered on the list of examination participants, and (c) patience and promptness in dealing with students.

## Student Satisfaction

Aviliani and Wilfridus (1997) classify three indicators of student satisfaction: (1) the offered services meet the students' expectations, (2) the anticipated performance and the quality of the services are in line with the students' expectations, and (3) the students are contented with the offered care and treatment. In higher education, satisfaction of students as customers of education services is affected by the following factors: (1) their appreciation of the knowledge and skills they acquire, (2) the understanding of their career prospects, and (3) their expectations of the education institution which has provided services to them as customers. The level of students' satisfaction at UPBJJ-Makassar, was measured according to the five dimensions or the aforementioned indicators (tangibles, reliability, responsiveness, assurance and empathy).

Sylvana (2006) describes the following relationship between aspects of service quality and students' satisfaction, and their effects on students' intention to re-register. First, aspects of service quality have significant effects on students' satisfaction; second, aspects of students' satisfaction have significant effects on the students' intention to re-register; third, aspects of service quality have significant effects on the students' intention to re-register and fourth, aspects of service quality and students' satisfaction do not simultaneously have significant effects on students' intention to re-register.

## METHODOLOGY

This study is a survey research, involving a population of 300 students in both Basic Education and Non Basic Education programmes, who attended UAS 2014.2 in Makassar. Sampling was done with Purposive Sampling method and Slovin's formula. A total of 75 samples was obtained with such criteria as: (1) Basic Education students in semester 2, who had experience of the examination services, and (2) active Non Basic Education students until 2014.2 academic year.

The conceptual framework of this research refers to that of consumers' perceptions of service quality by Zeithaml and Bitner (1996), which includes five dimensions – reliability, assurance, tangibles, empathy and responsiveness – better known as "Five RATER Criteria."

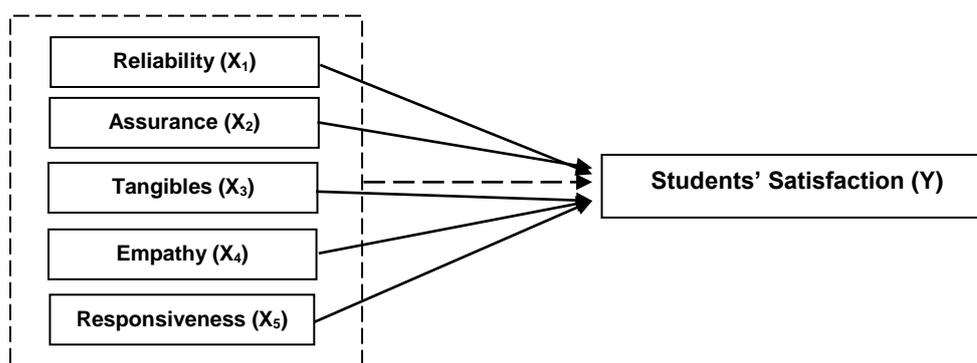


Figure 1: Conceptual Framework

Research data was collected through questionnaires and observation. The questionnaires aimed to describe the aspects of service quality of examination services, where data validity and reliability of students' satisfaction were tested later. The questionnaire is based on the Likert Scale. In addition, an observation checklist was developed to assess the aspects of UT staff's quality in the examination service. Students' satisfaction with the examination

services is the dependent variable (Y), while reliability (X<sub>1</sub>), assurance (X<sub>2</sub>), tangibles (X<sub>3</sub>), empathy (X<sub>4</sub>), and responsiveness (X<sub>5</sub>) are the independent variables.

The acquired data was analysed using Univariate analysis to describe the characteristics of each variable, be it an independent or dependent variable. Categorical variables were presented in numbers and percentages, while numerical variables were classified in descriptive statistics as an average value (mean), standard deviation, 95% Confident Interval, minimum value and maximum value. The data was then analysed using multiple linear regression to ascertain the effect of the free variables on the bound variables with the following formula:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

Where:

Y	=	Students' satisfaction
X <sub>1</sub>	=	Reliability
X <sub>2</sub>	=	Assurance
X <sub>3</sub>	=	Tangibles
X <sub>4</sub>	=	Empathy
X <sub>5</sub>	=	Responsiveness
β <sub>0</sub> , β <sub>1</sub> , β <sub>2</sub> , β <sub>3</sub> , β <sub>4</sub> , β <sub>5</sub>	=	Constant
e	=	Standard error

The significance level with the F-test, α = 0.05. If F is significant, the group of free variables has simultaneous effects on the bound variable. The significance level with T-test is also 0.05. If the test result is significant, independent variables have partial effects on the dependent variable.

## FINDINGS AND DISCUSSION

The data was obtained from 75 questionnaires, all of which were eligible for analysis. The respondents' characteristics include age and sex. Other sociodemographic questions regarding occupation and year of enrolment were not included because age and sex are the only two attributes that largely influenced individual's perceptions of the construct (the examination).

Table 2: Age Distribution of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 25	39	52.0	52.0	52.0
	26 – 35	22	29.3	29.3	81.3
	36 – 45	10	13.3	13.3	94.7
	> 46	4	5.3	5.3	100.0
	Total	75	100.0	100.0	

Most respondents (52%) were under 25 years of age. This is due to the fact that the number of students at UPBJJ-Makassar aged less than 25 years old were Non Basic Education students who were recipients of Bidikmisi (Education Financial Aid for Low-Income and Accomplished Students). The lowest number of respondents was in the range over 46 age group (4 students) with a percentage of 5.3%. These respondents were Basic Education students, i.e. teachers of Elementary School and Early Childhood Education.

Table 3: Sex Distribution of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	34	45.3	45.3	45.3
	Female	41	54.7	54.7	100.0
	Total	75	100.0	100.0	

As Table 3 shows, female respondents outnumbered male respondents, at 41 students (54.7%) and 34 students (45.3%), respectively.

Data from the research variables was processed using descriptive statistics to interpret the average value of each indicator of the variables and to describe the indicator that led the concept of the research model. The evaluation of each variable along with the indicators is presented in the following tables.

Description:

SD: Strongly Disagree    D: Disagree    N: Neutral    A: Agree    SA : Strongly Agree

### Reliability (X<sub>1</sub>)

Table 4: Frequency/ Percentage of the Indicators of Reliability Variable

No.	Indicators	Distribution of Respondents' Answer					Mean	Category
		SD	D	N	A	SA		
1	Agile and prompt responses	0	5	13	47	10	3.78667	High
2	Readiness and willingness	0	0	17	44	11	3.78667	High
3	Plain information	0	1	9	46	9	3.85333	High
	<b>Mean</b>						3.80889	High

Reliability shows examination officers' ability to provide prompt, accurate and satisfactory services. Respondents' evaluation of Reliability variable is perceived as excellent and positive with mean score = 3.80889.

### Assurance (X<sub>2</sub>)

Table 5: Frequency/Percentage of Indicators of Assurance Variable

No.	Indicators	Distribution of Respondents' Answer					Mean	Category
		SD	DTS	N	A	SA		
1	Examination services	0	0	13	53	9	3.97333	High
2	Examination implementation	0	4	8	52	11	3.90667	High
3	Examination result announcement	0	0	18	51	6	3.86667	High
	<b>Mean</b>						3.91556	High

Assurance indicates knowledge, manner and trustworthiness of the examination officers. The respondents perceive the Assurance variable as great and positive with a mean score of 3.91556.

### Tangibles ( $X_3$ )

Table 6: Frequency/Percentage of Indicators of Tangibles Variable

No.	Indicators	Distribution of Respondents' Answer					Mean	Category
		SD	D	N	A	SA		
1	Officers' appearance	0	0	1	24	50	4.68000	High
2	Examination rooms	0	1	6	29	39	4.42667	High
3	Lavatories and clean water	0	1	12	52	10	3.96000	High
	<b>Mean</b>						4.35556	High

Respondents' evaluation of the Tangibles variable that consists of 3 indicators is excellent and positive with a mean score of 4.35556. Based on Table 6, the indicator of Tangibles variable is the clean and tidy appearance of the examination officers, which the students perceive as decent and clean.

### Empathy ( $X_4$ )

Table 7: Frequency/Percentage of Indicators of Empathy Variable

No.	Indicators	Distribution of Respondents' Answer					Mean	Category
		SD	D	N	A	SA		
1	Good manner in speech	0	2	29	41	3	3.60000	High
2	Readiness in accommodating complaints	0	1	9	24	41	4.41333	High
3	Security and continuity of examination process	0	0	11	60	4	3.93333	High
	<b>Mean</b>						3.98222	High

Respondents' perceptions of Empathy are good and positive with a mean score of 3.98222. The examination officers are proven to be capable of responding to the students' inquiries and complaints on-site and by mobile phone.

### Responsiveness ( $X_5$ )

Table 8: Frequency/Percentage of Indicators of Responsiveness Variable

No.	Indicators	Distribution of Respondents' Answer					Mean	Category
		SD	D	N	A	SA		
1	Providing solutions	0	0	18	29	28	4.16000	High
2	Special care	0	2	14	52	7	3.85333	High
3	Patience and promptness	0	0	16	30	29	4.20000	High
	<b>Mean</b>						4.07111	High

Respondents' perceptions of Responsiveness variable are categorised as good and positive with a mean score of 4.07111. The examination officers are perceived as patient and prompt in catering to each of the students' inquiries and complaints.

## Students' Satisfaction (Y)

Table 9: Frequency/Percentage of Indicators of Students' Satisfaction

No.	Indicators	Distribution of Respondents' Answer					Mean	Category
		SD	D	N	A	SA		
1	Fulfilling students' needs	0	0	14	39	22	4.13333	High
2	Fulfilling service qualities	0	1	21	35	18	3.94667	High
3	Satisfaction of attention and services	0	0	23	34	18	3.96000	High
	<b>Mean</b>						4.01333	High

The students' perceptions of the students' satisfaction variable are great and positive with a mean score of 4.01333. This reveals that the indicators of examination services meet the students' expectation. To find out the effect of examination services on students' satisfaction, multiple linear regression analysis was applied as seen in Table 10.

Table 10: Output of Linear Regression Coefficients<sup>a</sup>

Model		Unstandardised Coefficients		Standardised Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	4.997	.516		9.680	.000		
	Reliability (X <sub>1</sub> )	.286	.020	.251	14.174	.000	.264	3.547
	Assurance (X <sub>2</sub> )	.284	.015	.602	19.530	.000	.527	1.394
	Tangibles (X <sub>3</sub> )	.135	.035	.174	3.885	.000	.324	1.235
	Empathy (X <sub>4</sub> )	.201	.041	.212	4.918	.000	.849	3.335
	Responsiveness (X <sub>5</sub> )	.107	.027	.089	3.925	.000	.837	1.387

a. Dependent Variable: Students' satisfaction (Y)

The equation of multiple linear regression obtained from the analysis is as follows:

$$Y = 4.997 + 0.286 X_1 + 0.284 X_2 + 0.135 X_3 + 0.201 X_4 + 0.107 X_5.$$

As shown in Table 10, T-test result reveals that each of the independent variables partially affected students' satisfaction as its significance level is 0.000 (< 0.05).

F-test shows whether the independent variables could explain the dependent variables. In the following ANOVA table (Table 11), it can be seen that each of the independent variables had a simultaneous effect on the dependent variable.

Table 11: Output of F-test ANOVA<sup>b</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	61.902	5	12.380	881.413	.000 <sup>a</sup>
	Residual	.646	46	.014		
	Total	62.548	51			

a. Predictors: (Constant), Responsiveness (X<sub>5</sub>), Reliability (X<sub>1</sub>), Assurance (X<sub>2</sub>), Empathy (X<sub>4</sub>), Tangibles (X<sub>3</sub>)

b. Dependent Variable: Students' satisfaction (Y)

The result of hypothesis in Table 11,  $F_{Cal.}$  of 881.413, at a significance level of 0.000. At a significance level of  $< 0.05$ , the obtained F-calculate is significant. Students' satisfaction is thus simultaneously affected by those five dimensions of service quality of examination services.

A beta test (domination) was applied to the variable with the highest standardised beta coefficient to find out which among the five independent variables (X) has the most dominant effect on the dependent variable (Y). The data in Table 10, showing standardised beta values, indicate that assurance ( $X_2$ ) comes up as the variable with the most dominant effect on students' satisfaction with a value of 0.602.

Coefficient of determination (R-square) was applied with simultaneous correlation values to measure the degree of simultaneous relationship between examination services and students' satisfaction as seen in Table 12:

Table 12: Summary Output of Simultaneous Correlation Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.995 <sup>a</sup>	.990	.989	.119

a. Predictors: (Constant), Responsiveness ( $X_5$ ), Reliability ( $X_1$ ), Assurance ( $X_2$ ), Empathy ( $X_4$ ), Tangibles ( $X_3$ )

Based on the calculation result, the simultaneous correlation coefficient value is 0.995 with R-Square of 0.990. This indicates that the simultaneous effect of reliability, assurance, tangibles, empathy and responsiveness on students' satisfaction is considered strong. The effect of reliability, assurance, tangibles, empathy and responsiveness is measured from the values of coefficient of determination ( $R^2$ ), which have 99.0% simultaneous effect on students' satisfaction. The remaining 1.0% is another factor that is not included in the model.

## CONCLUSION

The examination services for students at UT UPBJJ-Makassar include such qualities as reliability, assurance, tangibles, empathy and responsiveness, which can improve students' satisfaction with the implementation of examinations. The dimensions of service quality that affect students' satisfaction both simultaneously and partially are reliability, assurance, tangibles, empathy and responsiveness. Assurance is considered as the most significant dimension by students at UT. These conclusions lead to the following suggestions:

- (1) Heads of UT in the department of examination services and UPBJJ-Makassar are to generate and maintain the dimensions of service quality – reliability, assurance, tangibles, empathy and responsiveness as the triggers of students' satisfaction to create sufficient and continuing student satisfaction;
- (2) The five dimensions of service are to be gradually improved at UT UPBJJ-Makassar since they are necessary in boosting students' satisfaction; and
- (3) Future studies can add other independent variables that can affect the dependent variable of student satisfaction.

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