

IMPROVING THE SERVICE QUALITY OF DISTANCE EDUCATION USING INTEGRATION SERVICE QUALITY FOR HIGHER EDUCATION AND KANO

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ABSTRACT

Increasing demand for distance education was not compensated by the number of higher education distance education providers make students more demanding. Improved service quality becomes important. This research integrates methods Service Quality for Higher Education and Kano as a guide to improve the quality of service quality by identifying needs attribute and evaluates students expectation. Case study conducted at Electrical Engineering postgraduate program in private university and involved 115 respondents from bachelor of Electrical Engineering, bachelor of Telecommunication Engineering, alumnus, and distance education master of Electrical Engineering in Bandung. From this research is obtained attribute service needs to be developed and prioritized.

Key words: Need Analysis, Service Quality, Higher Education, Kano.

1. INTRODUCTION

Distance education is one of educational innovations that are beneficial and have a good prospects (Zuhairi, Antor, & Aridasih, 2015). Realizing that some colleges in addition to the Unirversitas terbuka, also organizes LDL programs include Binus University, Universitas Indonesia, Universitas Gadjah Mada, Institute Teknologi Sepuluh November Institute Teknologi Bandung, and Yogyakarta AMIKOM (Republika, 2015). The increasing need for distance education is not matched by the number of college that have Distance Education Program making the student become more selective and demanding the distance education services. Because it is necessary to improve the quality of services to meet the needs of students.

Improved quality of service is conducted by identifying the attributes of service requirements. Preliminary research conducted to learn more about the unmet needs by exploring various shortcomings or of distance education. Among them are the types of deficiencies regarding access speed, service administration, faculty willingness to serve the students, virtual lecture schedules, discipline faculty,

distance education service system, and promotion

The Service Quality (servqual) has been used to determine critical attributes of various services and the improvement actions are derived based on gap score of expectation and perception (Sukwadi, Yang, & Liu, 2011). Servqual is a popular standardized method to measure the quality of service. However, the service industry is very diverse, so the quality parameter is different. Specific characteristics of each service industry requires a unique dimension in addition to common features with other services (Owlia & Aspinwall, 1996). Because of this research service attribute identification refers to the relevant dimensions of service quality for higher education.

Kano method is a powerful way to classify categories of quality attributes as customer requirements (Sukwadi, Yang, & Liu, 2011). Kano method categorizing attributes by Kano category that can lead to the development of services.

The research describes the results of a study conducted at higher education to gain students true customer needs to attribute the needs of the service in college. The focus of

the research will involve identifying attribute needs and determine actions for improving service quality in higher education. The research will be applied to an electrical engineering postgraduate program in private university in Bandung which aims to increase the number of distance education students to improve service quality.

2. THEORETICAL BACKGROUND

2.1. Service Quality

Service quality is a measurement of how well the level of service delivered according to customer expectations (Lewis and Booms, 1983; in Parasuraman, et al., 1985). That is used based on the dimensions of service quality for higher education. There are six relevant dimensions used to measure service quality of distance education which are tangibles, content, medium of instruction, reliability, assurance, and responsiveness (Shauchenka, et al., 2010; Kwan & Ng, et al., 1999; Parasuraman, 1988).

2.2. Kano

Kano proposes a model of two-way quality to categorize attributes in terms of the company's ability to meet the needs of the product or customer service into the category of primary and secondary quality categories of perceived quality (Kano et al. 1984; in Bandyopadhyay, 2015). Customer needs attributes are grouped into Kano categories, which is attractive, one-dimensional, must-be, indifferent, reverse, and questionable.

3. RESEARCH METHOD

The initial step is extracting needs attribute with Voice of Customer (VoC) through depth interviews and phone interviews. Informant in VoC are 12 students who have been undergo distance education Postgraduate Electrical Engineering Program for a minimum of one year.

After identification of needs attribute further to define the dimensions of the attribute requirements of Service Quality for Higher

Education. Determination of dimensions begin with study literature was to look for the dimensions reference of Service Quality for Higher Education and then combine the results of the literature study with the results of VoC that determined dimensions of Service Quality for Higher Education that was relevant to the study. Needs attribute were grouped into six dimensions that already have been determined.

The design of the questionnaire conducted based on needs attribute that have been grouped into the dimensions of service quality for higher education. The study involved two types of questionnaires on service quality for higher education for measuring Customer Expectation Value (CEV) and Kano questionnaire to classify the needs attribute by Kano category. Questionnaire using a likert scale to determine the degree of agreement and disagreement of respondents to a statement field. In the questionnaire service quality for higher education using a scale of 1 to 4 to avoid neutral answers on a questionnaire while using five scales of measurement based on the provisions of Kano. The questionnaire was designed to test the validity subsequent to the experts to examine the contents of predetermined dimensions can measure services aspects of distance education in higher education.

The study using non-probability sampling technique with the judgmental sampling type. Determination of the number of respondents and the criteria is based on certain considerations by researchers. The minimum sample size for a descriptive study is 100 samples (Fraenkel, 2009). In this study there were 120 samples to address the questionnaire is not filled properly.

A total of 120 questionnaires were distributed to the target distance education students are bachelor of Telecommunication Engineering, bachelor of Electrical Engineering, and to the students who have felt the service distance education postgraduate program as in Electrical Engineering. From 120 questionnaires distributed, 115 questionnaires obtained are eligible for use in research. Furthermore, the

questionnaire data reliability test is conducted to see how far the scale is able to create consistent results. Reliability test used Alpha Cronbach. Item of needs attribute can be reliable if the value alpha coefficients greater than 0.6 (Malhotra, 2005). Based on the reliability test results, all of the data reliable then can be conducted data processing service quality for higher education and Kano.

The data that has been reliable can conducted measurement of service quality , CEV, as well as identifying the strong and weak needs attribute by Kano category. Furthermore, the integration of service quality for higher education and Kano in order to obtain the true customer needs. True customer needs was analyzed to strengthen the results of the data processing that which needs attribute eligible to be prioritized and developed.

4. RESULT AND DISCUSSION

4.1. Needs Attribute Identification

Needs attribute identification aims to find out the need of Distance Education service. Based on VoC through in depth interview and literature study produced 23 needs attributes that have been grouped into the dimensions of Service Quality for Higher Education in Table 1.

Table 1 Needs Service Attributes

Dimension	Needs Attribute
Tangibles	1. Availability of conference equipment for virtual lecture that support the learning process 2. Provision of classroom for direct face-to-face learning.
Content	1. Relevance of lecture material that taught to the world of work. 2. Standardized learning system.
Medium of Instruction	1. Have an up-to-date virtual lecture conference software 2. Provide sharing virtual lecture file

	software with sufficient capacity.
Reliability	<ol style="list-style-type: none"> 1. The lectures material relevant and up-to-date 2. The lectures material that easily understood 3. Method of teaching that understandable 4. Ease of access in learning process 5. Current connectivity when virtual lectures. 6. Controlling in virtual lectures. 7. Teachers give assignments and examinations in accordance with the agreed schedule. 8. Availability of media communication for distance education students. 9. Effective learning process.
Assurance	<ol style="list-style-type: none"> 1. Teachers were competent. 2. Teachers were able to answer questions from students. 3. Has a teaching staff who specialize to service distance education students.
Responsiveness	<ol style="list-style-type: none"> 1. Important announcement related lectures informed quickly. 2. Clear notification about tasks of lectures and exams. 3. The rapid administration services. 4. Students complaints well handled. 5. Initiatives from teachers to sharing video and course file without being asked by students.

4.2. Determining Strong and Weak Attributes

Determination of the strong and weak attributes conducted by multiplying importance level and expectations level of distance education in each service attribute which produces CEV. Identification strong and weak attributes based on the Sukwadi (2011) research that considering mean value. If the CEV greater than the mean of CEV value, that attribute classified as strong attributes. It had weak attribute if below the mean. Based on the results of data processing are obtained 9 strong attributes and 14 weak attributes.

4.3. Needs attribute classification by Kano category

Needs attribute classification by Kano category conducted by categorize each needs attribute into Kano category such as attractive, one-dimensional, must-be, different, reverse, and questionable. Determination of Kano category conducted by combining the answers from functional and dysfunctional statement based on Kano evaluation table. Based on the results of data processing that has been done, obtained one attractive attribute, 3 one-dimensional, 15 must-be, and 4 indifferent.

4.4. Integration of Service Quality for Higher Education dan Kano

After determining the strong and weak attributes based on CEV and grouping needs attribute by Kano category, further integration of these results. The integration aims to determine actions to be performed in each attribute. The results of the integration of Service Quality for Higher Education and Kano indicates there are 9 attributes are need to be prioritized, 1 attribute need to be developed, 9 attributes are need to be maintained, and 4 attributes are need to be maintained but not prioritized.

4.5. True Customer Needs

True customer needs is needs attributes that is important to students that should be prioritized in improving service quality. Needs attribute as the true customer needs obtained from the integration of service quality for higher education and Kano are

prioritized for improvement. Needs attribute that including true customer needs are availability of conference equipment for virtual lecture that support the learning process, have an up-to-date virtual lecture conference software, provide sharing virtual lecture file software with sufficient capacity, method of teaching that understandable, current connectivity when virtual lectures, controlling in virtual lectures, teachers give assignments and examinations in accordance with the agreed schedule, availability of media communication for distance education students, and initiatives from teachers to sharing video and course file without being asked by students.

5. CONCLUSION

Based on research results, there are 23 needs attributes for distance education service dimension used *tangibles*, *content*, *medium of interaction*, *reliability*, *assurance*, dan *responsiveness*. From the calculation of CEV there are 9 strong attributes 14 attributes weak attributes. Based on the results of needs attribute classification by Kano category, there is an attractive attribute category, 3 one-dimensional attribute category, 15 must-be attributes category, and 4 indifferent attribute category. Integration of Service Quality for Higher Education and Kano resulted in 10 attributes of service needs to be prioritized and developed, there are availability of conference equipment for virtual lecture that support the learning process, have an up-to-date virtual lecture conference software, provide sharing virtual lecture file software with sufficient capacity, method of teaching that understandable, current connectivity when virtual lectures, controlling in virtual lectures, teachers give assignments and examinations in accordance with the agreed schedule, availability of media communication for distance education students, and initiatives from teachers to sharing video and course file without being asked by students.

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