

# The Development Concept of Service Quality at Student Affairs Department of Widyatama University Using Factor Analysis

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## ABSTRACT

Student Affairs Department is one of the departments that relate directly to students in the extra-curricular activities service. The improvement of service quality to students is the major policy of this department. Continuous improvements are always done by the department both in terms of service facilities and service quality. However, such efforts are felt not optimal because there are still some complaints about the services that performed. Therefore, it is necessary to know the factors of service quality that should be addressed so that the improvement efforts could in line with the students' expectations.

The objective of this research is to find out factors that shaped the service quality concept. This research used exploratory method. The primary sample data took 115 student of Widyatama University as respondent. The scale used in this research is Likert scale which is later transformed into interval scale using Method of Successive Interval. Factor analysis is used to find out any factors that shaped the service quality concept in terms of services that provided by the Student Affair Department.

The results of this research proved that there are five factors that shaped service quality concept in Student Affair Department. Those five factors is called convenience, accuracy, accessibility, communication and attitude.

Keywords : Service quality, Factor Analysis, Student Affair Department.

## INTRODUCTION

In business, the product or services provided, has strong relation with the quality offered by the company. Kotler defines that quality is all character from a product or services that influenced their ability to satisfy the stated or unstated needs [2].

Tjiptono also defines the same definition of service quality where service quality is concentrated in the effort to fulfill the customer needs and wants and accurate delivery to gain customer expectations [6]. So, the provided services have to fulfill and satisfy the customer needs.

Gronroos also defines service quality as a perceived judgment, resulting from an evaluation process where customers compare their expectations with the service they perceive to receive [1]. Wong also suggests that service quality issues can be split into technical quality (what is done) and functional quality (how it is done) [7].

The service quality issues are also faced by the Student Affair Department of Widyatama University (UTama), Bandung, Indonesia. UTama is one of well and respected private university in West Java, Indonesia. In its development UTama, primarily uses the tagline "Friendly Campus for Future Business Pro", the value that wants to be delivered to students as customers.

As consequences of the tagline, Student Affair Department as one of the Department in UTama that has direct relation with the student in terms of extracurricular activities and many others, tries to give the best services for the students. Continuous improvement has always been conducted to enhance student satisfaction.

The Improvement efforts do not seem in line with students' expectation. The indicator is that there are still some complaints from the student about the performed services.

Based on the descriptions above, the purpose of this research is to describe the development concept of service quality in terms of services provided by the Student Affair Department by using factor analysis. The results of this study are expected to contribute and to give additional useful information for Student Affair Department in conducting an innovation and service quality improvement.

## Literature Review

The definition of service quality, concentrated their efforts on fulfilling customer needs and wants as well as accuracy of delivery to meet customer expectations [6]. And according to Wyckof as written in the [6]:

"Quality service is the expected level of excellence and control over the level of excellence to meet customer desires. In other words there are two factors that

affect the quality of services they are expected service and perceived service. If the services received or perceived as expected, then it will be perceived better service quality and satisfaction. If the services received exceed customer expectations, then the quality of service perceived as an ideal quality. Conversely, if the services received is lower than expected, then the perceived poor quality of services. Thus whether or not the quality of service is considered as good one depends on the ability of the service providers in fulfilling customer expectations consistently. "

Further Zeithaml and Bitner [8] argued that:

"Service quality is a focused evaluation that reflects the customer's perception of specific dimensions of service: tangibles, empathy, reliability, responsiveness, assurance."

Same with them, Lovelock [3] also says there are five dimensions of service quality, namely:

- Tangibles, including the company's physical facilities, equipment, performance personnel/employee, website and communication facilities.
- Empathy, including the ease in the relationship, good communication, and personal attention, and understanding of personnel / employees to the needs of customers (understanding the customer's) because the consumer is unique and special.
- Reliability, is the company's ability to provide services promised immediate, accurate, and satisfying (dependability). Besides this dimension also includes the consistency of performance so the company must also provide his services in a timely manner since the first moment (right at the first time).
- Responsiveness, including the willingness, preparedness and alertness of personnel / employees of companies in assisting and providing services needed by consumers to respond.
- Assurance, includes the knowledge, ability, skill, friendliness, courtesy, and honest and trustworthy attitude of the personnel / staff who are given when using the services of the company, free from danger, risk or doubt (competence, credibility, courtesy, and security).

In a study conducted by Berry, Parasuraman, and Zeithaml in 1993, they argued there are two levels of customer expectations on service, which is adequate service and desired service. Adequate service is a minimum service of performance level that can be accepted with no dissatisfaction impression [3]. They are based on estimates service about what that might be received and depending on the available alternatives. While the desire service is the level of service performance that customers expect to receive, which is a combination and expectation of what can and should be received [8]. These include two levels of explicit and implicit promise of service providers, the comments from word of mouth and past experiences of consumers within the company. If the performance is below of adequate service it will create the frustration and dissatisfaction, while if the performance exceeds the level of desired service it will make customers happy and surprise.

And then, the area between the two levels of expectation is called zone of tolerance. Lovelock [3] says that the zone of tolerance is the extent to which customers are willing to accept service delivery variation. In this zone the consumer not paying attention to the performance of services. This zone can expand and shrink depending on various factors such as competition, prices, interest and service attributes, and different for every individual, companies, situations and aspects of service [6].

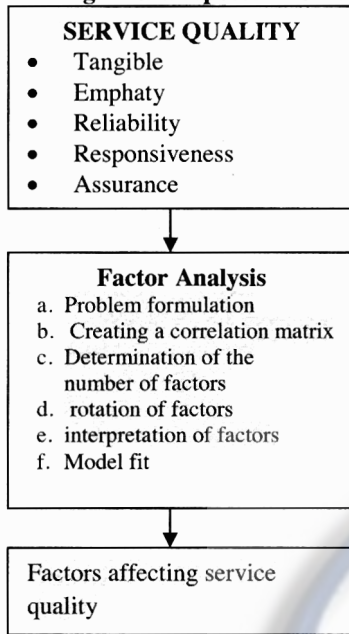
In general, consumers will have less tolerance for services that are not reliable, like as not keeping appointments. Similarly, for the most important dimension of service then the consumer will be less tolerance and desired and adequate service levels will be higher. While the degree to which consumers anticipate to receive the so-called predicted service, which directly affects the adequate service.

## RESEARCH MODEL

Based on the preceding literature, the research model for this study, shown in Figure 1, focuses on the factor that can influence the service quality.

value (mean) response data showed a tendency of respondents in each dimension of service quality indicators.

**Figure 1. Proposed Research Model**



**METHOD**

Factor analysis is a technique for analyzing the interdependence of several variables simultaneously in order to simplify the form of the relationship between the variables studied to be a number of factors that fewer than the variables studied, which means it can also describe the data structure of one study [4].

The unit of analysis is the student of 2006-2010 Class. The restrictions on this respondent is the assumption that the students have felt the impact of the services offered by Student Affairs Department that are expected to have had its own views on these services. The spread of respondents conducted in classes that have students with those forces. The research sampling is selected subjectively by the researchers of a population [5]. The respondents are 115 people. The data collection was carried out by two techniques namely field research through questionnaires, interviews and observation, and library research.

**RESULTS AND ANALYSIS**

Descriptive statistics of the dimensions of service quality to be presented is the the average and standard deviation is a measure of trend data and data distribution. The average

**Table 1. Descriptive Statistic of Service Quality Indicators**

INDICATORS	MEAN	STANDARD DEVIATION	N
Room appearance of Student Affairs Department	3.4348	0.88981	115
Student Affairs Department room comfortness	3.4087	0.95418	115
Availability of information board/announcements for the necessary information	3.4174	0.83753	115
Ability to communicate with the staff of Student Affairs Department	3.0696	1.04059	115
Student needs and wants understood by the staff of Student Affairs Department	3.4348	0.88981	115
The accuracy of the service provided by the Student Affairs Department	3.4087	0.95418	115
Reliability of service provided by the Student Affairs Department	3.8957	0.87232	115
Knowledge about University policies related to student services	3.7913	0.89340	115
Readiness services provided by staff of the Student Affairs Department	3.4174	0.83753	115
The speed of service provided by the staff of Student Affairs Department	3.8957	0.87232	115
Responsiveness services provided by staff of the Student Affairs Department	3.0609	1.07023	115
Ease to obtain services from the Student Affairs Department	3.4087	0.95418	115
Ease in obtaining information related to student welfare	3.4174	0.83753	115
Honesty staff of the Bureau of Student Affairs	3.0696	1.04059	115

Source: field data processing, August 2011

**Indicators Correlation in Service Quality**

From the calculation, the determinant value of 0.011 was obtained. Determinant of this figure is close to zero, It indicated that there is a correlation between the indicators. To determine whether factor analysis feasible or not, it is necessary to see the Kaiser-Meyer-Olkin measure of sampling adequacy was. Factor analysis is used if the value of KMO worth is greater than or equal to 0.5. From the calculation results, obtained KMO value of 0.751, this means taking a sample into the category of somewhat good/moderate is

according to the size classification accuracy of KMO by Subhas Sharma. While the Bartlett test of sphericity test showed that the value of chi square value of 492.391 while his table is 315, 749. Because Bartlett's test value is greater than table value, then this shows the correlation matrix tested is not an identity matrix so that it can be concluded that the correlation matrices tested had levels of inter-related indicators in the variable sufficient.

The testing of indicators of service quality variables are also made through the MSA approach to see if the indicator concerned feasible or processed using factor analysis should be considered for elimination. MSA has a sense of value equal to the value of KMO, was only partial (per item/indicator). If the item / indicator has a value of the MSA is smaller than 0.5, then the item is excluded from the selection of indicators.

**Table 2.**  
**MSA Value for Service Quality Indicators**

INDIKATOR	MSA
Indicator 1	0,755
Indicator 2	0,842
Indicator 3	0,794
Indicator 4	0,674
Indicator 5	0,800
Indicator 6	0,763
Indicator 7	0,829
Indicator 8	0,657
Indicator 9	0,748
Indicator 10	0,834
Indicator 11	0,698
Indicator 12	0,755
Indicator 13	0,672
Indicator 14	0,636

Source: field data processing, August 2011

From the table above can be seen that all indicators which had MSA values greater than 0.5. Thus the 14 indicators of service quality variables declared eligible to participate in the subsequent factor analysis.

**Table 3.**  
**Value of Commonalities**

	Initial	Extraction
tang1	1.000	.655
tang2	1.000	.657
tang3	1.000	.672
emph1	1.000	.696
emph2	1.000	.670
relia1	1.000	.562
relia2	1.000	.565
relia3	1.000	.778
respon1	1.000	.628
respon2	1.000	.635
respon3	1.000	.726

assu1	1.000	.688
assu2	1.000	.719
assu3	1.000	.775

Extraction Method: Principal Component Analysis.

Source: field data processing, August 2011

From the table can be interpreted things as follows:

1. Initial value is a variant of the variable prior to the extract. All the initial value is 1, this means that prior to extraction, the variable is 100% form factor, because prior to the extraction of factors is equal to the indicator. Thus, there are 14 factors.
2. Extraction value describes the percentage of variant of an indicator which can be explained by factors that will be formed. For indicator P1 (tangible indicator), the extraction is 0.655. This means that 65.5% of the variance of the indicators of P1 can be explained by factors that will be formed. Similarly so for 13 other indicators.
3. The greater the commonality value indicates the stronger relationship with the factors that will be formed. From the table can be seen that the highest value there is commonality in the three indicators of reliability of 0.778 which means that 77.8% of the variance of reliability indicators can be explained by three factors that will be formed.

#### Total Variance

Total variance explained table will be used to determine many factors that shape. Factors that are formed should have eigen values > 1. From the calculation results can be seen that there are five components that have a value of eigenvalues greater than 1. This means, the factors that will be formed in this factor analysis of five factors with a cumulative score of 67.331%. This means that 67.331% of all existing indicators can be explained by five factors that are formed.

#### Factor Rotation

The rotation of factors was carried out to show the distribution of indicators that have been extracted into the factors that have been formed based on its factor loadings after the rotation process. Terms used in the analysis of these factors are indicators that had factor loadings <0.4 are considered to have a weak contribution to the form factor and should be reduced from the formation factor [4].

Based on the results of the rotation matrix can be seen that all the indicators have a loading factor value is greater than 0.4. Results factoring into fourteen indicators based on the rotation matrix shown in the following table:

**Table 4.**  
**Result Factoring of The Service Quality Indicators**

FACTOR	INDICATORS
Factor 1 (Convenience)	<ul style="list-style-type: none"> <li>• Appearances room of Student Affair Department</li> <li>• Leisure room of Student Affair Department</li> <li>• Availability of information boards / announcements for the necessary information to students</li> <li>• Ease in obtaining information related to student welfare</li> </ul>
Factor 2 (Accuracy)	<ul style="list-style-type: none"> <li>• Accuracy of services provided by the Student Affair Department</li> <li>• Reliability of service provided by the Student Affair Department</li> <li>• Knowledge of the staff of Student Affair Department regarding university policies related to student services</li> <li>• Readiness services provided by staff of the Student Affair Department</li> </ul>
Factor 3 (accessibility)	<ul style="list-style-type: none"> <li>• Responsiveness of services provided by staff of the Student Affair Department</li> <li>• Easy to get service from the Student Affair Department</li> </ul>
Factor 4 (communication)	<ul style="list-style-type: none"> <li>• Communication ability of Staff of Student Affair Department</li> <li>• Speed of service provided by staff of the Student Affair Department</li> </ul>
Factor 5 (attitude)	<ul style="list-style-type: none"> <li>• Honesty of staff of Student Affair Department</li> </ul>

### Interpretation of Factor Analysis Results

From the results of factoring there are five factors that make up the concept of service quality in the services provided by the Student Affairs Department. The five factors in sequence were then called as factors:

a. Factor 1 is the convenience. This capability includes appearances room of Student Affair Department, leisure room of Student Affair Department, availability of information boards / announcements for the necessary information to students, ease in obtaining information related to student welfare. In this factor, the Student Affair Department needs to create the convenience atmosphere in the services so the student as the customer could feel comfortable. Beside that, this convenience is needed to create in the sense of the availability of the information related to them.

b. Factor 2 is accuracy. It is important to be noticed by Student Affair Department that in providing services to student, accuracy is one of the important thing for them. In gaining information from the department, they really need accuracy so it can reduce unnecessary effort. This includes accuracy of services provided by the Student Affair Department, reliability of service provided by the Student Affair Department, knowledge of the staff of Student Affair Department regarding university policies related to student services, readiness services provided by staff of the Student Affair Department.

c. Factor 3 is accessibility. The accessibility is referred to responsiveness of services provided by staff of the Student Affair Department, and easy to get service from the Student Affair Department. An easy acces to get the services from the department is one of the things that they want. Not only easy acces, but they also need the prompt responsive action from the staff.

d. Factor 4 is communication. This factor is referred to the communication ability and speed of service provided by staff of the Student Affair Department. In gaining service or information from the department, the student should receive brief information so they can clearly understand. But sometimes, bad communication skill from the staff becomes the barrier to the brief information.

e. Factor 5 is attitude. It is important to be noticed by department that the attitude from the staff especially honest manner is one the thing that the student need.

### Model Accuracy Test

To determine the accuracy of the model of the factors that form, the use of the test-accuracy based on the table reproduced correlation matrix. To determine this seen from the residual value (difference) between the reproduced correlation observed, in which a model is good if the difference is not more than 0.05 [4]. From the data have been processed can be seen that there is a 59% residual on a diagonal line that changed. This suggests that the model formed from the analysis of the factors that have been done otherwise not good enough because the change is above the 50%.

### DISCUSSION AND MANAGERIAL IMPLICATIONS

From the results of the research found that the factors that shape the concept of service quality consists of the convenience factor, accuracy,

accessibility, communication and attitude. These factors are obtained after conducting research that is exploratory using factor analysis. The initial stage is carried out by distributing questionnaires to obtain primary data to be processed further. Before conducting factor analysis, first conducted a series of tests to ensure that factor analysis is an appropriate method to use. Preliminary test results prove that the proper factor analysis to proceed. From the test results of factor analysis, it appears that the factors mentioned above have a value of eigenvalues greater than 1, the following order (from largest to smallest) : 4,511 for convenience factor, 1,634 for accuracy factor, 1,217 for accessibility factor, 1,062 for communication factor, and 1,003 for attitude factor. When it was viewed from the eigenvalue, the convenience factor is the most dominant factor in formed the service quality concept.

- a. For department, although the results showed that the service quality concept has good responses from the respondents, but the department must continue to improve existing concepts.
- b. It is important to build a convenience atmosphere around the department not only in services term but also in physical term. To be comfortable, the student also need a representative room in terms of wider room, completed with air conditioner and many others. So they can enjoy while they are waiting for the services or when they get the services.
- c. It is important to have a good communication skill and quick response from the department staff. Because sometimes it becomes a barrier to provide an accurate service for the student. This accuracy also depends on the knowledge ability from the staff and the good attitude or manner of the staff when they were providing the services.
- d. Building a wider access is also required for the student to get the important information. On-line information could be built to provide broader and wider information for the student.

are not active in student board, because, they are customers of Student Affair Department as well. Second, only small sample of respondents have been taken in this study. Future efforts should have a wider sample of respondent. This study need to be followed up by subsequent researchers using a more complete literature, and a longer time and using a sample of a wider and deeper study in order to produce better research. In addition, further studies could be conducted with the experiential marketing variabel.

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## LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

In interpreting the results, the limitations of the study have to be considered. First, the use of a specific student (i.e. student that active in student board) as the respondent is has become a limitation of this study. Future research should accommodate the other group of students that