

[SV 3] MEASURE CUSTOMER SATISFACTION: USE THE KANO MODEL AT UUM SULTANAH BAHYAH LIBRARY

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ABSTRACT

Customer satisfaction is defined as the number of customers, or percentage of total customers, whose reported have experience with a firm, its products, or its services with the ratings is equal or exceeds with the stated satisfaction goals. Previous literatures reviewed various models of customer satisfaction from the various perspective customer needs such as SERVQUAL, SERVPERF, application-specific integrated circuit (ASCI), Kano Model and etc. This paper emphasis on Kano Model to understanding and measures the customer's satisfaction in UUM Sultanah Bahiyah library. In order to meet the objectives of this study, a descriptive quantitative research was chosen to get the results from the user about customer's satisfaction at UUM Sultanah Bahiyah library with applying Kano model method. The population targeted for this study are School of Technology Management and Logistic (STML) student in UUM only for respondent to answer the questionnaire and the sample size are 100 students. The finding of this study are the first is the customers level satisfaction of customers need in terms of services and resources that librarians provided are the customers feel satisfied, second is the level of customer's satisfaction for library service and resources if not provided properly are unsatisfied and the third is the part of the library that make customers very unsatisfied are the effectiveness of the library service dimensions and the elements of the library able to trust dimensions, then the last is the quality that practiced by the library administrators are at indifferent needs category.

Keywords: *customer satisfaction, service quality, library services, Kano model*

INTRODUCTION

Customer satisfaction is defined as the number of customers, or percentage of total customers, whose reported have experience with a firm, its products, or its services with the ratings is equal or exceeds with the stated satisfaction goals. Within organizations, customer satisfaction ratings can have powerful effects. The organizations focus to employees on the importance of fulfilling customers' expectations. Customer satisfaction is widely regarded as one of the key components of a successful business. Knowing how to measure it, what to do with the information and how to improve the service based on feedback is one of the most significant. (Mace, 2015). Besides, the customer satisfaction is closely related to Kano model that can be used to measure the customer's satisfaction of services that offered to an organization such as a library. Studies have been showed the Kano model is a model that can used for determining and designing library services. This is because Kano model can be applied in various fields of services whether simple services or complex services. (Che Azlan Taib, Rosman

Iteng and Shahizan Affandi Zakaria, 2016). Kano model was created in late 1970, by Japan professor Dr Nariaki Kano of Tokyo Rika University that came out with interesting and practical model for more understanding about customer's satisfaction. When we rate the satisfaction of the customers, we rate them as good or bad. Kano model have two-dimensional model for quality which is x and y axis, the x axis represent the performance of the product or service while the y axis represent the level of customers satisfactions (Ramasamy, 2005).

The function of the library are as a warehouse, storehouse of knowledge and as a public space or meeting place which the environment very suitable for reading or study. (Paul, 2014). The goal of Sultanah Bahiyah libraries is to provide appropriate services and to meet information needs of the customers. "We promise to offer information services that meet the needs of our customers and stakeholders" is a quality statement of UUM Sultanah Bahiyah library (Portal, 2016).

OBJECTIVE

- i. To identify and measures the level of customers' satisfaction in terms of services and resources that librarians provided.
- ii. To measure the level of customer's satisfaction for library service and resources if not provided properly.
- iii. To identify which part of the library that make customers very unsatisfied based on the result of customers evaluation to the library.
- iv. To measures the quality that practiced by the library that influence to user satisfaction.

LITERATURE REVIEW

Customer satisfaction

The definition of customer's satisfaction is the good impression after the evaluation of use of the product or service. Satisfaction is a comparison between the quality of experience perceived or experienced with the quality expected that any user will experience the satisfaction when they are having equal or exceed the quality as expected. Satisfaction will resulting after going through the experience of using the stuff, service and deal with the organization itself that achieve the same or exceeds as expected. In other words, customer satisfaction is products or services that offer by a person or an organization it is absolutely meet customer needs and achieve customer expectations. (Emrah Cengiz Ph, 2010). There are several factors that influence the user satisfaction first aspect such as responsive, efficiency and safety, tangibles and resources. Then other aspect are product quality, service quality, environment location of the product or service and the price of the product or service. The product or service that provided by the organization is meeting customer expectations also it is an important element in determining the success of the business (Adeniran, 2011).

Library services

Assessment of quality services library is a matter questionable which traditional measures of collection size, counts of use, number of staff and size of budget are no longer applicable and societal concern for quality and accountability in information

services of higher education has increased (Kiran, 2010). The library was established to provide a source of information needed by students and staff including offering the quality services to maximize the effectiveness of the use of the library. To meet the needs of users, the library should provide a source of information and the actual services. The materials available in the library is to help and support the teaching, learning and research process for customers. Users will be satisfied with services provided by the library when the library is able to provide appropriate learning materials, conducive environment and efficient library staff. Library effectiveness can be measured in terms of the number of resources and services, the number of users and satisfaction. Service design is based on user needs which is constantly changing with the times. Thus, the library service should always be changed by introducing new services to consumers. The librarians are of the view that users obtain information at the library through access the information is more important than the physical materials in the library. The relationship between service quality and customer satisfaction is parallel. Every service organization will see the quality of service as something that is critical to ensure their organizations are in a position competitive environment where determined by expectations and user satisfaction (Adeniran, 2011).

There are various services that available in UUM Sultanah Bahiyah library, first is have a cycle of borrowing that provides lending materials in short and long term depends on the type of collection of these materials. The second is inter-library loans Service, reading materials that are not available in the collections of the Sultanah Bahiyah library are available from other libraries in Malaysia and abroad. The third was the electronic facilities such as Self check machine for book lending transactions using the cards matrix and machinery Book drop to return books borrowed with no need to go to the counter. Next is checking in online services, consisting of three namely WebOpec, World Cat and resources to find and get the collection of books, articles and thesis (Misgroup, 2013).

Model for measuring quality service

SERVQUAL

SERVQUAL is a service quality framework, which was developed by Parasuraman Zeithaml and Berry, which is designed to measure the scale of quality in the services sector. In 1988, the 10 of these components has been reduced by focusing on five dimensions which is responsiveness, assurance, tangibles, empathy and reliability (RATER) to measure the gap between customer expectations and experience.(Rockpulkit, 2013). The purpose of original SERVQUAL dimensions were modified in order to achieve more specific the results related the organization service that surveyed and the respondents were randomly selected to avoid biased results (Coleman, Daniel, Bair & Chollett, 1997).

LIBQUAL+

The emerging instrument that originated from Parasuraman, Berry and Zeithaml's SERVQUAL tool, the industries standard for measuring quality in the private sectors. 'Only customers judge quality, all other judgements are essentially irrelevant' (Thomas, 2000). This model allows a web-based method of administration and analysis and eases the burden of administration locally, creating a scalable and replicable protocol then makes readily available large normative data on user perceptions and expectations of library service quality (Blixrud, 2004). Besides it is a set of services used by the library

to acquire, track, understand, and act in accordance with the opinion of consumers about quality of service.

SERVPERF

SERVPERF is a model for measuring customer satisfaction on the quality of service, which consisting of 22 sentences arranged according to five dimensions of SERVQUAL such as Tangibles, Reliability, Responsiveness, Assurance, and Empathy. The twenty two item survey instrument used to assess non-electronic service quality base on perceptions of actual service quality (IG Global, n.a).

Kano model

Kano model is a very effective method to understanding the customers' needs and expectations into five category of customer's needs to increase the customer's satisfaction. The customers need can categorized through using the Kano questionnaire data that have functional (positive) and dysfunctional (negative) questions (Barutcu, Akgun, Utkun & Aydin, 2015). The evaluation table and graph Kano model was used to get the result from the questionnaire data.

Three types the main Kano model needs:

- i. Basic quality*

Criteria for meeting this needs the type of product or service is minimal or not complex. If the product or service is not met, the customers will not feel unsatisfied even don't have interest to buy the product or service and if this needs could be fully met by the product or service, the satisfaction of the customer does not exceed the level of neutral. Usually if this needs is met it is not noticed by customers because they believe this type of needs will be fulfilled by the producer of the product or service (Shahin, Pourhamidi, Antony & Sung, 2013).
- ii. Performance quality*

The existence of the performance to the product or service is in neutral level of satisfaction. The features that available in the product is still in the situation to improve and to identify the product feature, the manufacturer need conduct market research and observation. Usually the products of this need will be fulfilled by the organization based on what is requested by the customer and does not exceed what would be expected by customers (Shahin, Pourhamidi, Antony & Sung, 2013). Performance quality attributes and customer's satisfaction generally are linear response (Ramasamy, 2005).
- iii. Excitement quality*

This type of needs is unexpected or not shaded by the customer. The absence of this requirement does not lead to dissatisfied by customers but the presence of these requirements on the product or service is causing excitement customers. The products or services can be classified as attractive when the customer needs gain greater than what they expect. Although this needs delighting customers but if these needs are meet the organizations that want to produce the product should be careful because involves very high cost (Shahin, Pourhamidi, Antony & Sung, 2013). In order to generate excitement and brand loyalty, organization must leverage their creative resources to identify ideas and innovations that cause customers excitement. Excitement quality becomes the special reasons

why customers make a specific organization the default choice over its competitors and return to buy again and again (Ramasamy, 2005). Kano also refers to this as the “surprising quality”.

Five types Kano model need category

- i. One-dimensional*
This needs is the product success fulfilled the customer’s satisfaction. If the organization be able to provide a services or products with high performance therefore the user satisfaction is also higher and conversely, because the product performance and user satisfaction is in parallel (Verduyn, 2013).
- ii. Must be*
This requirements is already expected and taken for granted by customers (Vilet, 2014). But if this needs are not provided by the organization, the customers will feel very unsatisfied and if the organization is able to provide this needs to the product or services with a good performance the customer is just feel neutral (Verduyn, 2013).
- iii. Attractive*
At this level the needs that provided by an organization is not expected or thought previously by the customers. Usually, the organization that capable to producing this type of product or service are doing innovation (R&D) of the product. The customers will feel very excited about the existence of these needs and not caused to unsatisfied if this needs does not exists (Verduyn, 2013).
- iv. Indifferent*
Most of the customers do not care whether this requirement exists or does not exist on the product or service that provided by an organization (Verduyn, 2013). This is because the customers cannot determined if this type of product or service are good to them in the later (Vilet, 2014).
- iv. Reverse*
This needs is rare in offering to the products (Verduyn, 2013). This is because this type of needs make customers are not satisfied although the product have good quality and performance (Vilet, 2014).



Figure 1
Kano model graph

Table 1
Kano model evaluation table

Customer Needs		Dysfunctional (Negative question)				
		Very satisfied	Satisfied	Quite satisfied	Unsatisfied	Very unsatisfied
Functional (positive question)	Very satisfied	Q	A	A	A	O
	Satisfied	R	I	I	I	M
	Quite satisfied	R	I	I	I	M
	Unsatisfied	R	I	I	I	M
	Very unsatisfied	R	R	R	R	Q

A: Attractive
I: Indifferent

M: Must be
R: Reversal

Q: One dimensional
Q: Questionable

RESEARCH METHODOLOGY

Research design

In order to meet the objectives of this study, descriptive quantitative research was chosen. Kano model was apply in this study, where the questionnaire question, the evaluation and interpreting the data to get the results about customer's satisfaction at UUM Sultanah Bahiyah library from customers or students.

Population

The population targeted for this research study are School of Technology Management and Logistic (STML) student in UUM only for respondent to answer the questionnaire. Student in STML UUM are consisted of three major course namely Technology Management, Operation Management and Logistic. The total of STML students in 2016 are 1,167 students where Logistic are 414 total students, Technology Management are 373 total of students and 379 total of students for Operation Management course.

Sample

Based on Krejcie and Morgan table at population (N) = 1200, the sample size for this research (S) are 291 students as respondents that was answering the questionnaire that represents the population properly. To run the collection data from students of sample it was selected randomly regardless gender, semester, course (either technology management, operation management and logistic) and nationality.

Data collection

Primary resources

i. Questionnaires

The data was collected with use questionnaire method. The questionnaire that produced are paper pencil based and structured questionnaires which the data can be analysed quantitatively. Then, the techniques used to produce this questionnaires are close-ended question such as dichotomous questions, multiple questions and rating question. The measurement of variable in this questionnaire are nominal level and ordinal level. The questionnaire contain two parts. Part A covers background information that have 7 questions and the part B have 7 dimensions parts that represents services and resources in the library which each questions in the part B are Kano model style with have functional and dysfunctional question. The questionnaires mostly distributed to students during in classes on area STML building such as at Dkg 6/21, Lab C1 and Dpc 3. Finally, after the data are finish collected it will be analyse by use SPSS software and Kano model.

Secondary resources

i. Internet resources

To produce this article, the secondary resources also very helpful in getting information about this study. For example, I have use so much article and some is websites in internet to get the views about the concepts in this study.

FINDINGS

The total questionnaire that answered and give back are 97 only. Among the 97 respondents 75.3% are female and 24.7% are male. The 63.9% were Technology Management students, 35.1% were Operations Management student while Logistic students only 1.0%. The total of students who have experience use the library are 97.9%. The purpose students use library are 38.1% for doing course work, 30.9% for research while 24.7% were course work and research and the rest is for others.

The level of customer's satisfactions in terms of services and resources that librarians provided can see on the average of the all seven dimensions in term of functional or positive question only. The average is 4.0 for dimension service/resource library easy access, 3.93 average for service/resources suit your personal library need dimensions and service/resources library is ready for you to use dimensions are 3.97. Next is 3.91 average for elements of the effectiveness of the library service dimensions, the elements of an efficient library service are 3.99 average and 3.93 average for elements of the library able to trust and the last is elements of the library supply correct information dimensions which the average are 3.9. The minimum of average is 1.0 as very unsatisfied and the maximum is 5.0 as very satisfied. So, from all this dimensions

average, we can see the customers or UUM students are feel satisfied to resources and services that provided in the UUM Sultanah Bahiyah library with most dimensions is almost 4.0 average which means the resources and service in the library meet the customers need.

The results show for all average dimensions in term of dysfunctional or negative questions are 2.31 average for service/resource library easy access dimensions, 2.35 average for service/resources suit your personal library need dimensions and the service/resources library is ready for you to use are 2.28 average. Next is 2.22 average for elements of the effectiveness of the library service, 2.3 average for the elements of an efficient library service dimensions and 2.2 average for elements of the library able to trust dimensions and the last dimensions are elements of the library supply correct information with 2.3 average. So, from all the average with 2.0 or under 3.0, we can say if the librarians not provided services and resources with properly to customers, the customers will feel unsatisfied.

The part of the library that make customers very unsatisfied based on the result of customers evaluation to the library, it's can refer from the results of finding objective 2. Exactly based on the average, there are no dimension that can categorized under very unsatisfied or 1.0 average but the lower average among the all dimension are 2.22 average for two dimensions which is elements of the effectiveness of the library service dimensions and the elements of the library able to trust dimensions that both dimensions is 2.2 average only.

To measures of the quality that practiced by the library administrators that influence to user satisfaction are it can look based on the results all dimension average with both functional and dysfunctional question. The results show at the table below.

Table 2
Evaluation Kano table based average each dimension

Customer Needs		Dysfunctional (Negative question)				
		Very satisfied	Satisfied	Quite satisfied	Unsatisfied	Very unsatisfied
Functional (Positive questions)	Very satisfied					
	Satisfied					
	Quite satisfied					I (7)
	Unsatisfied					
	Very unsatisfied					

Table 3
Kano model questionnaire results

Dimension	A	E	O	R	Q	I	Total	Grade
A. Services / resources library easily access						I	97	I
B. Service / resources suit your personal library need						I	97	I
C. Service / resources library is ready for you to use						I	97	I
D. Elements of the effectiveness of library services						I	97	I
E. The elements of an efficient library service						I	97	I
F. Elements of the library able to trusted						I	97	I
G. Elements of the library supply correct information						I	97	I

The average results was evaluate and interpreted by the Kano model table, then the final results show, as we can see is it located at indifferent need category. This is means the customers or UUM students cannot determined or not sure if the services and resources that provided in the library are good or not good to them or they not really care of it.

DISCUSSION AND CONCLUSION

Based on the findings, the students are satisfied with the services and resources that librarian have provided. But when applying the Kano model analysis with functional and dysfunctional question, the findings show the customers satisfaction for services and resources that library have provided are indifferent needs. So, the administration of the library can improve the services effectiveness and efficiency of the library such as in term of machines, equipment and others that related which helps to ease the customers when they using the library. The resources that provided also the most importance matter that need give attention to the librarians because it is the main purpose the customers want to come to library and its very influence the customer's satisfaction about the library. The reasons to apply the Kano model is to measure the customer's satisfactions of the UUM Sultanah Bahiyah library with to provide useful information about the needs that customers exactly want and what the level of customer's satisfaction about the services and resources that librarians provides to customers.

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