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# Relationship between the Critical Factors for Success in Training Service Quality in UKM

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## ABSTRACT

Quality is something that should be given emphasis in all work and every activity undertaken. If quality becomes the priority, results will have an impact. Therefore, quality should be emphasised. Keeping this in view, the leading objective of this study is to identify the relationship between critical factors for success in training services that will influence student satisfaction by organising training in Universiti Kebangsaan Malaysia (UKM). The factors involved are the object quality, process quality, quality of the infrastructure, the quality of interaction and environmental quality. A questionnaire was developed and distributed to the students who had participated in the training organised by UKM. Frequency analysis and correlation analysis were used to analyse the data collected. Model validation is carried out to obtain the validity and sustainability of the model developed. The overall results of the analysis revealed that the highest Pearson value, which approximates the value of 1, is between the interaction quality and the environmental quality, which is 0.84. This high correlation indicates a strong relationship between the interaction quality and the environmental quality. The relationship of the object quality and the quality of infrastructure gives the lowest Pearson value of 0.651. There are proposals to improve the quality of training in the future, such as extending the period of training, diversifying activities and training content to be more attractive and using the online registration approach to simplify work processes and save time. The evaluation of this study should be taken into account to ensure

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that the defect can be overcome and to strengthen the training service management at the university.

*Keywords*: Customer satisfaction, correlation, quality, quality of service, training, students

## INTRODUCTION

For the last two to three decades, quality has been considered as one of the leading requirements of work. The Malcolm Baldrige National Quality Award (MBNQA) was developed in the late 1980s to provide a standard of excellence in quality for manufacturing and service companies in the United States (Rungtusanatham, Forza, Koka, Salvador, & Nie, 2005). This initiative and many other award programmes aimed at encouraging quality in work around the world, such as the European Quality Award, have caught the attention of senior executives. Top management are now aware that customers and internal suppliers or employees play a role in the effort to improve the quality of an organisation (Stanley & Wisner, 2001).

The importance of quality in meeting customer demand is that quality gains the customer's loyalty. The importance of maintaining customer loyalty is lies in its ability to retain customers so that there is less need to search for new ones. The longer a relationship can be maintained with customers, the higher the profit, as loyal customers will invest in suppliers who can meet their needs every time. This will also lead to their bringing in new customers for the supplier when these loyal customers share with others their experience of good service (Oakland, 2004). Deng, Lu, Wei and Zhang (2010) studied the determinants of customer satisfaction and identified one of them as being loyalty. Beliefs, perceived service quality, perceived customer value, the functional and emotional values contribute to the increase of customer satisfaction. Meanwhile, trust, customer satisfaction and cost conversion directly affect customer loyalty. This study proves that the relationship between quality and customer loyalty brings long-term interest to an enterprise and organisation.

Training is always important to enhance the knowledge of individuals in each and every aspect of life. However, it has been observed that quality is also attached to training, and in order for successful training, the problems hindering compatible relationship among the factors that bring success need to be resolved. Keeping this in view, a study was conducted to identify the critical factors for success in achieving quality improvement in the delivery of training. Each of these factors plays a role in determining the final services process, namely, customer satisfaction. Customer satisfaction can be evaluated by developing the measurement model. The measurement model is developed based on the 5Q quality model developed by Zineldin (2000). Figure 1 shows the conceptual model used in determining customer satisfaction and quality of training services delivered.

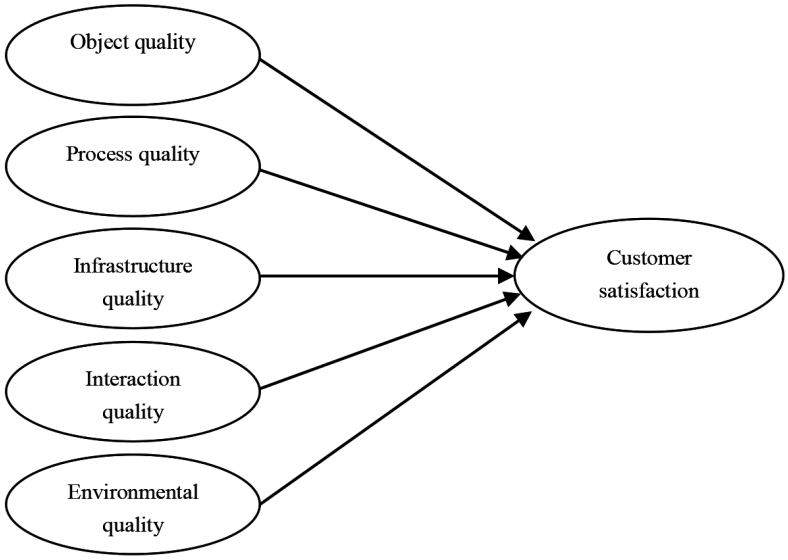


*Figure 1.* Customer satisfaction conceptual model (Zineldin, 2000).

The five dimensions of quality are described as follows (Zineldin, 2006):

1. Object quality – These qualities relate to the basic thrust of the training and is the main objective of the procedure, a course or programme focused on the technical aspects. It measures the organisation of the training itself, providing the main reason for "why students participated in the training." From the psychological point of view, meeting the core objective of the training is one of the main factors affecting the level of satisfaction.
2. Process quality – Quality involves the delivery of an object and how students view the training situation. It measures the effectiveness of the training delivered. Process indicators should be given more attention in training. These factors include the nature of the effectiveness and empathy during training, how the staff control the students' complaints and their willingness to provide training as expected. Satisfaction or the lack of satisfaction is a decision on the quality of the process.
3. Infrastructure quality – Infrastructure of the training venue is the major factor that affects the welfare of consumers and their overall satisfaction. This quality relates to skills, competencies, attitudes, technology and how activities are managed, controlled and coordinated. This indicator is considered important because the lack of these factors reflects low training quality. When it comes to academic institutions and the quality of the service they render, according to Price, Matzdorf, Smith and Agahi (2003),

their physical facilities affect their students' sense of satisfaction with them.

4. Interaction quality – This quality measures the quality of the exchange of information between organisers and trainers. This quality also measures how universities coordinate the service process to provide high quality education. Satisfaction is influenced when adequate explanations are given before, during and after the training. One of the important issues in this dimension is that organisers must be able to inspire and stimulate critical thinking.
5. Environmental quality – The relationship and interaction processes between customers and suppliers are affected by the quality of the environment. The lack of a friendly environment may reflect poor quality and lack of trust.

## METHODOLOGY

The respondents for this study were UKM students. A total of 150 questionnaires were distributed and 131 were returned. The survey was developed from Zineldin's survey. There were two parts to the survey. The first part was on the background of the respondents, while the second was on the aspects contained in each critical factor of success. Each statement was measured on a 7-point Likert scale with 1 indicating 'strongly disagree' and 7, 'strongly agree'. Questionnaires were distributed to the students in the faculty, library and student centre facilities. The forms were collected after the respondents had filled in the relevant information. The questionnaire was also distributed through social media such as Facebook, Twitter and gmail.

The Statistical Package for the Social Sciences (SPSS) version 19.0 was used to analyse the data collected. Frequency analysis was carried out to collect the demographics of the respondents. The correlation analysis was performed to examine the relationship between the variables and the response (Zikmund, 2003). The correlation measurement used was the Pearson correlation. This correlation reflects the degree of linear relationship between the two variables. The correlation value is between +1 and -1. A value of +1 indicated a perfect linear relationship in a positive manner, where the increase in one variable can affect the increase in another variable. Conversely, if the correlation is -1, the linear relationship between the two variables is negative, where the increase of one variable affects another variable decrease. If the correlation value is 0, it means that there is no linear relationship between the two variables. Seldom are the correlation values 0, -1 or 1. The hypotheses determined in this analysis were:

- $H_0$: *Correlation between the two variables is not significant if the p value is the same and less than 0.01*
- $H_1$: *Correlation between the two variables is significant if the p value is the same and less than 0.01*

## Model Validation

The validation process is usually used to see if there are similarities between the outputs of the model that have been developed and the real system (Hvala, Strmcnik, Sel, Milanic, & Banko, 2005). The main purpose of performing this model validation is to determine whether the model is acceptable for the intended use or otherwise. The validation and detection model can be an effective way to assess and monitor the performance of the model (Huang & Tamayo, 2000). To verify the output obtained, the expert review method was used. This method can determine the accuracy of the qualitative results through a final report or specific evidence from the participants and determine whether or not they feel what they are going through is accurate (Creswell, 2003). The validation of this study data can be achieved by interviewing the organiser's staff and students involved in the initial study.

In this qualitative study, the structured interview was used. The structured interview was to obtain accurate information such as sociodemographic, position held, length of service and so on (Merriam, 1998). Staff of the training organiser were selected to participate as respondents because they are the most relevant to this study as they have in-depth knowledge on the organisation of the training (Stevens & Palfreyman, 2012).

The validation was done by providing two different sets of questions based on the results obtained. The first set of questions was developed for the organisers' staff and the second was specifically for the students. The content of the first set of questions adduced statements and sought the views of the organisers on the results of the analysis obtained and the measurement model developed. Three questions were posed to the respondents.

The content of the questions for the students consisted of two subjective questions. Statements or questions asked were about the positive comments and their views on the improvement of all aspects of the quality of training services for the future. The answers and comments given supported the results of the measurement model developed.

## RESULTS

Two analyses were made on the data obtained, namely frequency analysis and correlation analysis. Model validation was carried out to obtain the validity of the model developed to support the output received.

## Frequency Analysis

The study respondents consisted of 131 students who had participated in the training organised by UKM. The frequency analysis results showed that the majority of the respondents were female (77.1%). In terms of age, the majority of the respondents were in the age range of 20-24 years (93.9%). Malay students recorded the highest percentage (84%) compared to other races and most of the respondents were pursuing a Master's degree (73.3%).

**Correlation Analysis**

The Pearson correlation analysis results can be seen in Table 1. From the results obtained, it can be concluded that there was a strong relationship between the two variables. This means that changes in a variable are closely related with changes in the second variable. The highest Pearson value that was proportionate to 1 was between Q4 and Q5 i.e. 0.84. This high correlation indicated a strong relationship between the quality of interaction and environmental quality. If the quality of interaction changed, environmental quality would be affected, and vice versa. The relationship between Q1 and Q3 provided the lowest Pearson value i.e.0.651.

All of the Pearson correlation values in Table 1 show positive values. This means that the relationship between the two variables was proportionately positive. When the value of the variable increases, the two variables will also increase in value. Likewise, when the first variable decreases, the second variable will also decrease.

Table 1
*Correlation Between Variables*

| Variables | | Object quality (Q1) | Process quality (Q2) | Infrastructure quality (Q3) | Interaction quality (Q4) | Environmental quality (Q5) |
|---|---|---|---|---|---|---|
| Object quality (Q1) | r | 1 | | | | |
| | p | | | | | |
| Process quality (Q2) | r | 0.807** | 1 | | | |
| | p | 0.000 | | | | |
| Infrastructure quality (Q3) | r | 0.651** | 0.741** | 1 | | |
| | p | 0.000 | 0.000 | | | |
| Interaction quality (Q4) | r | 0.690** | 0.831** | 0.789** | 1 | |
| | p | 0.000 | 0.000 | 0.000 | | |
| Environmental quality (Q5) | r | 0.710** | 0.752** | 0.772** | 0.840** | 1 |
| | p | 0.000 | 0.000 | 0.000 | 0.000 | |

r: Pearson quality value p: significant (2 - end)
** Correlation is significant at level 0.01(2 - end)

Table 1 clearly indicates that since all the p valuea were below 0.05, each pair of variables was significant. This means that an increase or decrease in one variable was significantly associated with the increase or decrease in the second variable. Thus, $H_0$ (the correlation between the two variables was not significant if the p value was the same and less than 0.01) was proven valid.

Ramaloo (2011) reported that the relationship between the overall quality of services provided by the Graduate School (PPS), UKM and the level of student satisfaction was strong. The quality

of service provided was excellent and fulfilled the students' expectations in terms of satisfaction.

## Model Validation

The model validation was done using the interview technique. Structured interviews with the organisers and students were conducted to obtain support on the quality model developed. Table 2 shows a list of personnel interviewed. Five persons were the staff selected from different departments representing the training organiser in UKM.

Table 2
*List of Staff for Model Validation*

| No. | Name | Position | Department | Length of Service (Number of Years) |
|---|---|---|---|---|
| 1 | Nor Asiah Mohamad | Librarian | Tun Sri Lanang Library | 13 |
| 2 | Najwa Ahmad Zawawi | Pricipal Asistant Registrar | Student Managemnt Department | 12 |
| 3 | Suhaimi Sulaiman | Youth and Sports Officer | Sports Centre | 5 |
| 4 | Siti Salwa Ahmad Zur | Assistant Registrar | Graduate Study Centre | 5 |
| 5 | Noor Faliza Hanim Roslan | Culture Officer | Cultural Centre | 5 |

The staff were employees who hold key positions in the quality management and training organisations. Length of service was an advantage because it added to their experience in organising and managing the delivery of training to students. Model validation was done using the interview technique. The structured interviews with the organisers and students were conducted to obtain the support of the quality model developed. The interview sessions took about two weeks to complete.

## DISCUSSION

Five of the respondents agreed that the five aspects of quality were adequate and included trainers, learning methods, learning locations and training duration. The qualities were compatible with the employee's job duties and led to delivery effectiveness and satisfaction among the students. The views of all the officers on the quality of interaction, which had the highest mean values, coincided because interaction can facilitate work process.

Process quality and infrastructure quality recorded a low mean value because these qualities were beyond their control. According to Mrs Najwa (JPPel), infrastructure was difficult to control because it depended on department usage and the cost to improve the ergonomics value to customers and to maintain the

system was high. Although process quality could be controlled, a lot depended on the system, and the process needed to adapt to the system facilities. Puan Nor Asiah (PTSL) stated that the training process involving trainers was unpredictable and the subject of their lives could not be designated as a technical tool.

The five respondents also agreed that there was a strong relationship between the quality of interaction and the quality of atmosphere. Mrs Najwa (JPPel) mentioned that the quality of interaction between students and organisers would create a conducive and comfortable environment for all involved. This statement was supported by Mr Suhaimi (Sports Centre), who stated that quality facilitated understanding among the participants. Friendly interaction was necessary for the students to communicate and ask questions. Therefore, personnel or training instructors must know the background of the trainees so that it is easy to provide explanations and guidance.

The final question posed to the organisers was about the appropriateness of the measurement model to guide the continuous improvement of the delivery system and skills training to the students. In conclusion, all agreed that it was appropriate to use the measurement model to evaluate detailed effectiveness of teaching and the level of acceptance of the information provided.

In addition to the interview with the training instructors in UKM, student interviews were also conducted to gain support for and to check the validity of the model developed. A total of 50 students were selected for the model validation. The respondents were the same who were involved in the earlier studies of student satisfaction with the quality of training delivery. They were selected via email as stated in the questionnaire. Appointments were made according to the respondents' availability. The interview with the students took a month during the month of July in 2013.

In the interviews, the students were asked to provide feedback on the results of the descriptive statistics listed as critical factors of success. A total of 93.5% of the respondents supported quality of interaction as being very important in delivering effective training to students. Among the positive comments about this quality was that the relationship between the students, trainers and management had affected them so greatly that they remained in touch even after completing the training (third respondent). Another comment was that the information shared would be received by all the participants of the training (39th respondent).

The percentage of respondents who did not agree that quality was the most important interaction was very small, at 6.45%. The fourth respondent was of the opinion that the organisers were not committed to carrying out their tasks and were less concerned about the needs of the participants.

The sixth respondent said that the problem of interaction occurred because the students' own commitment to the student-

run programme was not satisfactory. The lowest mean value recorded for infrastructure quality was concurred on by the students. Respondents 11, 13, 14, 24 and 49 were of the opinion that this was due to the incomplete existing equipment, which needed repair. Respondents 15, 18, 25, 34, 36, 45 and 47 were of the opinion that the quality did not meet the required level of satisfaction as the Internet facilities provided were not satisfactory and slowed down work, affecting the participants emotionally.

Based on the views expressed by both parties, it can be concluded that the results obtained were agreeable to them. This validation supports the findings, and this should encourage the university to apply this model in their training delivery system.

## CONCLUSION

Factors affecting the success of training delivery were the main results of this study. The relationship between these factors affected customer satisfaction and was interdependent. The results-based Pearson values clearly indicated that the leading success factors were interaction quality and environmental quality; indeed, a strong relation between them was observed. However, there was a very weak relationship between object quality and infrastructure quality. Furthermore, the factor of interaction quality factor was considered to be the most important factor as good interaction between trainers and students is very helpful when it comes to discussion and asking questions. Moreover, knowing the success factors can provide guidance to stakeholders in formulating new policies to improve the quality of skills training implementation. The measurement model developed was not only used in the organisation of training but also to achieve customer satisfaction.

This study can also be used as an implementation effort in conducting training excellence that is beneficial to both parties involved, namely the organisers as providers and students as customers. This study can also be used as a guide for other organisations, learning centres and public or private institutions of higher learning to improve their implementation, management and training services.

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