
Service Quality and Postgraduate Student Satisfaction: A pilot study

NIGINA KADIROVA
LIM LI-CHEN
BENJAMIN CHAN-YIN-FAH
TEE POH-KIONG

Centre for the Socio-economics of Ageing (CSEA)
Asia Pacific University of Technology and Innovation
Kuala Lumpur, Malaysia

Abstract:

The field of service quality continues to be marked by several important research questions including an evaluation of student satisfaction from a service quality perspective. To address such questions, we have conducted a pilot study to assess the relationships between service quality model postulated by Lehtinen and Lehtinen (1991) using a sample of 100 postgraduate students studying at a local private university in Kuala Lumpur, Malaysia. The results suggested that all service quality dimensions are moderately to highly-related to student satisfaction. Future research directions are discussed.

Key words: Service quality, student satisfaction, pilot study

Introduction

Service quality is always crucial criterion for both business and government. It is considered as an important driver of an institutions' success. The attention of service quality derives from the philosophy of excellence, such as expanding the number of loyal customers, growing the attraction of new customers, presenting opportunities for institutional growth,

improving cost reduction policy and also, reinforcing the permanence of its members (Reboloso, 1999).

In order to remain competitive for all the successful companies and organisations service quality has become a requirement. Past studies have emphasized the importance of quality enhancement initiatives which have resulted in sustainable competitive advantage in service organisations (Hadikoemoro, 2002; Rapert and Wren, 1998; Stock and Lambert, 1992). Quality refers to a process and its important characteristic is its variability, which evolves gradually and continuously depending on the interaction between the customer and the service (Buzzel & Gale, 1987). Past studies have highlighted the importance of service quality as a very essential research topic because of its evident relationship to costs, profitability, customer satisfaction, customer retention and positive word of mouth. Service quality is widely regarded as a driver of corporate marketing and financial performance (Buttle, 1995).

In a developing country like Malaysia, the shift from agriculture- to knowledge-economy has brought education in all its forms (pre-school, primary school, secondary school, higher education, vocational training, and adult education) into focus. Education has for years been a “commodity” spurning big and small businesses, and now eventually education is a big business (Sohail, Jegatheesan & Nor Azlin, 2003). Moreover, the higher education sector is considered as a global business; therefore all universities must do their best to continuously explore options to expand their higher education services.

In an initial attempt to understand what factors are considered as the most influential ones in the concept of student’s satisfaction with service quality in higher education, this paper is aimed to assess the relationships between service quality dimensions of a Malaysia’s private university on student satisfaction with a focus on postgraduate students. The service quality model introduced by Lehtinen and Lehtinen

(1991) which concentrates more on three basic service quality dimensions, mainly: the physical quality (general services, teaching and learning facilities, accommodation); the interactive quality (academic instruction, guidance, interaction with staff and students); and the corporative quality (recognition, reputation and value for money) were used to assess student satisfaction.

Satisfaction

In a competitive higher education sector, where each and every organisation struggle for potential customers, their level of satisfaction on service has become an important differentiator of marketing strategy. These customers will look at the way how a service is supplied by an organisation meets or even delights their expectation which later, contribute to customer satisfaction. Therefore, measuring the customer satisfaction will help organisation in getting an indication of how successful they actually are in providing products to the market. Oliver (1982) found customer satisfaction is relatively transient and is consumption-specific, whereas attitudes are relatively enduring. Moreover, Westbrook and Oliver (1981) have also argued that customer satisfaction is an evaluation of the totality of the purchase situation relative to expectations, whereas an attitude is a liking for a product or service that lacks the element of comparison. Therefore there was concluded this perspective that the level of satisfaction may vary and depending on the alternatives available to customers (Munteanu and Ceobanu, 2010).

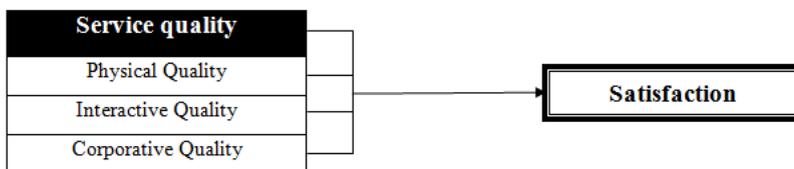
The terms “customer satisfaction” and “service quality” are often used interchangeably, but they are in fact two distinct, although related constructs (Clemes et al., 2007). Parasuraman et al. (1988) regarded satisfaction as a transaction-specific measure where they saw service quality as a form of attitude gained through long-run overall evaluation.

They argued that customer satisfaction determined service quality. In contrast, Cronin and Taylor (1992) argued that service quality is the antecedent of satisfaction. They found, based on empirical research in four different service industries, that satisfaction exerted a stronger and more consistent effect on purchase intentions than service quality, and concluded that customers may not necessarily buy the highest quality service, as convenience, price and availability may enhance satisfaction but not customers' perception of service quality. Apart from that, student satisfaction is also a key determinant of student loyalty (Webb and Jagun, 1997), and it is student loyalty that encourages positive word-of-mouth on their institution even after their studies.

In a sum, all higher education institutions try to achieve student satisfaction to bring in new customers, as well to reduce numbers of drop out (Tinto, 1993); more likely to achieve higher grades (Bean and Bradley, 1986); engage in positive word-of-mouth and collaborate with the institution after they graduate (Alves and Raposo, 2009).

In an initial attempt to understand the relationship of service quality variables in higher education and if they really influence customer satisfaction, the current study assessed the relationship using service quality model proposed by Lehtinen and Lehtinen (1991). This model has three service quality dimensions which are physical quality, interactive quality and corporative quality. The research framework of this study was illustrated in Figure 1.

Figure 1: Conceptual model for the study



Satisfaction and Service Quality

Juran and Godfrey (1988) have defined quality as: (1) “those features of products which meet customer needs and thereby provide customers satisfaction” and (2) “freedom from deficiencies-freedom from errors that require doing work over again (rework) or that results in field failures, customer dissatisfaction, customer claims and so on”. The term “quality in education “has been defined with different meanings by different scholars, such as “excellence in education” (Peters and Waterman, 1982); “value addition in education” (Feigenbaum, 1951); fitness of educational outcome and experience for use” (Juran and Gryna, 1988); “specifications and requirements” (Gilmore, 1974; Crosby, 1979) and “meeting or exceeding customer’s expectations of education” (Parasuraman, Zaithaml and Berry, 1985). Therefore there is not possibility of identifying a single definition of higher education service quality, when it would be more suitable to define higher education service quality based on the criteria that their stakeholders used to judge quality as well to the competing views when assessing the education quality.

The service quality of higher education is very crucial in today’s world with a noticeable trend of increasing competition among universities and higher education institutes to attract the students from across the globe. The competitive pressure that exists in higher education industry today has forced educational institutions to look for alternative strategies. And now, in a highly competitive environment students have become more discriminating and demanding in their choice of university. Therefore it is very crucial and important for each and every institution to understand their expectations.

Athiyaman (1997) hypothesized the conceptual basis of consumer’s satisfaction and perceived quality; and highlighted their importance to the higher education sector. Since the construct is usually defined by a specifying its relationship with

other constructs, the author started by specifying the relationship between consumer satisfaction and perceived quality using a scenario specific to higher education. Figure 2 specifies all the hypothesized links between subjective disconfirmation and consumer satisfaction. Athiyaman in his study explains that a negative disconfirmation arouses feelings such as anger in the student. Similarly a positive disconfirmation arouses pleasant emotions (for example excitement) and confirmation creates non-arousing pleasant emotions (for example contentment). Moreover there was also shown that emotions could be ordered in a bipolar scale using positive emotions on one side of the axis and negative emotions on the other side (Russell and Bullock, 1985).

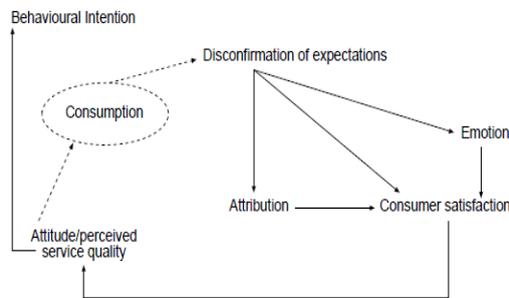


Figure 1: Athiyaman's (1997) Conceptual Framework of Consumer Satisfaction and Perceived Service Quality

Satisfaction and Physical Quality

Bitner (1990, 1992) states that the physical facilities of an organisation are able to indicate the capabilities and the level of service quality offered by the service based company. Therefore, the physical facilities of the tertiary institution to a certain extent do influence the overall students' perceived service quality because students will associate various tangible elements with the services provided by the higher education institution (Russell, 2005; Oldfield and Baron, 2000). Students

are expected to spend hours every day in a school are likely to have attitudes toward the school system that are strongly influenced by the physical facilities (Wakefield and Blodgett, 1994, p.68).

Still, functional physical facilities in higher education are necessary to facilitate teaching learning process. It comprises: school building, availability of enough rooms, proper lighting and ventilation seating and furniture, provision of pure and safe drinking water, availability of play grounds, laboratories, writing boards, enough washrooms. General cleaning and particularly the cleanliness of classrooms are also considered as necessary issue in order to improve teaching learning process. Environmentally responsive heating, air condition and ventilating systems, either in new provides a more comfortable learning environment. A recent report competed by the council of Educational Facility Planners International documented that “Facility condition may had a stronger effect on student performance than the combined influences of family background, socio-economic status, school attendance, and behaviour” (2000). Hence physical evidence has a strong influence on employee motivations and the quality of the service encounter.

Satisfaction and Interactive Quality

Service is an interactive process and not alike products, where customers will evaluate service quality based on the process of the service delivery. Higher education services are co-produced in contact with the university and its stakeholders, i.e. other students, library services, answering queries by their staff on higher education (HE) services. The core service in customer-oriented higher education services builds on academic knowledge (Vauterin et al., 2011). In fact, the educational expertise of the university such as providing consultation on a degree program is considered as technical component of the

service delivery in order to allow them to commit on the learning process. However the same international higher education related services can be perceived in multiple approaches by students from different countries, as all of them have different values and different backgrounds for becoming involved with international higher education related services.

Each and every university by having their personal education system, establish their own rules and strategies on how their service should be best provided to their students. However each lecturer within a course program has different practices and their own approach to deliver a lecture. This factor may also increasingly affect the overall quality of the service. This issue can provide a negative impact on the service due to unclear nature of job responsibilities. There is a tendency among academics to underestimate the teaching role, focusing less on the training process and more on the research. Once hired, professors may find that their position or function within the higher education institution, the opportunity to promote, the salary and external financing are highly connected to their research activity, rather than teaching (Fairweather, 1996; Hearn, 1999; Sutz, 1997). However the main reason of the existence of the university is its students or in other words education. The main mission of each and every university is the training or learning process. Generally, teachers are considered as the most significant factor in teaching and learning process. Moreover, considering all of their multiple roles, it can be seen that teachers are an essential element that contribute to students' satisfaction with educational experience. Therefore all of the universities should first of all ensure that a constant concern for higher educational institutions is students' highest level of satisfaction with professors.

Satisfaction and Corporative Quality

Corporative quality comprises such aspects as image, recognition and reputation of the educational institution as well as value for money. Institutional image refers to the overall impression made on the customer's minds about an organisation (Barich and Kotler, 1991). This is related to different behavioural and physical attributes of the organisation, such as business name, architecture, variety of products/ services, tradition, ideology, and to the impression of quality communicated by each person interacting with the organisation's client. According to Kennedy, 1997, there are two principal components of institutional image, namely functional and emotional. The functional component is related to tangible characteristics that can be easily measured, while the emotional component is associated with psychological dimensions that are manifested by feelings and attitudes towards organisation (Gaston et al., 2011).

Brown and Mazzarol (2008) found that between the "image of the institution" and "student satisfaction" the relationship is much stronger than between "student satisfaction" and "perceived quality of human ware" or "perceived quality of hardware". Moreover, the results of another research indicates that service quality is derived mainly from reputation, a factor which is closely tied to management's capacity to foster an organisational climate directed to serving the needs of its customers and the image of the business school. In marketing critical role of institutional image and institutional reputation in customer's buying intention is well known (Barich and Kotler, 1991). In order to develop and maintain a loyalty relationship with customers, institutional image and reputation must be very important. In educational services management, these concepts are extensively used as positioning instruments to influence student's choice of higher education institution (Milo et al.,

1989; Weissman, 1990). Moreover there was found out that the institutions image and reputation may also considerably impact on student's decision to stay for advanced studies. In other words institutional image and institutional reputation are considered as two distinct but strongly related social entities (Nguyen et al., 2001).

All in all higher education is being driven toward commercial competition and every university tries to build strong image of their institution that will provide them a competitive advantage among other rivals. According to Freeman (1993) this competition is the result of the development of global education market on the one hand, and the reduction of governmental funds that force public organisations to seek other financial sources on the other.

Based on the preceding review of research that drew on service quality dimensions and student satisfaction, we posit the following hypotheses:

H1: Physical quality is positively related to student satisfaction

H2: Interactive quality is positively related to student satisfaction

H3: Corporative quality is positively related to student satisfaction

Methodology

Sample

Participants in this study were registered postgraduate students from a private university in Kuala Lumpur, Malaysia (Table 1). There is a variety of nationality, the most common being Kazakhstan, Malaysia, Maldives, Iran, China and Indonesia. On average, participants were 25 years old, and 62 percent were male. Their studying mode is full time with an average of 1 year with the university. A total of 200 questionnaires were manually distributed to the participants

and only 100 questionnaires were returned to the authors. This yield a response rate of approximately 50 percent.

Demographic	Percentage
Age	
Below 24 years old	57
25 years old and above	43
Sex	
Male	62
Female	38
Nationality	
Kazakhstan	17
Malaysia	16
Maldives	13
Iran	12
China	11
Others	31
Program of study	
Master of Business Administration	61
Information & Technology Management	29
Software Engineering	10

Table 1: Demographic Information

Measures

Control variables. Given their potential effect on service quality assessment, respondent age, sex, nationality and program of study were obtained from the postgraduate students' personal profile.

Physical quality. Physical quality in this study refers to 3 items adopted by Daniel Jake Beaumont (2012) which was measured using 5-point Likert scale (Strongly Disagree; Disagree; Not Sure; Agree; Strongly Agree) ($\alpha=0.728$). Items include: "The library resources and services are good enough for my needs"; "I have been able to access general IT resources when I needed to" and "I have been able to access specialised equipment, facilities, or rooms when I needed to".

Interactive quality. Interactive quality in this study refers to 3 items adopted by Sohail and Shaik (2004) which was measured

using 5-point Likert scale (Strongly Disagree; Disagree; Not Sure; Agree; Strongly Agree) ($\alpha=0.733$). Items include: “I have received sufficient advice and support with my studies”; “I have been able to contact staff when I needed to” and “Good advice was available when I needed to make study choices”.

Corporative quality. Corporative quality in this study refers to 3 items adopted by Sohail and Shaik (2004) which was measured using 5-point Likert scale (Strongly Disagree; Disagree; Not Sure; Agree; Strongly Agree) ($\alpha=0.770$). Items include: “Degree from APU improves my employment prospects”; “Degree from APU is well recognized internationally” and “APU had been extensively recommended by my friends in my home country”.

Since each of the dimension’s instruments includes three statements, the minimum composite score for each dimension is three and 15 for max. For analytical purpose, those respondents who scored within the range of 3 to 9 would be categorised as “low level” while those respondents who scored within the range of 9 to 15 would be categorised as “high level”.

Satisfaction. Satisfaction in this study refers to dependent variable adopted by Munteanu, Ceobanu and Anton (2010) and includes only one item which was measured using 7-point Likert Scale (Less Satisfied, Not Dissatisfied, Somehow Dissatisfied, Neutral, Somehow Satisfied, Satisfied, Highly Satisfied).

Results

Descriptive statistics

Data analyses were performed by SPSS version 19.0. Correlation analysis and multiple regressions were used to test the hypotheses. Table 2 shows means, standard deviation, alpha reliability coefficients, and correlations for the variables in the study. All the variables have a coefficient that exceeded

the minimum .70 level recommended by Nunnally (1967). The correlations among the three dimensions of service quality, which ranged from .603 to .434, are similar in magnitude to those found in previous research.

Table 2: Means, Standard Deviation, Cronbach’s alpha values and correlations

Variable	M	SD	1	2	3	4	5
1 Physical Quality	10.83	2.055	.728				
2 Interactive Quality	10.88	2.016	.563**	.733			
3 Corporative Quality	10.12	2.43	.500**	.434**	.770		
4 Total Service Quality	3.54	1.068	.831**	.797**	.817**		
5 Satisfaction	4.51	1.07	.436**	.615**	.603**	.679**	

Note: n =100. Alpha reliability coefficients are in boldface along the diagonal. Correlations ** are significant at $p < .01$ (two-tailed).

The mean student satisfaction score was 4.51, which can be accepted as high student satisfaction. From table 2, all three dimensions of service quality; physical quality, interactive quality and corporative quality were correlated with student satisfaction ($p < .001$).

Table 3: Multiple regression analyses for Student Satisfaction

Variables	Satisfaction
Constant	.661
Physical Quality	0.005**
Interactive Quality	.436
Corporate Quality	
Total Service Quality	.000**
R-square	.517
F	34.312

** $p < 0.01$

In H1-H3, it is predicted that the three service quality dimensions have positive relationships with student satisfaction; this was supported by the correlations analysis and multiple regression model. The results of regression

analysis were represented in Table 3. The F statistics for the overall goodness of fit of model is 34.312, which is significant at $\alpha = 0.01$.

This model explains 52% of the variance in student satisfaction. This indicates that 52% of the dependent variable (satisfaction) was explained by the linear combination of the three-predictor variables. Among the three-predictor variables, interactive quality was found to contribute more significantly towards postgraduate students' satisfaction. It can be explained by the higher level of service quality of the university the higher level of satisfaction of postgraduate students.

Discussions

The research results of this study may have various theoretical and practical implications. In theoretical perspective although the service quality studies has long tradition in industrial sociology, the meaning of service quality has diversified and such conceptual confusions and inconsistencies may hinder the development and understanding of a clear operational definition of the service quality construct as well as disturb the effective empirical assessment of their organisational impacts. As a solution to the operational definition problem, this paper offers a three service quality dimensions at a higher education institution from general service quality model. After reconceptualising the service quality dimensions among postgraduate students in a private university in Kuala Lumpur, Malaysia, this study empirically tested the construct validity and showed the positive impacts on the student satisfaction of postgraduate students.

Analysing the findings that the results have demonstrated in the current research, it has been identified that interactive quality is the most important dimension for the respondents, followed by corporative quality. However it cannot be confirmed that respondents are not concerned about physical

quality of the university, it rather can be considered as supplementary dimension that supports the interactive and corporative quality. This can be discussed from a different way. Education for students is perceived as a long process of obtaining the required knowledge, hence this factor obviously necessitate a quality interaction between students and lecturers as well as staff of the university. Interaction here is considered as a support, help or valuable advice that lecturers are obliged to provide in accordance with their profession. However there can be situations when the necessary support or advice is provided by the lecturer but it is still can be considered as an insufficient one by a student due to his or her different levels of perception caused by their cultural background or any other life factors.

Corporative quality of the university is also assessed as very important for students of Malaysia's private university. It is believed that the image and reputation of the university do influence the future employability of the graduates. Moreover, it is also can be assumed that corporative quality is formed by the feedback and positive or negative word of mouth that graduates can spread among potential students. Furthermore, it can also be said that satisfaction and corporative quality are two interdependent variables. High corporative quality is used as a platform, fundament or expectations for the students by which they can assess it comparing with their own perception. Conversely, corporative quality is somehow dependent on student satisfaction as satisfied student spread a positive word-of-mouth, which demonstrates corporative quality from a better way hence the overall service quality of the university.

Practical Implications

The research result of this paper present practical implication regarding the dimensions of service quality and satisfaction of students at the higher education institutions. First, developing

an understanding of what is important to the students is essential requisite for service providers, and this study suggests that particular dimensions of service quality has capability to influence student decisions. This result is in line with the study of Sadiq Sohail, Jegatheesan and Nor Azlin (2003), which suggests that in a highly competitive environment, student have become more discriminating and demanding in their choice of university. Ensuring which dimensions of service quality is important to understand their expectations.

Given the significance of interactive quality in predicting postgraduate student satisfaction, it is important that employed front-line employees especially the academic members and administrators, to be clear with their job responsibilities. It is implied from this study that strong ability to ensure operational efficiency, information accuracy and credibility of service offerings by institution, these will resulted higher level of student satisfaction.

Strength and limitations

Our findings are limited by the use of single-source, cross-sectional data and small sample for this pilot study. We also limited our focus to three dimensions of service quality and a single dimension of student satisfaction. Our findings suggest an important advantage for organisations in using an alternative service quality model to predict and understand student satisfaction, and can be further enhanced in future research with a broader examination of undergraduate students and more items in the service quality dimensions.

Conclusion

We conclude that theorists and practitioners would benefit from an alternative service quality model to examining the relationships between service quality dimensions and student

satisfaction at the higher education institution. A more complex view of service quality dimensions, how dimensions align with another, will add value to an important area of research on the service quality predictors of student satisfaction and will be helpful to incorporate in future studies.

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