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The Attributes of Electronic Service Quality (e-SQ) among Academic Librarians

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Abstract

This paper examines the level of electronic service quality (e-SQ) attributes among academic librarians in the Malaysian public universities which have an established automated library system. Six attributes of the e-SQ were determined from the analysis of related e-SQ theories. The 162 academic librarians respondents involved in this study were from nine public universities in West Malaysia. The findings of the research indicate that all the attributes have high level of mean, of which the two highest attribute are Reliability and Security. Thus, the research shows that the academic librarians of the Malaysian public universities are aware of the importance of e-SQ in their job since the overall attributes at the high level.

Keywords: Electronic Service Quality, Academic Librarians, Malaysian Public Universities

1. Introduction

Electronic service (e-service) is becoming increasingly important in determining quality of service delivery in organizations. These organizations shifts their focus from manual to e-service method in their transaction processes (Cristobel, Flavian, & Guinaliu, 2007). Such shift implies that understanding of how employees perceive and evaluate e-SQ is essential to the organizations. The advancement of technology today has been the dominant force in improving and enhancing library services. The

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development of automated library services has a profound impact on academic librarians which involve attributes of e-SQ which includes reliability, responsiveness, access, flexibility, ease of navigation, efficiency, assurance / trust, security / privacy, price knowledge, site aesthetics and customization / personalization (Parasuraman, Zeithaml, & Malhotra, 2005). Identifying the competency level of these attributes among academic librarians would give an indication of the quality of the library automated system and thereby significant actions can be taken for necessary improvements to increase e-SQ in libraries. This situation is also not exceptional to academic librarians of public universities in Malaysia.

For the past two decades, the public university libraries in Malaysia have shown a shift from using manual to automated system in providing their services. However, there has been minimal evidence to show which particular attributes of e-SQ are dominant in these libraries. With the intensive use of information and communication technologies (ICT) in organizations including libraries, the dimensions of service quality have changed due to the changing practice of e-services. Therefore, this research determines the appropriate attributes of e-SQ based on extended theory of service quality by Parasuraman *et al.* (2005) that are suitable to be applied in highly automated workplace. There are few studies which examine the level of these attributes of e-SQ to indicate their importance in daily job of professionals (Stiakakis & Georgiadis, 2009; Tan, Xie, & Li, 2003; Yi & Gong, 2008). Hence, the main objective of this study is to measure the level of e-SQ attributes among academic librarians in Malaysian public universities.

2. Literature Review

The advent of technology today has made e-SQ increasingly important to organizations which apply intensive automated systems. Boyer *et al.* (2002) defined e-services as all interactive services that are delivered on the Internet using advanced telecommunications, information, and multimedia technologies. While Zeithaml *et al*. (2002) defines e-SQ as the comprehended of both pre and post website service perspectives which can be understood as the evaluation of the efficiency and effectiveness of online shopping, purchasing, and delivery products and serves. Cristobel *et al.* (2007) took a wider view in noting that the various studies of e-SQ could be divided into two major categories, which are: online retailing services and web site design and quality. Based on the theory of e-SQ by Parasuraman *et al.* (2005) the attributes of e-services are developed as shown in Table 1.

Table 1: Attributes of e-SQ

No.	Attributes	Description
1.	Reliability	Correct technical functioning of the site and the accurateness of service promises, billing, and product information.
2.	Responsiveness	Immediate response and the capability to get help if there is a problem or question
3.	Access	Ability to get on the site fast and to get in touch with the company when required.
4.	Flexibility	Selection of ways to pay, ship, buys, search for, and return items.
5.	Ease of navigation	Site contains functions that help customer find what they need with no difficulty, has good search functionality, and let the customer to maneuver easily and quickly back and forth throughout pages.
6.	Efficiency	Site is easy to use, structured properly, and requires a least amount of information to be input by the customer.

7.	Assurance / Trust	Assurance the customer sense in dealing with the site and is due to the reputation of the site and the products or services it sells, as well as clear and truthful information presented.
8.	Security / Privacy	Degree to which the customer believes the site is safe from invasion and private information is protected.
9.	Price Knowledge	Degree to which the customer can decide shipping price, total price and proportional prices during the shopping process.
10.	Site Aesthetics	Manifestation of the site.
11.	Customization / Personalization	How much and how easily the site can be modified to individual customers' liking, histories, and ways of shopping.

However, the researchers deduced these attributes of e-SQ into six categories based on its practicality in automated library systems namely reliability, responsiveness, ease of navigation, efficiency, assurance/trust and security/privacy.

3. Methodology

3.1 Population and Sample

The academic librarians at the west side of Malaysia's public universities were chosen for this study. The sampling technique employed is non-probability sampling based on public universities which have their library set up more than 10 years. A sampling frame was obtained from the library website of each university. Nine public universities were chosen due to its established automated library system. The universities are including; Universiti Teknologi Malaysia (UTM), Universiti Tun Hussein Onn (UTHM), Universiti Kebangsaan Malaysia (UKM), Universiti Malaya (UM), Universiti Teknikal Malaysia (UTeM), Universiti Utara Malaysia (UUM), Universiti Sains Malaysia (USM), Islamic International University of Malaysia (IIUM) and Universiti Putra Malaysia (UPM). The total of 398 self-administered questionnaires were distributed online and 162 questionnaires were answered (a response rate of 40.7 percent).

3.2 Instrument

This study uses the data collected through a series of questionnaire answered by the academic librarians. The questionnaire was divided into two sections, which the first section contained the questions concerning the demographic information like gender, age, education level and years of working with the current organizations. Meanwhile, the second section contained a set of instrument used to measure Electronic Service Quality (e-SQ) which was adapted from a multiple-items scale (E-S-QUAL) developed by Parasuraman *et al*. (2005). This scale comprised of 30 items operationalized from the six attributes. The respondents were asked to indicate the extent of their agreement to each statement based on a seven-point numerical scale ranging from 1 ("Strongly Disagree") to 7 ("Strongly Agree"). However, to interpret the level of e-SQ attributes experienced, this study used a 5-level scale based on the mean score was developed as shown in table 2.

Table 2: A 5-level Mean Score Scale

Mean	Level
1.00 – 2.19	Very Low
2.20 – 3.39	Low
3.40 – 4.59	Moderate
4.60 – 5.79	High
5.80 – 7.00	Very High

3.3 Reliability

The overall Alpha Cronbach's value for the e-SQ attributes were 0.887. This indicates that the values were greater than the minimum recommended value of 0.70 (Nunnally, 1978: Hair et al., 1988). Table 3 illustrates the Alpha Cronbach's values of the six e-SQ attributes.

Table 3: Reliability Statistics

Electronic Service Quality (Independent Variables)	Cronbach's Alpha
Reliability	0.848
Responsiveness	0.891
Ease of navigation	0.811
Efficiency	0.908
trust	0.865
Security	0.806
Overall	0.887

3.4 Data Analysis

This study employed a cross sectional survey through online method. The descriptive analysis by using Software Package of Social Sciences 18 (SPSS v18) was performed. The completeness, eligibility and consistency of the data were checked before the data analysis was carried out. The six attributes proposed for assessing the e-SQ level among academic librarians are reliability, responsiveness, ease of navigation, efficiency, assurance/trust and security/privacy.

4. Finding and Discussion

The study found that the librarians' perception on reliability, responsiveness, ease of navigation, efficiency, assurance/trust and security/privacy of their library automated system (LAS) are at the high level. This can be seen on the table 4 below which illustrates the overall level of the six attributes of e-SQ of the LAS, which was high (Overall Mean = 5.26). The mean score of all six attributes falls within the range 5.13-5.40. From that, generally the finding of this study shows that the academic librarians of Malaysian public universities were aware of the importance of e-SQ on their LAS. In terms of each attributes of the e-SQ, the perception of the respondents on the reliability attribute shows that the

academic librarians perceive LAS as always available and, performing the promised services accurately and consistently (refer table 4; the highest response rate were at the 'very high' level = the frequency of 78 respondents).

The responsiveness attribute result had shows that the LAS had found to be highly responsive as it provides user prompt services where it resolves user problems and make decision properly (refer table 4; the highest response rate were at the 'high' level = the frequency of 85 respondents). LAS is also found to be easy and quick in navigations which reflect effective usability of the websites (refer table 4; the highest response rate for ease of navigation were at the 'high' and 'very high' level = the frequency of 66 respondents on both level). The result supported Fassnacht and Koese (2006) findings which stated that the ease of navigation attribute has been highly rated in customer's e-SQ measurement. For the efficiency attribute, the LAS is perceived to be easily and speedily accessible where information is sufficient, easy to understand, and properly structured (refer table 4; the highest response rate were at the 'very high' level = the frequency of 63 respondents).

In terms of assurance/trust attribute, the LAS are found to have good service reputation, and clear, truthful and appropriate information. Trust toward the organizations had been regarded as a key factor of e-commerce growth, online success and competitiveness (Gounaris, et al., 2005). Lastly, the respondents perceived privacy/security attribute as important (refer table 4; the highest response rate were at the 'very high' level with the total frequency of 67 respondents). It was also perceived that the LAS are protecting users' confidential information and secured from intrusion (Parasuraman et al. 1988).

Table 4: e-SQ Level

Dimensions	Mean	Standard Deviation	e-SQ Level (n=162)									
			Very Low		Low		Moderate		High		Very High	
			f	%	*f*	%	*f*	%	*f*	%	*f*	%
Reliability	5.40	1.006	1	0	7	4	21	13	56	35	78	48
Responsiveness	5.13	0.951	0	0	8	5	27	17	85	52	42	26
Ease of navigation	5.28	1.003	0	0	7	4	23	14	66	41	66	41
Efficiency	5.20	1.000	2	1	7	4	30	19	60	37	63	39
Assurance/trust	5.23	0.968	0	0	6	4	34	21	63	39	59	36
Security/privacy	5.34	1.216	0	0	6	4	28	17	61	38	67	41
Overall	5.26	0.907										

f = frequency of the respondents' answer

% = percentage of the respondents' answer

5. Conclusions

The high level of the e-SQ attributes of LAS (websites) in the west Malaysian public universities indicates that the system is competent in providing excellent services to their customers. The e-SQ of LAS is reliable for providing required information, responsive in attending customers' problems, easy and quick in navigation, efficient in usage, trustworthy in providing information, and secured and protected transactions and confidential information of users (Parasuraman et. al 2005; Santos 2003; Janda et.al

2002). This finding supports the theory of Parasuraman *et al.* (2005) which declares that high quality attributes of e-SQ will ensure excellent quality services for customers.

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