

Formative Evaluation of Teaching Analysis (FETA) Using the SERVQUAL Scale: A Route to Students Satisfaction and Continuous Improvement

(Penilaian Formatif Analisis Pengajaran (FETA) Menggunakan Skala SERVQUAL:
Ke arah Kepuasan Pelajar dan Peningkatan Berterusan)

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Abstract

As we move towards globalization and a borderless world, every aspect of quality in our education must be competitive. In creating competitiveness among every teaching staff at the higher institutions, the quality of teaching should be improved from time to time. Many attributes are being used in measuring teaching quality and become more important to determine students' satisfaction. The purpose of this study is to determine the level of teaching effectiveness from students' perceptions and to identify the significant differences of service quality with gender. The marketing concept of service quality (SERVQUAL) encompassing Tangible, Competence, Attitude, Content, Delivery and Reliability has been used to evaluate the teaching quality of Commerce Department lecturers in Politeknik Kuching Sarawak. The evaluation process was measured by the students on the lecturers. The questionnaire consists of 22 items that have been used as instruments for data gathering. A total of 207 students under the Diploma in Accountancy and Diploma in Business Studies study programs for the December 2019 Semester were identified as a sample in this study in answering the questionnaires that were distributed. Data has been analyzed by using the Statistical Package for Social Science (SPSS) through descriptive and inferential analysis to determine the objectives. The findings of this study have shown that the majority of students are satisfied with the foundation of teaching principles and practices of the lecturers and could serve as role models for others. Furthermore, there is no significant difference between the dimensions used to the gender except for the courtesy construct from male respondents. For future recommendations, a large-scale study involving all departments can be implemented to determine students' satisfaction to sustain the teaching effectiveness of the institutions.

Keywords: Teaching effectiveness, service quality, students' satisfaction

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INTRODUCTION

Nowadays, in the current competitive environment, the education sector has become important as an output for country development. Human capital produced by all levels of education institutions will determine the future of a nation. Hence the quality of students is crucial not only to ensure an advanced society but also to give a worth return for the investment made by parents. Teaching quality can be one of the yardsticks to measure students' satisfaction that reflects students' quality. Effective teaching can be described in many ways including teacher behavior, teacher knowledge, teacher belief, and so forth. The most important is that effective teaching will able to influence students' satisfaction and achievement (Thomas, Caroline, & Ida, 2009). Tertiary institutions should concern not only the society's perception of graduates' skills and abilities but also the students' feelings about their educational experience. Hence, educators have great responsibilities to ensure the provision of education quality.

FETA measures student perceptions of service performance against six dimensions - reliability, responsiveness, assurance, tangibles, empathy, and communication. Using a FETA as a framework for research ensures that feedback is not only specific but is also relevant since it focuses on the six key drivers of service performance. This study aims to measure the teaching effectiveness from students' perception and also to identify the significant differences of teaching quality with gender. Thus, the researcher thinks that FETA is suitable for use in determining the quality of teaching and staff efficiency. The benefits of FETA on a large scale are as follows:

- i. Findings on the customer perception can be used to formulate strategy and plan action to upgrade the customer service.
- ii. Helping to improve the teaching quality as well as improving students' satisfaction.
- iii. It will bring awareness on the importance of teaching quality with relation to developing career opportunities in the world of business especially in the education sector.

LITERATURE REVIEW

Formative Evaluation of Teaching Assessment (FETA)

Assessment is a central activity in the teaching and learning process, with teachers typically devoting a significant amount of time to the preparation of questions and marking guides, followed by repetitive marking. According to Poehner (2007), assessment is a process for documenting the learner's measurable knowledge, skills, attitudes, and beliefs. Teachers will be able to measure students' understanding through the assessments, and it will provide evidence of lessons learned. The main feature of the teaching and learning process is assessment, and improving assessment practice would have a significant impact on the quality of learning (Boud, 2010).

Teaching is the process by which teachers use instruction and information to help students achieve their learning goals (Wenjie & Chunling, 2013). According to Isola (2019), "Teaching as a scientific process contains components such as content, communication, and feedback where teaching takes place interactively, primarily involving classroom talk which occurs between teacher and pupil and occurs during certain definable activities."

FETA is defined by Rivers, Dunlosky, and Joynes (2019) as "an assessment that allows adaptation of teaching and learning activities to take into account students' knowledge, strategies, goals, needs, and interests." During the learning process, the teacher gathers and interprets information about the students' learning to improve the learning (Bell & Cowie, 2000). However, formative evaluation can become a critical learning activity because it involves assuming a different conception of knowledge and learning/teaching and, as a result, may lose control due to not being strictly objective (Irina, Miguel, Myrian, & Gema, 2019). According to Randy (2011), formative assessment is commonly claimed

for its effectiveness, the limited attention to a specific domain in its conceptualization, the need for teacher support, and the impact on the larger educational system.

Service Quality

There have been many ideas about the definition of quality over the last eighteen centuries, but the idea introduced by Juran (1992) has been seen to make a significant contribution to the concept of quality. To ensure customer satisfaction, quality should be applied to all business activities. As a result, the products, processes, or services should not only be free of flaws but also capable of meeting or exceeding customer expectations. Finally, quality can be defined as an outcome, a feature of goods or services provided to customers, which becomes the hallmark of an organization and satisfies all of its stakeholders.

According to Ramya, Kowsalya, and Dharanipriya (2019), service quality is a service provider's ability to satisfy customers efficiently to improve business performance. While Naeem, Akram, and Saif (2009) identified service quality as a focused assessment that reflects customers' perceptions of specific dimensions. Customers' evaluation on reliability, responsiveness, assurance, empathy, and tangibles, problems that occurred can be identified quickly and improvement can be planned and implemented to get better assessed by clients or consumers. Keshavarz and Jamshidi (2018) supported that perceived value and satisfaction will be increased if the management focuses more on service quality which includes the process and outcome quality. Tangible, reliability, responsiveness, empathy, assurance, and convenience were the dimensions to measure the process quality, while sociability was the dimension of outcome quality.

ISO and Service Quality in Educational Institutions

Since the early 1990s, one of the most popular topics has been the delivery of high-quality education. The appropriate standards for the educational industry were developed in 1992 when the International Organization for Standardization issued ISO 9004-2. (ISO). According to John (2003), the most recent version of the ISO series, ISO 9000: 2000, has placed a greater emphasis on how to measure customer satisfaction from educational environment perspectives. ISO 9001 effectiveness has an impact on company service quality and performance (Psomas, Pantouvakis, & Kafetzopoulos, 2013).

Since the product in higher institutions is not tangible and indirectly visible as manufactured products, its quality must be obtained by the customer, as in the case, the students themselves. Based on the customer satisfaction theory, the customers' perceptions towards goods and services can be used as a benchmark in measuring their satisfaction (Hassan & Kerr, 2003). Hence, the satisfaction towards the service quality of higher institutions can be determined by students' perceptions towards the quality of educators, learning process, support system, physical resources, and its operation management (Hill, Thomas, & MacGregor, 2003).

Education quality is achieved through three key pillars: ensuring access to quality educators, providing access to quality learning facilities and professional development, and establishing safe and supportive quality learning environments (Slade, 2017). Higher education service quality is comprised of twelve factors, according to Jain (2010): curriculum, academic facilities, interpersonal relationships, input quality (students), input quality (faculty), industry interaction, support facilities, reputation, campus, outcome, processes, and visual appeal. While Aniskina (2015) proposed three main approaches in achieving education quality; quality of the educational programs, quality of the management of institutions, and quality of the outcomes. While Parasuraman, Zeithaml, and Berry (1988) have suggested six quality elements to determine students' satisfaction towards service quality in higher education that we used in this research, which are: tangibility, competency, reliability, attitude, content, and delivery. According to Munawar, Ahmed, and Musarrat (2011), there was a positive relationship between the dimensions

of service quality; reliability, responsiveness, assurance, and empathy with student satisfaction. However, the tangible dimension was having insignificant relation with student satisfaction.

Relationship between Service Quality and Gender

In comparison to the past, the education quality system derived from attention to students' education has become more in demand. Student ratings have a strong positive relationship with teaching dimensions, and they have contributed to the body of literature on evaluating teaching effectiveness (Mohammed & Pandhiani, 2017). Rojan (2016) who found that the dimensions of service quality have a positive relationship with students' satisfaction had also attested to the theory by Parasuraman, Zeithaml, and Berry (1988) on SERVQUAL. However, the perceived quality of service may differ depending on gender. Women are more likely to be dissatisfied than men because they have higher expectations of perceived quality (Randy, 2016). According to Osman (2011), gender moderates the effects of empathy and reliability dimensions on customer satisfaction.

Conceptual Framework

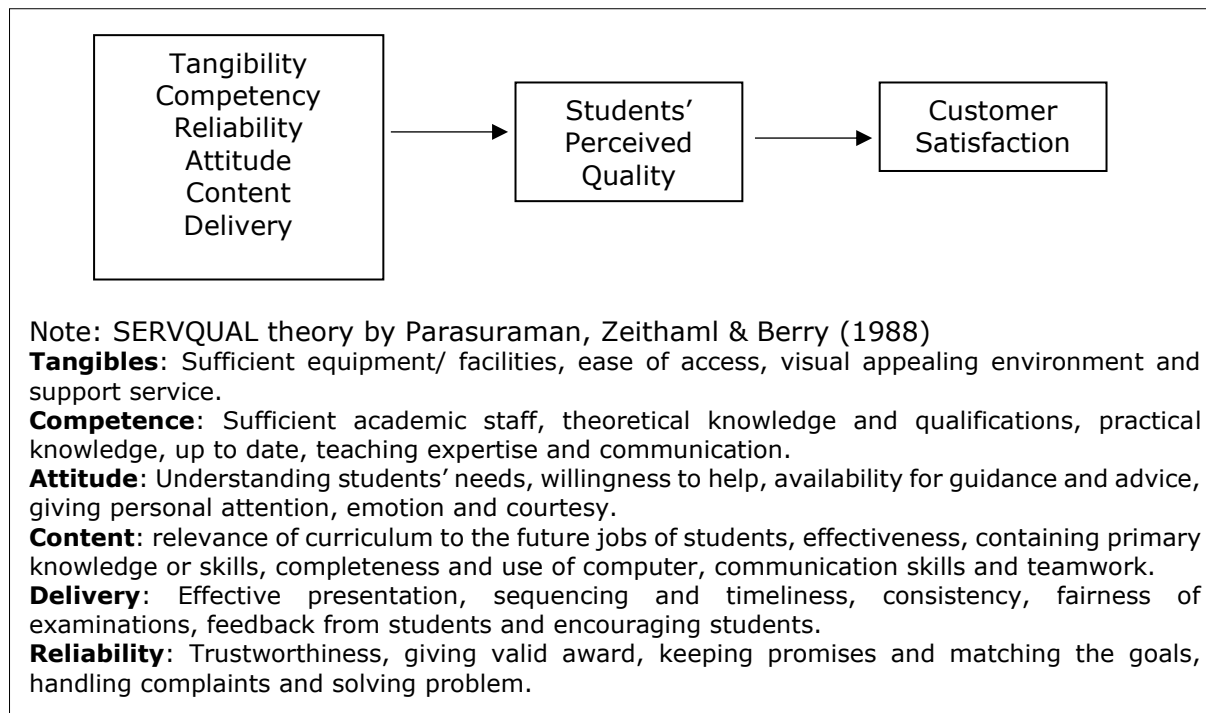


Figure 1. Conceptual framework

Based on Figure 1 that shows the theory developed by Parasuraman, Zeithaml, and Berry (1988), this study uses the elements of tangibility, competency, reliability, attitude, content, and delivery as independent variables and measure the level of the dependent variable which is customer satisfaction. In this case, the perception of JP students on how they perceived the teaching quality of their lecturers is the dependent variable.

RESEARCH METHODOLOGY

This part would be starting with the settings of the research, including how researchers selected respondents, the locations of the participating respondents, and the number of respondents who were selected. In this chapter, independent and dependent variables are laid out as well. Researchers will also give a brief introduction to data collection, procedures, and data analysis of this study.

Research Sampling

For this study, the sampling by Krejcie and Morgan (1970) has been used to determine the number of respondents to be involved. 210 respondents were asked to participate through the structured questionnaires to test their satisfaction towards teaching quality in their courses.

Instruments and measurements

This study was conducted in the form of exploratory research. Exploratory research does not aiming for providing conclusive evidence but merely helps us to have a better understanding of the issue and determines the initial research design, sampling technique, and data collecting method (Singh, 2007). Data was collected by using a structured questionnaire which was divided into four sections of straightforward items as shown in Table 1 below.

Table 1. Respondent profile

Particular	Number of items
Respondent background details	1-3
Teaching Quality (tangibles, competence, attitude, content, delivery and reliability)	4-28

Table 1 refers to the items that require respondent demographic details such as gender, race, and semester (Part 1) and the teaching quality effectiveness (Part 2) which is measured by using a five scales series of Likert from 1 until 5 (Sekaran, 2000). The types of scale used in this study are as followed, 1 – Lots of improvement, 2 – Room for improvement. 3 – satisfactory, 4 – Good, and 5 – Excellence. Part 4 in the questionnaire was directing the respondents on recommendation or opinion which consisted of 2 questions. The questionnaires were designed in dual language, which was in English and Malay. The questionnaires have been translated bilingual according to the procedure proposed by Brinslin (1980) which stated that questionnaires translated should follow certain procedures. To convince our respondents to come out with a better understanding, we delivered the bilingual for every question in a survey form that leads to reduce the tendency of bias. Part 2 as we can see that the questions are divided into 6 dimensions, as stated in Table 2.

Data Analysis Technique

The data collected was organized and analyzed using Statistical Package for Social Science (SPSS). Before data was going to be analyzed, items from the questionnaire were grouped according to variables and coded based on the dimensions they addressed.

Frequency Analysis

For researchers to measure the pattern of respondents' background, frequency analysis has been used. In Part 1 (gender, race, and semester) frequencies and percentages were used in the analysis.

Table 2. Dimensions / attributes of teaching effectiveness

Dimension	Attributes / Criteria / Questions
Tangibles	1. Lecturer's teaching aid is well equipped. 2. The Lecturer is neat in appearance.
Responsiveness	3. The availability of the lecturer's note and teaching. 4. Punctuality.
Reliability	5. The lecturers' behaviour build my confidence. 6. Lecturer is always willing to help me when needed.
Competence	7. The lecturer conducts classroom discussion well. 8. The lecturer clarifies idea and concept well. 9. The lecturer is well prepared and well organized in teaching and learning. 10. The lecturer discussed quizzes, tutorials, and exam promptly in class.
Courtesy	11. Lecturer is able to plan the subject development in line with the trend nowadays. 12. The lecturer made it clear on what standard of work he/she is expected from students. 13. Questions (continues assessment) develop student's skill.
Communication	14. The lecturers share best practice with regard to course and organization. 15. Friendliness and politeness. 16. The lecturer respect student suggestion and questions. 17. The lecturer is working as a teamwork with student. 18. Clarity of voice. 19. Variety of interaction and cooperation . 20. Lecturer's good in communication skills.

Reliability test

To accomplish the objective of this study, a reliability analysis (Cronbach alpha) has been performed. According to Sekaran (2000), the reliability test is conducted to ensure the consistency or stability of the items. The Cronbach Alpha test as stated in Table 3 was used to analyze the reliability of the instruments whereby the reliability acceptance level should be more than .60 (Malhotra, 2007).

Table 3. The value of Cronbach's Alpha and reliability category

Cronbach's Alpha value	Reliability Category
0.0 - 0.20	Very Low
>0.20 - 0.40	Low
>0.40 - 0.60	Sufficient
>0.60 - 0.80	High
>0.80 - 1.00	Very high

Source: Sugiono (2005)

Descriptive Analysis

Respondents' answers in sections B, C, and D which determine the first objective were analyzed by using descriptive statistics to find how the independent variables (tangibility, responsibility, reliability, competence, courtesy, and communication) affect the dependent variable (students' satisfaction). The items in the instruments that have been measured are based on the 5 Likert Scale 1 - 5, where 1 represents strongly disagree and 5 representing strongly agree. While inferential analysis by using a T-test was used to measure the relationship between service quality and gender which is the second objective of this study.

FINDINGS AND DISCUSSION

Following that, a summary of the demographics of the participants is provided. This section will also present the findings and discussion, beginning with the research objective and progressing to the mean effectiveness level of each dimension of independent variables. Out of 210 questionnaires collected for this study, 207 were accepted for analysis. As a result, the overall response rate for this study is 98.5 percent, which Sekaran considers adequate (2000).

Demographic Statistic of Respondents

Frequency distribution will be defined as a mathematical distribution to obtain a count of the number of responses associated with different values of one variable and to express in percentage terms (Shin, Powers, Grady & Bhatt, 2000). The researchers used a frequency table which was presented in the form of the frequency data to show frequency distribution. Table 4 below showed the frequency distribution which has been derived from the background questionnaires that were collected.

Table 4. Demographic distribution

Demographic	Group	Frequency	Percentage
Gender	Male	48	23.2
	Female	158	76.3
Race	Malay	111	53.6
	Chinese	21	10.1
	India	3	1.4
	Iban	2	1.0
	Bidayuh	3	1.5
	Others	67	32.4
Semester	1	15	7.2
	2	36	17.4
	3	37	17.9
	4	41	19.8
	5	53	25.6
	6	25	12.1

As shown in Table 4, female students have the highest participation in this study which is 76.3 percent. As for the race, the Malays have contributed the highest percentage which is 53.6, followed by others group (natives) 32.4 percent and Chinese 21 percent. Among the respondents, Semester 5 students were the most that participated in the study which is 25.6, followed by Semester 4, Semester 3, and Semester 2.

Descriptive Analysis on Quality Dimensions

The six (6) dimension factors were used to measure the interest and satisfaction of the students are shown in Table 5 below.

Table 5. Mean score and standard deviation for six dimensions

Dimension	Mean	Standard Deviation
Tangible	4.10	.645
Responsiveness	4.22	.603
Reliability	4.19	.616
Competence	4.18	.539
Courtesy	4.31	.566
Communication	4.37	.544

From all dimensions, Table 5 shows that the total score for the mean is 4.23, which means all the Commerce Department that has been evaluated in Grade B+ which is the lecturer

have a good foundation in teaching principles and practices and could serve as a role model for others. Besides, teaching effectiveness is also determined by the ability of teaching staff to individualize the instruction for students (Jani, Shahid, Thomas, Francis, & Francis, 2018).

Inferential Analysis of Service Quality on Gender

To determine whether constructs of tangible, responsibility, reliability, competence, courtesy and communication have significant differences towards gender, a t-test analysis was performed. The results have shown a significant difference over the courtesy construct according to male respondents ($M = 4.44$; $SD = .446$) and female respondents ($M = 4.28$; $SD = .593$). Specifically, our results suggest that gender has an impact on the construct of courtesy. However, the findings have shown that there is no significant difference between the tangible constructs, responsibility, reliability, competence, and communication according to the gender of the respondents.

RECOMMENDATION AND CONCLUSION

This study could be carried out not only by comparing the teaching quality of each department but also by determining the teaching effectiveness of individual lecturers. Based on the findings, several approaches to improving teaching quality, which in turn affects student satisfaction, can be planned. Effective educators must be prepared for and readily available for additional continuous improvement when it is required to improve effective teaching and learning (Peter, Mary, Siti, & Syahrina, 2015). Furthermore, they are responsible for not only assess, guide and encourage to promote students involvement but also be ever willing to upgrade their knowledge and skills to facilitate students with the latest information.

In corresponding to the perception of service quality on gender issues, it is recommended that attention should be paid to all dimensions to sustain the perceived value and student satisfaction (Sohrabi & Majidi, 2014). However, the focus should be more on dealing with male students, particularly to the courtesy aspect.

For future recommendations, a large-scale project, such as inter-departmental satisfaction surveys or semester-by-semester research, can be implemented to sustain teaching effectiveness. Aside from that, this study provides useful guidelines for future research, resulting in a more accurate theoretical and methodological process of higher institution service quality. The terms of student satisfaction and teaching quality have been highlighted in the higher education authorities' philosophy and are critical for the future success of higher education institutions.

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