

## USING EDUQUAL AND KANO'S MODEL TO IMPROVE THE SERVICE QUALITY OF TRAINING AND CERTIFICATION PROGRAM

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### ABSTRACT

*In what has become a highly competitive environment, it is not enough for students to merely have formal education. Certification has increased in worth to encounter this competition. Therefore, it is important for certification centers to understand service quality attributes what their prospective customers expect. The aim of this study is to understand the True Customer Needs from the attributes of customer requirements of training and certification program using the integration of EDUQUAL and Kano's Mode. This study is conducted in a well-kown certification center in Bandung that has been registered in National Agency for Professional Certification.*

*Key words: attributes of customer requirements, EDUQUAL, Kano's Model, True Customer Needs.*

### 1. INTRODUCTION

In today's competitive job market, certification has increased in worth to encounter this competition. This intense competition makes not enough for students to merely have formal education. Certification provides recognition of someone's competence and improves their quality as well as competitiveness (Pangestu, 2012). Therefore, certification can be a provision for someone to compete in this increasingly intense competitive job market (Husin, 2015).

Certification center is expected to provide quality services to help improving learners' competence and to be able to compete with other certification centers. The best service is a service provided according to customer requirements based on identifying the attributes of customer requirements (Mazur, 1993). Services provided by a certification center must correspond with customer requirements in order to become the main choice by many people. Identifying the attributes of customer requirements can be conducted with an instrument that has the dimensions to measure the perception of quality of educational services as well as capturing Voice of Customer (VoC).

EDUQUAL is one of measuring instruments used to measure the service quality

perception in education sector. The object of this study is a training and certification program. However, there are similarities in the way of teaching with formal educational institutions that becomes the object on the assessment of EDUQUAL. Therefore, an adaptation of EDUQUAL dimensions to the object of this study is done at the phase of selecting dimensions in order to be relevant with the scope of the problem.

Kano's Model is a model used to categorize the attributes of customer requirements that can lead to the service improvement. In this study, there will be an assessment of the role of capturing VoC to reveal the attributes of customer requirements of training and certification program as well as the integration of EDUQUAL and Kano's Model to obtain True Customer Needs in order to understand which attributes that have big impact in customer satisfaction and dissatisfaction.

### 2. THEORETICAL BACKGROUND

#### 2.1 Needs Analysis

Needs analysis is an activity to understand customer needs and communicate them effectively to those who provide the service (Ulrich & Eppinger, 2012). Needs analysis focuses on the interpretation of the Voice of the Customer.

## 2.2 Education Quality (EDUQUAL)

Education Quality (EDUQUAL) is a measuring instrument with the dimensions created based and the proposition of experts to measure the overall perceived quality of the higher education institution (Mahapatra & Khan, 2007). In this study, an adaptation of EDUQUAL dimensions to the object of this study is done at the phase of selecting dimensions in order to be relevant with the scope of the problem. There are 7 dimensions chosen based on the relevance with the object and those are *Curriculum, Academic Facilities, Industry Interaction, Academics, Campus, Responsiveness, and Reputation* (LeBlanc & Nguyen, 1997; Mahapatra & Khan, 2007; Jain, dkk., 2011; Kumaran & Anbazhagan, 2011).

## 2.3 Kano's Model

Kano's Model is a model used to categorize the attributes of product or service so it can help us gain a profound understanding of customer satisfaction (Shen, dkk., 2000). Kano's Model can be used to categorize the attributes of customer requirements into six categories and those are *attractive, one dimensional, must-be, indifferent, reverse, dan questionable*.

## 3. RESEARCH METHODOLOGY

The first step of this study is to capture the VoC and the respondents are the prospective customers who potentially enroll to this training and certification program. The attributes are then grouped based on chosen dimensions. Two kinds of questionnaires are then designed based on those attributes and those are EDUQUAL questionnaire and Kano questionnaire. EDUQUAL questionnaire is used to measure expectation level and importance degree, while Kano questionnaire is used to determine the category for each attribute. For testing the validity of questionnaire, pretest is done to 30 respondents namely prospective customers as well. The normality of the data obtained from pretest questionnaire distribution is then tested. If the data shows normal distribution, validity test is done used Bivariate Pearson Correlation, but if the data shows non normal distribution, validity test is done use Bivariate Spearman's Rank Correlation. In

this study, the data from pretest shows normal distribution so Bivariate Pearson Correlation is used to test the validity. All of the question attributes are valid because the coefficients of all question attributes are above 0,3 (Kaplan & Saccuzzo, 1993). Therefore, the real questionnaire distribution can be done.

The questionnaires are distributed to 125 respondent (Champion, 1981) namely the prospective customer of this training and certification program. The reliability of the data obtained from questionnaire distribution is then tested. Reliability test is done with internal consistency reliability test using Cronbach's Alpha coefficient 0.6. The test is done for each dimension. The coefficients of all the question attributes from those 7 chosen dimensions are above 0.6 that means the respondent's consistency in answering all of the questions is good (Malhotra & Birks, 2007).

The respondents for this study are the prospective customers who have not accepted the service, because it is adapted to the condition of the object. In the integration process of EDUQUAL and Kano's Model, a modification is proposed based on expectation level of prospective customers (Sukwadi, dkk., 2011). The integration framework of EDUQUAL and Kano's Model based on expectation level is illustrated in Figure 1.

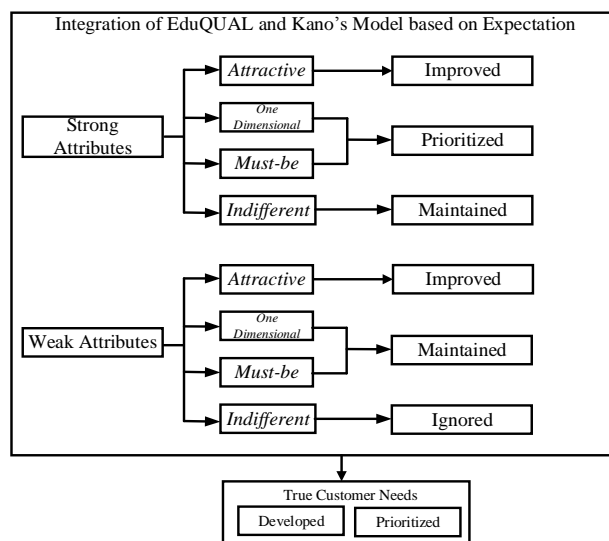


Figure 1 Integration Framework of EDUQUAL and Kano's Model Kano based on Expectation Level

#### 4. RESULT AND DISCUSSION

The first results of this study are 7 dimensions relevant to the object as well as 25 attributes on which to base the requirements of prospective customers when they will enroll in a training and certification program. Those attributes are then analyzed and grouped based on its similar themes or ideas into 7 chosen dimensions and are set out in Table 1.

Table 1 Attributes of Customer Requirements based on the Chosen Dimensions

Dimensions	Attributes
A. <i>Curriculum</i> , refers to the program content and its utility to industry and society, such as courses and period of training	1. The tenure of training is short (short-course) conformed to all learning materials given
	2. Training activity tends to do directly practice
	3. The learning materials are taught modularly (sequentially starts from the basic module to more complex ones)
	4. Learners can choose the schedule according to the options already provided
B. <i>Academic Facilities</i> , refers to the availability of physical facilities and equipments such as computers (with software and website) and laboratories, staff as well as communication tools.	1. Computer facility works well when the learners run the software
	2. Internet facility runs well
	3. Availability of online tutorials or e-learning that is easily accessible by learners
	4. The number of learners who attend the training each class is limited based on the quota

	5. Classrooms are equipped with additional facilities that support the training (AC, comfortable desk, etc.)
C. <i>Industry Interaction</i> , refers to the practical and industry exposure provided to the students during the tenure of their course.	1. The certification center cooperates with companies in order to facilitate the learners to get a job after graduation 2. Teaching materials are provided according to the needs of industry 3. The certification center provides a good briefing for the learners to go to the real world of work
D. <i>Academics</i> , refers to expert faculties and communication skill to provide services that have been promised.	1. Instructors are patient in giving training to learners 2. Instructors establish good interaction with learners 3. Instructors have proven competencies
E. <i>Campus</i> , refers to the availability of public facilities around the location, location that is strategic, and campus environment constitute.	1. Strategic training location (located in the middle of urban areas) 2. The training location is reachable (provided by facilities to reach the location) 3. The room used to give the training is conducive (quite)
F. <i>Responsiveness</i> , refers to the ability and willingness of the staff to help customers and	1. The administrative staffs are open to all criticisms and suggestions as well as complaints by learners

<p>provide prompt service.</p>	<p>2. The administrative staffs are responsive to respond the needs or complaints learners</p> <p>3. The administrative staff can provide accurate information to the applicants</p> <p>4. The administrative staffs are friendly to prospective applicants and learners</p>
<p>G. <i>Reputation</i>, refers to the institution image formed in the community based on the quality of service provided.</p>	<p>1. The certification center has good credibility</p> <p>2. Certificates are well accepted in the world of work</p> <p>3. The material on module and the software are always updated according to the changing in the world of work</p>

Table 2 Integration of EDUQUAL and Kano's Model based on Expectation

Code	CEV	Classification	Category	Actions
A1	11,8	Weak	M	Maintained
A2	18,5	Strong	O	Prioritized
A3	16,6	Strong	I	Maintained
A4	14,3	Weak	I	Ignored
B1	19,3	Strong	A	Developed
B2	16,8	Strong	M	Prioritized
B3	14,6	Weak	O	Maintained
B4	12,3	Weak	M	Maintained
B5	14,1	Weak	I	Ignored
C1	17,0	Strong	M	Prioritized
C2	19,6	Strong	M	Prioritized
C3	20,1	Strong	M	Prioritized
D1	14,6	Weak	M	Maintained
D2	20,3	Strong	O	Prioritized
D3	16,3	Strong	M	Prioritized
E1	14,8	Weak	I	Ignored
E2	14,3	Weak	M	Maintained
E3	14,4	Weak	A	Developed
F1	14,8	Weak	I	Ignored
F2	15,5	Weak	M	Maintained
F3	18,0	Strong	M	Prioritized
F4	14,6	Weak	M	Maintained
G1	16,0	Weak	O	Maintained
G2	18,4	Strong	O	Prioritized
G3	16,3	Strong	M	Prioritized

Questionnaire is designed based on those attributes. EDUQUAL questionnaire data processing generates Customer Expectation Value (CEV) that can identify strong and weak attributes. CEV is generated by multiplying expectation level and importance degree from each attribute. The classification of strong and weak attributes is done by calculating the mean value of CEV. While Kano's Model questionnaire data processing generates the category for each attribute. The results of data processing of both questionnaires that are then integrated can identify the action for each attribute. Attributes that become the True Customer Needs are attributes that need to be developed and prioritized. The results are shown in Table 2.

**5. CONCLUSION**

The result of this study is obtained 25 attributes of customer needs of training and certification program that are divided into seven dimensions of EDUQUAL. There are 12 attributes classified as strong attribute and 13 attributes classified as weak attribute. Based on Kano's Model data processing, 2 attributes are categorized as attractive, 13 attributes as must-be, 5 attributes as one dimensional, and 5 attributes as indifferent. The integration between the result of EDUQUAL data processing and Kano's Model data processing generates 2 attributes that need to be developed and 10 attributes that need to be prioritized as True Customer Needs. In the future and further study, the results of the integration between EDUQUAL and Kano Model can be integrated again into Quality Function Deployment (QFD) method which serves as a planning process for translating customer needs into appropriate

organizational requirement in order to further service excellence.

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