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Service Quality and Engagement at Some Private Universities

Heni Mularsih[1], and Lerbin Aritonang[2]

[1]Fakultas Psikologi, Universitas Tarumanagara, Indonesia.
[2]Fakultas Ekonomi, Universitas Tarumanagara, Indonesia.
henim@mku.untar.ac.id; aritonanglerbin@gmail.com

Abstract: The research conducted in this paper is a previous follow-up study. This study was conducted on 1000 female students at 10 universities in the Kopertis III Region. The purpose of this study was to examine the *nomologica*l validity of service quality, namely by using engagement. These two variables are measured by a Likert scale and their validity and reliability are tested. *Nomologic* validity alone is tested by correlation and regression analysis. From the results of the analysis and testing, it was found that the *nomologic* validity was tested empirically.

Keywords: quality services, engagement, *nomologic*

INTRODUCTION

This research is a continuation of previous research. As presented in the initial research proposal, the first research has been completed and the result is an instrument of higher education service quality that has been tested for validity and reliability within the scope of Kopertis Region III. The development of the instrument was based on the results of PZB research (Parasuraman, Zeithaml & Berry, 1985, 1988, 1991, 1994) using information related to its development, as reported in the first study.

Further research is the implementation or use of these instruments within the scope of Kopertis Region III. It was intended that the college obtain information about the quality of its services so that it can be known the weaknesses and advantages of each university in terms of the dimensions of the quality of service that has been provided to students. On that basis, universities will be able to find out what dimensions are classified as good so that they need to be maintained and / or improved. Universities can also know the weaknesses in the dimensions of the quality of services that have been provided. Thus, universities can identify the causes and formulate improvement plans that need to be done to improve the quality of their services.

In addition, testing for nomologic validity was added to this follow-up study. This is intended to examine the link between the quality of higher education services and other variables that are different, namely engagement. From the results of the study it can be seen that service quality is positively related to engagement. Barkhuizen, Magwere and Schutte (2014), for example, find that the dimensions of engagement work are positively related to the dimensions of service quality. Engagement is a positive predictor of service quality (Freeney & Fellenz, 2013; Raditha, Clemes & Dean, 2017).

The purpose of this study was to examine the nomological validity of service quality by using engagement.

THEORETICAL BASIS

Quality of Service. First year research (2017), dimensions as the basis for instrument development refer to ten dimensions according to PZB (in Wilson & Ronald, 2016). The explanation of the ten dimensions is presented below. One, realibility is the ability to provide services to customers consistently, accurately and professionally. Two, responsiveness is the desire to provide services with full readiness according to customer needs. Three,

competence is knowledge and skill so that it can provide services according to customer needs. Fourth, access is the closeness and convenience to be contacted regarding the location of services that are easy to reach, easy to contact communication channels, and the waiting time is not too long. Five, courtesy is the ability to provide service in a polite, respectful, caring and friendly manner. Six, communication is the ability to provide services to customers related to the delivery of information in a language that is easy to understand, and willing to listen to complaints, and suggestions. Seven, credibility is the ability to provide services honestly and trustworthy, which involves the name of the credit reputation, personal contact, and in terms of interacting. Eight, security is the ability to serve safely to customers, free from risk, danger, risk or doubt. Nine, understanding is an effort to provide services by understanding customer needs. Ten, tangible is a service in the form of physical appearance that can be used or felt by the customer.

Based on the test of the ten dimensions of service quality above, obtained the results of the development of instruments from ten dimensions to 4 dimensions. The results of this year research show, in the following table.

Table2.1. *Valid and Reliable Statements, and Dimensions*

P	STATEMENT	DIMENSION	
		Initial	Results
1	Lecturers teach according to their competence	Competence	Dimension 1: Competence
2	Lecturers have broad insight		
3	Lecturers easily communicate with students	Communication	Dimension 2: Communication
4	Institutional information access is easy to obtain		
5	The university is accredited by BAN	Credibility	Dimension 3: Confidence
6	Study Program Accreditation / Department can be trusted		
7	Comfortable administration service space	Security	
8	Vehicles parked safely		
9	Comfortable class room	Physical facilities	Dimension 4: Physical facilities
10	The lecture room is clean and tidy		
11	White board and audiovisual must function properly		
12	LCD is available in every lecture hall		
13	Clean toilet		

From Table 2.1 it can be seen that thirteen valid and reliable statements come from ten dimensions developed by PZB (1985). The dimensions of competence are manifested in statements 1 and 2. From the results of the analysis carried out, the two statements are manifestations of the same dimension. Thus, the resulting dimension is still given the term (name) Competency.

The communication dimension is manifested in 3 and 4. From the results of the analysis, the two statements are manifestations of the same dimension. Thus, the resulting dimensions are still given the term (name) Communication.

From the results of this study it is known that 5 to 6 are manifestations of the same dimension, namely Dimension 3. However, based on the references used in this study, 5 and 6 are manifestations of the credibility dimension. Meanwhile, 7 and 8 are manifestations of the Security dimension. With another statement, Dimension 3

produced in this study is a combination of the dimensions of Credibility and Security (PZB, 1985). On that basis, the name Dimension 3 produced in this study is the dimension of Belief, namely the credibility of institutions (colleges and study programs) and the security of lectures.

Physical facilities dimensions are manifested from 9 to 12 and 13. From the results of the analysis carried out, the five statements are manifestations of the same dimension. Thus, the resulting dimensions are still given the term (name) dimension of Communication.

Engagement. Initially, engagement was first developed in psychological research. In subsequent developments, engagement was adopted and developed in the field of organizational behavior and consumer behavior. In the context of consumer behavior, many empirical studies show that engagement plays a major role in explaining consumer behavior. Consumer engagement is a variable that has been recently believed to increase loyalty (Bowden, 2009; Brodie, Hollebeek, Jurić, & Allić, 2011; Sarkar & Sreejesh, 2014), increasing sales (Voyles, 2007), and profitability (Harter, Schmidt, & Hayes, 2002; Wellins, 2005; Voyles, 2007).

As it is often the case in the behavioral sciences, the concept or definition of the engagement until now still not definitive, they vary based on several views. The definition and size of engagement in the work context proposed by Schaufeli, Salanova, Gonzáles-Romá and Bakker (2002) are often used as references by researchers in consumer and organizational behavior (see also Flynn, 2012).The definition of consumer engagement adapted in this study is ". , , a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. "(Schaufeli, Salanova, Gonzáles-Romá and Bakker, 2002: 74) Related to that, vigor is characterized by energy and mental resilience with a high level, the desire to invest in work and even persistence in the face of difficulties., Dedication is characterized by feelings of significance, enthusiasm, inspiration, pride, and enthralled in the work, with which the perceived time passes quickly and has difficulty by releasing itself from work.

RESEARCH METHODS

Time and Place of Research This research was conducted for 1 year, namely in 2018. The place of research was conducted at private universities in Kopertis Region III.

Population and Sample. The population of this study is all private university students who are included in Kopertis Region III. From the population, a sample of 10 tertiary random techniques was chosen, each of which consisted of 100 students so that the total sample was 1000 students. One hundred students from each college were randomly selected as many as 20 students from each year.

Instrument. There are two variables in this study so that there are two instruments needed. Instruments for measuring service quality variables have been produced in previous studies with proven validity and reliability. Engagement variables are developed based on their conceptual definition and by adopting instruments that have been developed by previous researchers.

Both instruments use the Likert type with five response options. The score moves from 1 to 7. Before the engagement instrument is used, the instrument is administered to 10 students to determine the possibility of improving the editor of each statement. On that basis, the initial instrument was developed to test the reliability and validity of the broader subject. The initial instrument is presented in the attachment.

Validity and Reliability. The validity of engagement instruments and service quality were analyzed by item-total correlations corrected as presented in Tables 4.1 and 4.2, using a validity coefficient of at least 0.20 (Cronbach, 1990). Engagement reliability and service quality were analyzed with Cronbach's alpha as presented in Table 4.1 and 4.2, using a reliability coefficient of at least 0.70 (Rush & Golombok, 1989).

Table4.1. *Validityand Reliability of Egagement*

Statements	Corrected Item-Total Correlation (CITC)	Statements	Corrected Item-Total Correlation (CITC)
AGE1	,202	KOG1	,360
AGE2	,214	KOG2	,479
PL1	,284	KOG3	,454
PL2	,352	KOG4	,367
PL3	,351	KOG5	,298
PL4	,412	KOG6	,275
PL5	,391	KOG7	,507
EMO1	,520	KOG8	,378
EMO2	,363		
EMO3	,421		
EMO4	,386		
Cronbach's Alpha = ,798			

Table4.2. *Validityand Reliability of Quality Service*

Statements	Corrected Item-Total Correlation (CITC)	Statements	Corrected Item-Total Correlation (CITC)
COMP1	,308	PHYSIC1	,404
COMP2	,245	PHYSIS2	,409
COMU1	,271	PHYSIS3	,548
COMU2	,322	PHYSIS4	,379
SURE1	,451		
SURE2	,326		
Cronbach's Alpha = ,696			

From Table 4.1 it can be seen that 11 statement items regarding engagement are valid, as the validity coefficient in the CITC column is greater or equal to 0.200. The engagement consists of Agency (AGE), Behavior (PL), and Emotion (EMO) dimensions. The reliability coefficient (0.798) is greater than 0.700 so it is reliable.

Furthermore, from Table 4.2 it can be seen that 10 statement items regarding service quality are classified as valid, as well as the validity coefficient in the CITC column which is greater or equal to 0.200. Quality services consist of Competency (COMP), Communication (COM), Confidence (SURE), and Physical dimensions. The reliability coefficient (0.696) is smaller than 0.700 but the difference may be small so that it can still be assumed to be reliable, especially if one decimal is used.

From the results of the validity and reliability analysis above, it can be concluded that the data obtained is feasible to be used to answer the formulation of the research problem.

Data analysis. In accordance with the purpose of this study, the data analysis used was analysis of variance to compare the mean dimensions of service quality between universities and simple regression analysis to test the *nomologic* validity of service quality. The analysis was carried out with the help of SPSS 21 software.

RESULTS AND EXTENSION OF RESEARCH

Table5.1.a. *Universities*

		Frequency	Percent	Valid Percent	Cumulative Percent
	A	60	6,0	6,0	6,0
	B	140	14,0	14,0	20,0
	C	100	10,0	10,0	30,0
	D	100	10,0	10,0	40,0
	E	100	10,0	10,0	50,0
Valid	F	100	10,0	10,0	60,0
	G	100	10,0	10,0	70,0
	H	100	10,0	10,0	80,0
	I	100	10,0	10,0	90,0
	J	100	10,0	10,0	100,0
	Total	1000	100,0	100,0	

In Table 5.1.b it can be seen that 432 respondents have economic disciplines and the remaining 568 people have discipline not economics.

Table5.1.b. *Faculties*

		Frequency	Percent	Valid Percent	Cumulative Percent
	Ekonomics	432	43,2	43,2	43,2
Valid	Non Economics	568	56,8	56,8	100,0
	Total	1000	100,0	100,0	

In Table 5.1.c the respondent's semester is presented. Respondents are in the first semester as many as 470 people, 403 people are in the second semester, and 127 people are in the third semester.

Table5.1.c. *Semester*

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	470	47,0	47,0	47,0
	2	403	40,3	40,3	87,3
Valid	3	127	12,7	12,7	100,0
	Total	1000	100,0	100,0	

In Table 5.1.c the respondent's semester is presented. Respondents are in the first semester as many as 470 people, 403 people are in the second semester, and 127 people are in the third semester.

Table5.1.d. *Gender*

		Frequency	Percent	Valid Percent	Cumulative Percent
	Male	502	50,2	50,2	50,2
Valid	Female	498	49,8	49,8	100,0
	Total	1000	100,0	100,0	

Table5.2.a. *Descriptive Statistics of AGE Item (Agency)*

	N	Range	Minimum	Maximum	Mean	Std. Deviation
AGE1	1000	4	1	5	3,39	,608
AGE2	1000	3	2	5	3,18	,582
Valid N	1000					

The behavioral dimension consists of five statements. The average moves from 3.28 for statements five to 3.73 for statements two and four. The variability of the score moves from 0.633 in the statement one to 0.712 for statement two. Descriptive statistics of emotional items are presented in Table 5.2.c. The emotional dimension of the engagement variable consists of four statement items. The average moves from 3.43 for statements two to 3.57 for statements three and four. The variability of the score moves from 0.666 for one statement to 0.784 for statement four.

Table5.2.b. *Descriptive Statistics of PL Points (Behavior) Engagement*

	N	Range	Minimum	Maximum	Mean	Std. Deviation
PL1	1000	4	1	5	3,66	,633
PL2	1000	4	1	5	3,73	,712
PL3	1000	3	2	5	3,66	,693
PL4	1000	4	1	5	3,73	,645
PL5	1000	4	1	5	3,28	,698
Valid N	1000					

Table5.2.c. *Descriptive Statistics of EMO Points (Emotions)*

	N	Range	Minimum	Maximum	Mean	Std. Deviation
EMO1	1000	4	1	5	3,56	,732
EMO2	1000	4	1	5	3,43	,776
EMO3	1000	3	2	5	3,57	,666
EMO4	1000	4	1	5	3,57	,784
Valid N	1000					

The dimension of engagement variable cognition consists of eight statements, as presented in Table 5.2.d. The average moves from 3.45 for statements three to 3.80 for statement seven.

Table5.2.d. *Descriptive Statistics of KOG (Cognition) Points*

	N	Range	Minimum	Maximum	Mean	Std. Deviation
COG1	1000	3	2	5	3,58	,757
COG2	1000	3	2	5	3,73	,737
COG3	1000	4	1	5	3,45	,707
COG4	1000	4	1	5	3,61	,805
COG5	1000	4	1	5	3,60	,857
COG6	1000	4	1	5	3,59	,812
COG7	1000	3	2	5	3,80	,740
COG8	1000	4	1	5	3,77	,801
Valid N	1000					

Engagement variables consist of four dimensions, as shown in Table 5.2.d. The mean score moves from 3.2845 for the agency dimension to 3.6398 for the dimension of cognition. The standard deviation moves from 0.43557 to the cognition dimension up to 0.49127 for the emotional dimension.

Table5.2.d. *Descriptive Statistics of Engagement Dimensions*

	N	Minimum	Maximum	Mean	Std. Deviation
AGE	1000	2,00	5,00	3,2845	,44834
PL	1000	1,80	5,00	3,6122	,44037
EMO	1000	2,00	5,00	3,5320	,49127
COG	1000	2,63	5,00	3,6398	,43557
Valid N	1000				

Descriptions of the Item and Dimensions of Services Quality. Item characteristics and dimensions of service quality variables are presented in Table 5.3. Service quality consists of four dimensions, namely competence, communication, confidence and physical. In Table 5.3.a it can be seen that the competency dimension consists of two statements with a mean of 3.57 for statements one and 3.67 for statement two, and variability of 0.704 for statements two and 0.724 for statements one.

Table5.3.a. *Descriptive Statistics of COMP Points (Competency)*

	N	Range	Minimum	Maximum	Mean	Std. Deviation
COMP1	1000	4	1	5	3,57	,724
COMP2	1000	2	3	5	3,67	,704
Valid N	1000					

As can be seen in Table 5.3.b, the communication dimension consists of two statements with a mean of 3.73 for statement one and for 3.81 for statement two. The statement variability of two is equal to 0.681 and for the percentage of one is 0.685.

Table5.3.b. *Descriptive Statistics of KOMU Item (Communication)*

	N	Range	Minimum	Maximum	Mean	Std. Deviation
COMM 1	1000	2	3	5	3,73	,685
COMM2	1000	2	3	5	3,81	,681
Valid N	1000					

In Table 5.3.c it can be seen that the dimension of confidence consists of two statements. The mean of statement one is equal to 3.65 and for statement two is equal to 3.72. Variability of statement one is equal to 0.563 and for statement two is equal to 0.476.

Table5.3.c. *Descriptive Statistics of SURE Item (Confidence)*

	N	Range	Minimum	Maximum	Mean	Std. Deviation
SURE1	1000	3	2	5	3,65	,563
SURE2	1000	2	3	5	3,72	,476
Valid N	1000					

Descriptive statistics of grain physical dimensions are presented in Table 5.3.d. From the table it can be seen that the physical dimension consists of four items with a moving average of 3.59 for statements two to 3.78 for statements one. The variability moves from 0.513 for statements of three to 0.596 for statement two.

Table5.3.d. *Descriptive Statistics of Physical Item*

	N	Range	Minimum	Maximum	Mean	Std. Deviation
PHYSIC1	1000	2	3	5	3,78	,547
PHYSIC2	1000	4	1	5	3,59	,596
PHYSIC3	1000	2	3	5	3,67	,513
PHYSIC4	1000	2	3	5	3,72	,585
Valid N	1000					

Descriptive statistics on service quality dimensions are presented in Table 5.3.e. In the table it can be seen that the four-dimensional mean moves from 3.686 for the confidence dimension to 3.7685 for the communication dimension

Table5.3.e. *Descriptive Statistics on Service Quality Dimensions*

	N	Minimum	Maximum	Mean	Std. Deviation
COMP	1000	2,00	5,00	3,6210	,62750
COMM	1000	3,00	5,00	3,7685	,46084
SURE	1000	2,50	5,00	3,6860	,45838
PHYSIC	1000	3,00	5,00	3,6888	,42159
Valid N	1000				

Description of Variable Engagement and Service Quality. Descriptive statistics of engagement variables and service quality are presented in Table 5.4. Service quality score (SQ) moves from 3.00 to 4.60 with an average equal to 3.6906 and variability equals 0.31710. Engagement scores move from 2.37 to 5.00 with a mean equal to 3.5724 and variability of 0.33761.

Table5.4. *Descriptive Engagement Statistics and Service Quality*

	N	Minimum	Maximum	Mean	Std. Deviation
SQ	1000	3,00	4,60	3,6906	,31719
Engagement	1000	2,37	5,00	3,5724	,33761
Valid N	1000				

Nomologic validity. Validity of service quality *nomology* (SQ) was tested using engagement, namely through correlation and regression analysis, as presented in Table 5.5. In Table 5.5.a it can be seen that the correlation coefficient is equal to 0.575, with the coefficient of determination equal to 0.330. That means that 33 percent of engagement variability can be explained based on service quality variability (SQ). Statistically, the results are quite large, as can be seen in Table 5.5.b, namely the probability of errors (Sig.) Smaller than 0.050, ie 0,000.

Table5.5.a. *Model Summary Statistics*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,575[a]	,330	,330	,27649
a. Predictors: (Constant), SQ				

Table5.5.b. *Variant Analysis Results*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37,653	1	37,653	492,555	,000[b]
	Residual	76,292	998	,076		
	Total	113,945	999			
a. Dependent Variable: Engagement						
b. Predictors: (Constant), SQ						

Next, in Table 5.5.c it can be seen that the constants and regression coefficients obtained are classified as statistically large, as can be seen from the probability of errors (0,000) smaller than 0.050.

Table5.5.c. *Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,314	,102		12,861	,000
	SQ	,612	,028	,575	22,194	,000

From the results of the correlation and regression analysis, it can be seen that the *nomologic* validity of service quality is tested empirically.

Benchmarking Dimensions and Variables Based on Universities. In addition to the results of the correlation and regression analysis above, the following results of the analysis of variance are presented to compare dimension and variables between universities. In Table 5.6.a it can be seen that statistically there are no differences in dimensions of engagement between 10 private universities that are the subject of this research. It can be seen from all the probability of errors (Sig.) Greater than 0.05.

In Table 5.6.b it can be seen that statistically there are no differences in service quality dimensions between the 10 private universities that are the subject of this study. It can be seen from all the probability of errors (Sig.) Greater than 0.05.

Table5.6.a. *Results of Variance in Service Quality Dimension Analysis*

		Sum of Squares	df	Mean Square	F	Sig.
COMP	Between Groups	1,580	9	,176	,444	,912
	Within Groups	391,779	990	,396		
	Total	393,359	999			
COMM	Between Groups	2,740	9	,304	1,439	,167
	Within Groups	209,418	990	,212		
	Total	212,158	999			
CONFI	Between Groups	,274	9	,030	,144	,998
	Within Groups	209,630	990	,212		
	Total	209,904	999			
PHYSISC	Between Groups	,492	9	,055	,305	,973
	Within Groups	177,069	990	,179		
	Total	177,561	999			

In Table 5.6.b it can be seen that statistically there are no differences in service quality dimensions between the 10 private universities that are the subject of this study. It can be seen from all the probability of errors (Sig.) Greater than 0.05.

Table5.6.b. *Analysis Result of Variance Engagement Dimension*

		Sum of Squares	df	Mean Square	F	Sig.
AGE	Between Groups	,003	1	,003	,013	,908
	Within Groups	200,807	998	,201		
	Total	200,810	999			
PL	Between Groups	,105	1	,105	,541	,462
	Within Groups	193,626	998	,194		
	Total	193,731	999			
EMO	Between Groups	,124	1	,124	,513	,474
	Within Groups	240,977	998	,241		
	Total	241,101	999			
COG	Between Groups	,000	1	,000	,000	,989
	Within Groups	189,532	998	,190		
	Total	189,532	999			

DISCUSSION

This research is a continuation of previous research. The aim of the previous research was to develop service quality instruments in universities in several universities. From the research, quality service instruments have been produced which cover four dimensions, namely competence, communication, confidence and physical. The instrument is suitable for use based on the results of its validity and reliability analysis.

The main objective of the current study is to examine the *nomologic* validity of service quality using engagement variables. Related to that, engagement instruments were developed first. After going through the analysis of validity and reliability, three dimensions are produced, namely agency, behavior, emotions and cognition.

Furthermore, *nomologic* validity was tested through correlation and regression analysis. From the two results of the analysis, it can be seen that the coefficient of determination between engagement and service quality is statistically large.

CLOSING

Tujuan utama penelitian ini adalah untuk menguji validitas nomologic variabel kualitas layanan berdasarkan variabel *engagement*. Untuk itu, instrumen *engagement* dikembangkan berdasarkan landasan teori yang relevan. Selanjutnya, instrumen itu diuji validitas dan reliabilitasnya sehingga dihasilkan empat dimensi, yakni agensi, perilaku, emosi dan kognisi. Instrumen kualitas layanan sendiri telah dikembangkan dan teruji validitas dan reliabilitasnya pada penelitian sebelumnya. Hasilnya adalah bahwa variabel kualitas layanan terdiri atas empat dimensi, yakni kompetensi, komunikasi, keyakinan dan fasilitas fisik. Dengan demikian, masalah dimensi yang teridentifikasi mengenai *engagement* pada perguruan tinggi telah terjawab.

Furthermore, testing the *nomologic* validity was done with correlation and regression analysis. From the results of the analysis it can be concluded that the nomologic validity of service quality is tested empirically. Thus, the main objective of this research has been achieved.

From the results of the analysis of variance on the dimensions of engagement and the quality of service has been carried out it can be concluded that there are no differences in the dimensions of the two variables when compared between private universities that are the subject of this study. The implication of the results of the analysis is that there are no difficulties in higher education in using service quality instruments or engagement at all universities.

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