Quality Impact of Online Database in Selected Universities in Malaysia

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Abstract
Growing interests is going on among researchers to inquire the effectiveness of subscribed library online databases. However, a few studies on the impact of library online databases among scholars in Malaysia. The major objective of this research is to evaluate the effectiveness of library online databases. This study used a survey questionnaire to collect and the data was analyzed using SPSS (latest version). The results obtained showed that the subscription of library online database are still relevant in the academic environment.

Keywords: library online database, academic libraries, IS Success model and information quality, system quality and service quality.

1. Introduction

Subscription library databases have always become a major concern among libraries in Malaysia. In fact it becomes an increasing important component for acquisition department in libraries. They increased the academic members research productivity, output and also increased university status (Egberongbe, 2011; Noh, 2012; Razilan, Amzari, & Safawi, 2013; Razilan & Diljit, 2012; Sharma, 2009). Thus, the quality of library online databases is essential to the users. Here we can see the importance of quality in our life.

Islam certainly emphasized quality in the work. The word itqan means goodness and stands for the top level of quality work and invites man to rise the ladder of perfection in several Quranic verses. The concept of quality is, therefore, not a new thing in Islam. Accordingly, all verses that speak of ihsan are included in the perspective of "quality management".

In this research three aspects of quality which are information, system and service quality of library online databases, are essential to a successful research productivity of academic members in Malaysia.

Figure 1 shows that information system quality and service quality can influence user satisfaction of information systems. If the information system and service quality have been properly fulfilled, it will give satisfaction for user of library online database.
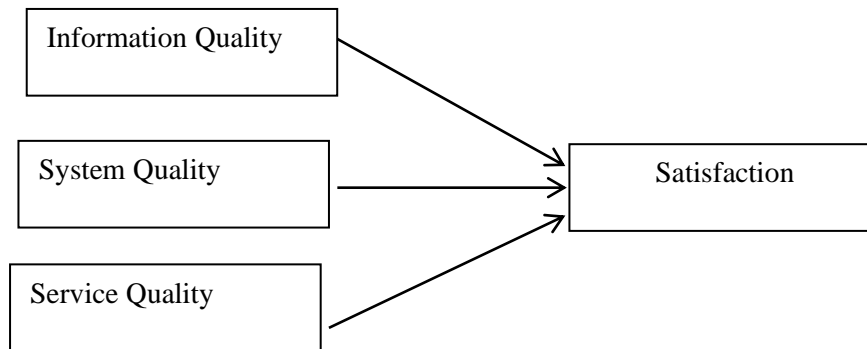
Figure 1. Concept model

Academic resources for libraries such as e-Resources have become essential due to the far-reaching development in publication environments. Increasing figures of academic journals and books are made reachable via online platforms either by publishers or online aggregators. As estimated, many academic libraries in Malaysia are migrating from developing and maintaining conventional collections to managing electronic resources, to provide better access to academic contents among library users. Unquestionably, excellent features of online platforms have successfully contributed towards resource optimization in higher education institutions. Moreover, these platforms are fully equipped through automatic recordings of logins, searches and full-text downloads to allow qualitative valuation of electronic databases. Other plugins and applications were installed by libraries to manage remote access to e-resources that successfully lead to realization of digital library component in academic institutions.

While access to scholarly contents has been improved tremendously, libraries are facing many uncertainties in managing electronic resources. These include ownership issues, access control, access rights, licensing policies, copyright restrictions and most importantly, pricing models and schemes. Major publishers are imposing on Big deal packages that provide access to greater number of journal titles directly from publishers' platforms. Apparently, Big deal packages have become increasingly serious problems due to its inflexibility to cater libraries in numerous scales and focuses. As library budgets have fallen relatively, libraries are facing huge challenges to maintain subscriptions to increasing subscription cost of Big deal packages. It becomes challenging in dealing with this issue. This paper aims to explore issues and challenges and possible solutions for libraries during challenging financial times Malaysian education expenditure is more than other ASEAN countries. For 2018, a sum of RM61.6 billion is provided for education sector. RM 13.6 billion of total Malaysian expenditure has been allocated to Ministry of Higher Education for 2018 (Ministry of Finance, 2017), which had seen an increased allocation budget compared to 2017. The allocation budget will have encouraged more institution investment on the research support such as acquiring library online databases. Most of online databases' pricing have increased yearly which become a burden to the universities (Samaravickrama & Samaradiwakara, 2014; Tripathi & Kumar, 2014; Kaur & Mahajan, 2012). Universities are encouraged to enhance their own budget, maximise usage and justify the impact. Thus, the role of academic members and libraries in achieving this goal cannot be denied. Academic members have to provide the standard and high quality research to achieve this goal. Libraries also have to collaborate with the academic members in providing the recent and relevant resources to be a research university. It is essential for the academic libraries to survey on the influencing attributes and impact of the online databases which are subscribed by the libraries. In a preliminary study, the highly used online database in Universiti Teknologi Malaysia (UTM), Universiti Putra Malaysia (UPM) and Universiti Teknologi Mara (UiTM) is Science Direct.

This study investigates the impact of library online databases according to IS Success Model about the impact of quality in determining the impact of library online databases among academic members.

2. Research Method
2.1 The instrument
In this section, we will explain in details the instrument used in this research. The instrument included 7-point Likert-type scales for measuring these variables. Statistical analyses included descriptive and inferential statistics, and focused on the use of correlation. This research employs quantitative research methods to analyze the library online database attributes and impact of library online database in research universities.

2.2 The sample
The total target population consisted of approximately 400 academic members of three universities. The participants of this research were academic members in three public universities in Malaysia which are Universiti Malaya (UM), Universiti Teknologi Mara (UiTM) and International Islamic University (IIUM). However, it is not possible to take all the population. The sample size will be based on Krejcie and Morgan (1970)'s table. The sample is from Engineering and Science Faculty. These faculties are chosen as it offers strategic field that is mentioned Malaysian Budget 2018.

3. Variables Used: Information Quality
The research findings support the significance and influence of information quality on respective academic members' perception of satisfaction of library online databases; recording relatively higher path coefficients of (0.816) for information quality. The coefficients indicate that satisfaction significantly explained academic members' perceptions of library online databases quality. In the aspect of information quality assessment, respondents had indicated that the library online databases met their expectations. All the information quality attributes namely completeness, details, accuracy, timeliness, reliability and appropriateness, usefulness, relevancy, consistency and sufficiency were rated highly by the respondents.

This is supported by other studies which regarded information quality as a very important aspect in accessing information about Islam. Thus, it is important to get the correct information from the right sources. The study on information quality in the internet on Hadith by Karim & Hazmi, (2005) for example, indicated that almost all participants have referred to the Internet to get information about Hadith. The users need to be made aware of the importance of getting the correct information about Hadith and the importance of evaluating the quality of any Hadith before consuming the information.

Trustworthy information is also important in the healthcare aspect, such as the study by Kim, (2010) collected from 219 Chinese university students who are currently using, or have used, the health information services available on the internet. Internet experience affects process quality, but it has no direct relation to outcome quality (Kim, 2010). A study by Fosso Wamba, Akter, Trinchera, & De Bourmont, (2018) suggested that information quality in BDA reflects four significant dimensions: completeness, currency, format and accuracy. The overall information quality has significant positive impact on firm performance which is mediated by business value (e.g. transactional, strategic and transformational) and user satisfaction.

Table 1: Mean and Standard deviation of information Quality

Item Statement	Mean	Std. deviation
The library online databases provide complete information.	5.980	0.852
The library online databases provide detailed information.	6.093	0.948
The library online databases provide accurate information.	5.954	0.997
The library online databases provide timely information.	6.093	0.897
The library online databases provide reliable information.	6.172	0.878
The library online databases provide information in appropriate format	6.119	0.816
The library online databases provide useful information.	6.212	0.771
The library online databases provide relevant information.	6.205	0.733
The library online databases provide consistent information.	6.119	0.632
The library online databases provide sufficient information.	5.868	0.670
Overall Mean and standard deviation of information Quality	6.082	0.657

Table 1 presents the mean and standard deviation for each variable of information quality. Respondent were asked to show their view in the aspect of library online database quality, measured on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The highest score of information quality scored 6.212 out of 7.0 points. That indicated the perspectives' of respondents on information quality library online database. This is supported by the study of library portal by Masrek, Jamaludin, & Mukhtar,(2010). The study had indicated that the library portal met their expectations. All the information quality attributes, namely completeness, comprehensiveness, accuracy, timeliness, reliability and appropriateness of format were rated highly by users.

The overall mean score for information quality in the current study was 6.082 out of 7.0 points with standard deviations of 0.657 which indicates that response of the majority of the respondents regarding the information quality of library online databases is high.

4. Variables Used: System Quality
In terms of system quality assessment, respondents had indicated that the library online databases met their expectations. All the system quality attributes namely appropriate style of design, easy navigation, fast response, fast transaction, can be used anytime, easy use, up and running and user friendly were rated highly by the users.

The research of DeLone & McLean (2003), showed that the system quality has a positive relationship to its user satisfaction. It indicates that the failure of an information system may be due to the inability of that system to meet the user expectations. Good quality of library online databases will have a positive relationship to the user satisfaction. Not only the user expects the databases to give fast response, fast transaction but also its user friendly quality easy navigation are very important to the users. A good system quality need to show the size of the information systems that is used. A good system quality should provide pleasure for the user as it can aid the user in doing the job efficiently.

Table 2: Mean and Standard deviation of System Quality

Item Statement	Mean	Std. deviation
The library online databases have an appropriate style of design.	5.795	.9954
The library online databases have an easy navigation to information.	5.834	1.0981
The library online databases have fast response	5.934	1.011
The library online databases have fast transaction processing	5.709	1.049
The library online databases can be used anytime.	6.139	0.895
The library online databases are easy to use.	5.987	1.172
The library online databases are always up-and running as necessary.	5.821	0.967
The library online databases are user friendly	5.781	1.148
Overall Mean of System Quality	5.875	0.884

Table 2 presents the mean and standard deviation for each variable of system quality. The respondents agreed that library online database can be used anytime. The result shows the overall mean score of 5.875 with a standard deviation of 0.884, indicating that the majority of academic staffs agreed that the library online databases offer good system quality.

5. Variables Used: Service Quality

In terms of service quality assessment, respondents had indicated that the library online databases met their expectations. All the system quality attributes namely appropriate, meet the needs of the user, give best interest, immediate services, prompt response, personalized services, empathy, error free record and trustworthy were rated highly by the users.

Among the three quality-related constructs, service quality had the strongest total effect on perceived net benefits and intention to reuse (Lwoga, 2013). Compared with system quality, information quality had the largest effect on user satisfaction. It is thus important for librarians to consider all these factors for effective adoption of library 4.0 projects in research and academic institutions.

Table 3: Mean and Standard deviation of Service Quality

Item Statement	Mean	Std. deviation
The library online databases meet the needs of the users	6.093	0.859
The library online databases gives the best interests to the users	6.086	0.864
The library online databases provides immediate services to users	5.980	0.744
The library online databases provides and prompt responses to users	5.636	0.779
The library online databases provide personalized services to users	5.132	1.13
The library online databases understand to the user's specific needs (empathy)	5.093	1.098
The library online databases insists on error –free records	4.642	0.851
The library online databases tools are trustworthy (assurance)	5.576	1.174
Overall Mean of Service Quality	5.53	0.649

Table 3 presents the mean and standard deviation for each variable of service quality. The respondents agreed that library online database meet the needs of the users. The result shows an overall mean score of 5.53 with a standard deviation of 0.649, indicating that the majority of academic staffs agreed that the service quality of library online databases offer good service quality.

Table 4: Mean and Standard deviation of Satisfaction

Item Statement	Mean	Std. deviation
I am very satisfied with the library online databases performance.	5.530	0.8231
I am very pleased with the experience of using the library online databases.	5.801	0.9094
I feel contented with the services provided by the library online databases.	5.768	0.8441
Overall, my interaction with the library online databases is very satisfying.	5.702	0.8066
Overall Mean of Satisfaction	5.70	0.752

Table 4 indicates the mean and standard deviation of academic staffs' opinions on satisfaction. It suggests that the respondents agree that the library online databases can give the best experience for the users (mean: 5.801), On average, they all somewhat agree with the library online databases performance (mean: 5.70).

6. Correlation

Table 5: Correlation between variables

		MeanInfoQ	MeanSystemQ	MeanServiceQ	MeanSatis
MeanInfoQ	Pearson Correlation	1	.897**	.761**	.731**
	Sig. (2-tailed)		.000	.000	.000
	N	151	151	151	151
MeanSystemQ	Pearson Correlation	.897**	1	.821**	.760**
	Sig. (2-tailed)	.000		.000	.000
	N	151	151	151	151
MeanServiceQ	Pearson Correlation	.761**	.821**	1	.816**
	Sig. (2-tailed)	.000	.000		.000
	N	151	151	151	151
MeanSatis	Pearson Correlation	.731**	.760**	.816**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	151	151	151	151

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5 indicates the correlation between variables, information quality, system quality and service quality and satisfaction. In line with our anticipation, all three variables are correlated with satisfaction. The information quality is found to have a significant positive relationship with satisfaction. The system and the service quality is found also to have significant positive relationship with satisfaction.

This result is also similar with the study by Nordin, Kassim, & Baharuddin (2012) which indicates that information, system and service quality has significant positive relationship with satisfaction.

7.Conclusion

Furthermore, the results confirmed that information quality, system quality, service quality aspects of library online databases positively and significantly correlate with satisfaction of library online database. The results are in accordance with the findings reported in the analysis part. This research study concludes by emphasizing the need of future researchers to put more effort in addressing these gaps in the literature in order to increase the quality of library online database. For future research, it could be further discovered and used in different settings. Furthermore, future research can study the factors that can enhance the quality of library online databases that will lead to satisfaction of using the databases.

Acknowledgements

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