

Hierarchical Service Quality Model towards Student Satisfaction

Aida Azlina Mansor, Rahayu Hasanordin, Muhammad Hafiz Abd Rashid, and Wan Edura Wan Rashid

Abstract—Nowadays, achieving good quality experience in higher learning institution is not restricted on teaching and learning aspect. However, several critical factors such as interaction quality, physical environment and outcome quality are substantiated to be explored. Therefore the aim of this paper is to investigate the importance of Hierarchical Service Quality Model (HSQM) and student satisfaction in higher education setting. Hence, data were collected via survey questionnaires to the total 179 respondents in Faculty of Office Management Universiti Teknologi MARA, Puncak Alam, Selangor. All the hypothesized relationships were tested using Pearson correlation coefficient. The results indicated that elements of HSQM are positive and have significant relationship to the student satisfaction. Notably, physical environment of the faculty are the highest element that contributes to student satisfaction. In brief, the university should improve their service quality in order to remain competitive in this globalized environment as well as to increase student satisfaction.

Index Terms—Hierarchical service quality, student satisfaction, interaction quality, physical environment quality and outcome quality.

I. INTRODUCTION

At present, students have a wide range of options in choosing good institution to further their study. Indeed, the universities are required to serve the program with high quality value in order to satisfy the students. Apart from this, the university is also aimed to fulfill the demand of social expectations [1]. Reference of [2], social expectation is refers to an interaction quality (attitude, behavior, and expertise) of the employees when dealing with the students, physical environment quality of the university, (ambient conditions, design, and social factors), and outcome quality (waiting time, tangible, and valence) in which the university should provide with high level of satisfaction to the students.

However, needs and requirements towards the selection of university are unique and different from one customer to another. It is very important to identify what customer expects in order to deliver good service quality [3]. As a result, it is a challenge for university to understand their students' needs and to transform these needs into services

that will satisfy them. Furthermore, student's overall satisfaction with educational experiences is viewed as a key component in maintaining a long-term competitive advantage for an institution of higher education. For this study, adapting the Hierarchical Service Quality Model (HSQM) proposed by Brady and Cronin (2001) is viewed as a comprehensive multilevel construct that consists of three primary elements such as interaction quality, physical environment quality, and outcome quality. Therefore, a study of HSQM towards customer satisfaction is practically important in the university in order to provide excellent services to their students.

Quality and customer satisfaction have long been recognized as playing a crucial role for success and survival in today's competitive market [4]. In line with this, [5] suggested more studies should be conducted in measuring the outcome of the service quality. As a precaution, low quality of service provided by the university can lead to students' dissatisfaction, for example, they have to wait for a long time when dealing with at counter service, the waiting area uncomfortable and lack of knowledge among administrative staffs. According to [6] customer satisfaction is deemed important for the providers in understanding the customer's need and expectation. Therefore, the goal of this paper is to investigate the importance of hierarchical service quality model (HSQM) and student satisfaction in higher education setting. In addition, no research has been done in education field particularly in Malaysian context. Few noticeable research on service quality in higher education institutions are those of [27, 28, and 29]. Findings from these studies reported that student's satisfaction towards services provided by the university is crucial determinants of institutional survival and excellence.

II. LITERATURE REVIEW

A. Student Satisfaction

Various studies have been conducted to measure the student satisfaction at university level. This is supported by student satisfaction has become central to recruitment and retention strategies [7]. Assessing overall student satisfaction involves more than a student's assessment of the "academic" experiences but also satisfaction with administrative processes, the social environment, the physical environment and other aspects of the university environment as well [8]. Many universities have increased their investment in order to distinguish themselves from competitors, by strengthening the image of "quality" [9]. Previous studies have reported [10] that higher education institutions are focusing on identifying

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and satisfying the needs and expectations of their students e.g; student academic achievement, faculty performance, classroom environment, learning facilities and institution reputation.

Indeed, [10] had investigated a group of university students in Pakistan by measuring their satisfaction level. From the result it shows that teachers' expertise, courses offered, learning environment and classroom facilities are significantly and positively related to student satisfaction. Hence, it can be concluded that the abovesaid variables improve the student satisfaction in higher education. Besides, the most significant factor in ensuring student satisfaction was came from the genuine interest of the employees in the students' needs and progress [7] demonstrated by caring and empathic approach. In other study conducted by Management Associate Europe in conjunction with the American Association and Japanese Management Association (AMA-Brussels, 1988), reported that majority of the respondents believe that improving customer quality service is the key to success. Study proven that the service quality dimensions (tangibility, assurance, responsiveness, reliability and empathy) have a significant relationship with student satisfaction [11].

In essence, service quality and student satisfaction are important determinant factors in students' retention in helping the educational institutions measuring students' expectations about the quality of educational services. More importantly, a good response to the student needs in general along with student satisfaction, a good level of education and the location of the university [6] are the main factors that contribute to a positive judgment towards student satisfaction.

B. Interaction Quality

Interaction quality deals with the experience that a customer has with the employees who provide services. In fact, it becomes one of the most vital factors that influence customer satisfaction. Apparently, attitude, behavior and expertise of the employees are the sub dimensions in interaction quality. For example; Employees should give a smile while interacting with the customers and this will result in customer satisfaction and good impression in a positive way [12]. Indeed, dealing with a serious employee, it can create a stressful situation as well as negative impact on customer satisfaction [13]. As a result, customers' quality perception occurs in relation to service worker smiling behavior and customer satisfaction [12].

Apart from this, providing good service quality to the customer is also critically important in an organization. For instance, core service or service product, human element of service delivery, systematization of service delivery; non-human element, tangibles of service –servicescapes, and social responsibility [14]. It is imperative for an organization to understand the customers need and want which can contribute to the satisfaction value. For instance, when customer gets enough attention from the employee, they are likely to have positive experience with the organization [15].

Thus, employee also should have knowledge, training, experience, qualification, and skills in order to ensure satisfaction when delivering the service. Specifically, service

personnel must be clearly responsible in satisfying customer needs and ensuring customer satisfaction [16]. In doing so, customers' perceptions of interaction quality are dependent on the attitude, behavior, and expertise of employees. Findings [17] indicate that personal care and individualized attention to the students are two important factors impacting student satisfaction. This is particularly true when students believe that the knowledge and information received from the lecturers are credible and trustworthy. strategic approach can be implemented in an organization such as a) establishing a personal connection with customers, b) recruiting employees with high social skills, c) providing intensive training and d) establishing careful management of the frontline employees [18]. Interestingly, findings from literature indicate that a good interaction between employees and customer will reduce customer perceived risk. Due to this concept, preposition has been developed.

H1_a: There is a positive and significant relationship between interaction quality and student satisfaction.

C. Physical Environment Quality

Physical environment quality concerns with the physical and social setting in which the university operates such as buildings, grounds, cleanliness, welcoming, and also customers' personal space. Ambient conditions, the design and social factors are the sub variable fall under physical environment quality. According to [15] physical environment is important to customers because every service occurs in an environment, where customer is present as a whole and parts of the service process. While dealing with the organization, customers are seeking special treatment in design, production and delivery [19]. Other than this, interior and exterior aspects are also very important to the customers because it creates a positive or negative experience to them [15].

The importance of good physical environment quality is where students express a preferred for several aspects of upgraded classrooms, including tiered seating, lighting, and classroom noise control [21]. A study conducted by [8], indicate that students view the new facilities favorably and as having a positive impact on student learning and satisfaction. Results of the study by [21] suggest that college students do perceive differences in classrooms. They are particularly affected by classroom seating and overall classroom comfort the students enjoyed coming to class more in the upgraded room and had a stronger sense of satisfaction in the upgraded room. The following preposition is developed;

H1_b: There is a positive and significant relationship between physical environment quality and student satisfaction.

D. Outcome Quality

Outcome quality refers to the outcome of the service performance and represents what the consumer achieves from the service. Waiting time, tangible and valance are the attributes that contributes to student satisfaction. For instance, waiting time in customer service commonly known as a waste of time to customers and when customers have to wait for a long time they become dissatisfied on the service provided [22]. It is shown from various study on service quality mentioned that waiting time can affect customer

satisfaction. Undoubtedly, many service companies worry about managing customers' queues as it may elicit negative influence on the quality of the customer service [23]. Seriously, the managers have to very carefully look into this matter. They need to appropriately handling the issues of waiting queues by stressing the need for proper design and the layout of the waiting area [23]. In another major study, [30] found that implementing service quality features (i.e., assurance, empathy, reliability, responsiveness and tangibles) have increased individuals' perceive value about the quality features and it lead to an increased customer satisfaction. [2] highlights valence describe attributes that control whether customers believe that a service outcome is good or bad, regardless of any other experienced aspects.

From the discussion, the following preposition is proposed;

H1_c: There is a positive and significant relationship between outcome quality and student satisfaction.

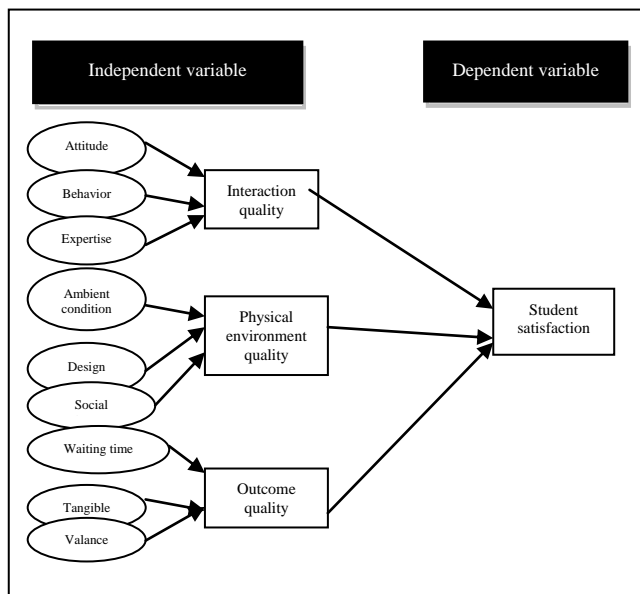


Fig. 1. Hierarchical service quality models

III. METHODOLOGY

The study aimed to investigate the relationship between HSQM and student satisfaction from full time students from four main bachelor degree programmes from Faculty of Office Management, Puncak Alam.

Sample for this study was obtained from the list of Integrated Students Information System (ISIS), UiTM. Data were collected by using questionnaires which were adapted from [2] using five-point Likert scales of measurement ranging from 1= strongly disagree to 5 = strongly agree.

A total 200 sets of questionnaire had been distributed to students from FOMT, however only 179 set were useable Therefore the return rate rate was 89.5% (n=179).

IV. FINDINGS

A. Demographic Profile of Respondents

Most of the respondents were female which represent 138 or 77.1% of the respondents, aged 22 years old (45.8%), and from Bachelor Degree of Event Management (42%) from

Faculty of Office Management, Puncak Alam.

B. Analysis

Table I shows the reliability statistics for each HSQM factors and students satisfaction.

TABLE I : RELATIONSHIP BETWEEN HSQM AND STUDENT SATISFACTION

	Correlation	Alpha Value
Interaction quality and student satisfaction	.728**	0.000
Physical environment quality and student satisfaction	.740**	0.000
Outcome quality and student satisfaction	.684**	0.000

As can be seen from the Table I, the relationship between interaction quality and student satisfaction is $r = .728^{**}$ and p value is .000. This indicates that interaction quality and student satisfaction have positive and significant relationship. The interaction referring to the attitude, behavior and expertise of the employees. Attitude and behavior among the employees shown is important especially when the students is having any inquiries or problems. Thus, the employees also need to be competent in their jobs. When the employees are competent in managing their jobs, every single task can be done smoothly and quickly. Besides, in providing good service quality, it was found that core service or service product, human element of service delivery, systematization of service delivery; non-human element, tangibles of service –servicescapes, and social responsibility are the critical factors of service quality [14].

As shown in table above also, the relationship between physical environment quality and employees satisfaction is $r = .740^{**}$ and p value is .000. This indicates that physical environment quality and student satisfaction have positive and significant relationship. Having new building and new facilities demonstrate the important of creating and maintaining a good and excellent physical environment of the faculty. The outer appearance and cleanliness of the faculty is good and well maintained. Besides that, the faculty also portrays a good transparency and ethics in delivering their services to the students. Recent evidence is significant with findings from [15], this view is supported by [24] whom emphasized that physical environment can have a significant impact on perceptions of the overall quality of the service encounter, which in turn affects the customer satisfaction. Excellent physical environment was a direct indicator of a customer's satisfaction [25].

Another important finding was that the relationship between outcome quality and employees satisfaction is $r = .684^{**}$ and p value is .000. This shows that outcome quality and student satisfaction have positive and significant relationship. According to [22] waiting time in customer service commonly known as a waste of time to customers and when customers have to wait for a long time they become dissatisfied on the service provided. These findings also further support the idea of [23], where many service companies worry about customers' queues, because this will lead to negative influence on the quality of the customer service and managers need to differentiate between waiting

area where customers use in service process, and more attention on the design and layout of the waiting area. Besides that, this the turning point where students have the feelings when they leave they always feel that they got what they wanted.

TABLE II: HIGHEST ELEMENT IN HSQM THAT CONTRIBUTES TO STUDENT SATISFACTION

	Mean
Physical environment	3.5872
Interaction quality	3.2598
Outcome quality	3.3209

From the Table II it shows that physical environment is the highest element of HSQM that contributes to student satisfaction. In this study, physical environment concerns with the physical and social setting such as buildings, grounds, cleanliness, welcoming environment, and also customers' personal space. It is encouraging this figure that found by [15], who found that physical environment is important because every service occurs where customer is present as a whole and parts of the service process. Another important finding was that while dealing with the organization, customers are seeking special treatment in design, production and delivery [19]. Interior and exterior aspects are very important to customers. [26] the effects of layout accessibility, facility aesthetics, electronic equipment, seating comfort, and cleanliness on the perceived quality of the servicescapes and from the findings revealed that physical environment significantly affected a customer's satisfaction. When all aspects are fulfilled a good warranty should encourage customers to have more confidence with the service provider [16]. Excellent physical environment was a direct indicator of a customer's satisfaction [25].

C. Hypotheses and Testing Discussion

H1_a: There is a positive and significant relationship between interaction quality and student satisfaction.

Table I shows that interaction quality influence student's satisfaction. Therefore the hypothesis is accepted. It can thus be suggested that a study conducted by [14] found that by providing good service quality to the customer is critically important in an organization. This refers to the students' perception of how the service is delivered during the service encounter. It is interaction between the employees and the students. This is referring to attitudes and behaviour of the employees. Another factor such as, core service or service product, human element of service delivery, systematization of service delivery; non-human element, tangibles of service –servicescapes, and social responsibility is the main elements in interaction quality.

H1_b: There is a positive and significant relationship between physical environment quality and student satisfaction

Table I explain that physical environment have influences on student satisfaction. Therefore the hypothesis is accepted. The finding is similar to study conducted [15] where it is important to customers because every service occurs in an environment, where customer is present as a whole and parts

of the service process. It can therefore be assumed that the perceived physical environment was a direct indicator of a customer's satisfaction [25]. This factors is referring to the built environment in which service delivery occurs as opposed to the natural or social environment.

H1_c: There is a positive and significant relationship between outcome quality and student satisfaction.

Based on Table I, it shows that outcome quality also influence student satisfaction. Therefore the hypothesis is accepted. Waiting time, tangible and valance are the attributes that contributes to student satisfaction. This factor is associated with the ability of the service provided by the employees to manage demand in an effective manner. It also captures attributes that control whether students believe that service outcome is good or bad, regardless of their evaluation of any other aspect of the experience.

V. CONCLUSION

The study on hierarchical service quality on student satisfaction is essential in educational area as it can help the the university to improve the service quality. Hence, the three main new areas in HSQM such as physical environment, interaction quality and outcome quality have been measured to identify the student satisfaction and have produced significant results. In short, it is imperative for any universities to improve their service quality by increasing student satisfaction. Moreover, the findings from this study also help the university to better understand what influences student satisfaction and at the same time to improve their services. For future research, it is recommended to evaluate the satisfaction level in service quality among international students in Malaysian university for more rigorous findings.

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