Journal of Engineering and Applied Sciences 14 (17): 6474-6477, 2019
ISSN: 1816-949X

Libraries e-Service Quality by Education Level: Evidence and Issues

[1]Malek Alharafsheh, [1]Haitham M. Alali, [2]MI Nofal and [3]Zaid Alabaddi
[1]Amman Arab University, Amman, Jordan
[2]UKM University, Bangi, Malaysia
[3]Al-Hussein Bin Talal University, Ma'an, Jordan

Abstract: How students perceive the standard of e-Services in a higher educational setting having libraries based on, the internet is the major topic of this study. Data collection was through a survey using a structured questionnaire and the study population consists of higher education students in the United States. Two things led to the use of random sampling in this study selection of a representative sample and a large number of persons making up the study population. The 109 of the students in the sample population were involved in this study. One-way ANOVA was used to test the research hypothesis. The dependent variable was e-Service quality while education levels served as the independent variable. Delivery speed, functions and content of the website and ease of use were used to measure e-Service quality. It was observed that there exists no significance between education level and e-Service quality perceptions of the higher education institution students in the US. This is a confirmation of the results obtained in previous studies on the education level of the participants.

Key words: e-Services, higher education, education level, internet-based libraries, quality, speed

INTRODUCTION

As observed in the studies by Fontanin (2010), Jain and Mutula, Beagle (2004), the emergence of new technologies has led to the advancement of library services in major institutions. According to the scholars, emerging technologies helped Higher Education Institutions (HEI) to introduce e-Library services with the support of global internet growth (Haneefa and Aswani, 2 017). Hence, advancement in e-Services in the majority of the educational institutions for the facilitation of easy access to materials required for learning is the key feature. Based on the discussion of Khasseh *et al.* (2009), skill and learning development in HEI brings about key challenges in situations where traditional means are utilized in libraries across institutions (Patel and Joshi, 2016). Changing of academic system now a days has brought an immense challenge to traditional means despite the likely effectiveness of traditional methods. As opined by Khasseh *et al.* (2009) introducing new technologies and applying them in the academic system constitute the major challenges for institutions still making use of traditional means for the provision of library services. This has resulted in a shift to distance learning by many institutions to serve as a means of effective learning for students. This is for the enhancement of the provision of enough resources for students and meeting their career-long professional needs (Thomas, 2007).

Both instructors and students are opportune to learn from where is comfortable for them even outside the walls of the institution with the introduction of new technologies. Technology is crucial to distance learning. Integrating technology into training serves as a good beginning to students = professional growth (Thomas, 2007). Distance learning is the new means of learning (Beagle, 2004). The study carried out by Fontanin (2010) revealed the facilitation of distance learning with the approach, offering huge potential to students for learning. Rowley (2006) studied the development of e-Service in the majority of the higher institutions as measures utilized to make them fit into the global market competition. Hence, a majority of situations has led to the development of both e-Learning and e-Content policy have been significant for developing academic policies just as it can have an influence on the enhancement of learning through easy access to reading resources anywhere (Patel and Joshi, 2016).

e-Library service in HEI is the focus of this study. The study is concerned with how students perceive the excellence of e-Library services provided in their universities. The factors utilized for the evaluation of

Corresponding Author: Malek Alharafsheh, Amman Arab University, Amman, Jordan

e-Service quality are ease of use, delivery speed, website contents and functionality (Wooden, 2006). The identification of these factors as variables by the researchers in performing the evaluation is because they all influence users satisfaction. In addition, there was a need for the researchers to undertake primary research to obtain important information on the recognized topic. Therefore, the area of concern for the research study is what is the perception shared by the students engaging in higher education who are still taking assistance of internet-based libraries regarding the quality of the e-Service at these libraries and is there any difference in this perception by education level.

The quality of e-Service in education: There is a need to consider the history of institutional technology development prior to having a look into e-Service as the newest technology in higher academic institutions. A concise view of the parts of learning practice in a higher academic institution that has experienced improvement through e-Service is provided from the consideration. Majority of those who educate attribute technology advancement to be contented as crucial to the development of learning revolution. Not with standing, it is just supplementary to classroom learning to others. It is believed by the supporters of advancement in technology that technology produces huge learning changes (Morales and Roig, 2002). Downing *et al.* (2011) discussed the comprehension of the contributions of technology to learning and the way technology affected learning changes within many of the institutions. The analysis of the study by Downing *et al.* (2011) shows that technology introduced the use of devices like Leap Pads, laptops, educational television and Smart Boards in teaching process. Convenience and easiness of learning are the reasons why we have advancement in technology usage in higher academic institutions (Driver, 2002).

Outstanding facilitation of learning has been due to the utilization of new and advanced technological tools for over 20 years (Downing *et al*., 2011). ChemQuest was a project in a high-school sponsored by the National Science Foundation in the United States, Washington, D.C. It was developed recently as a modern type of high technology and advanced learning environment (Levine, 2002). Such development has brought about comparisons on what some people see as two separate thrusts in learning now a days (Barak *et al*., 2006). According to Schrum *et al.* (2002) using technology as a supplementary tool for traditional learning and teaching processes methods and using technology as the center of interactive learning and teaching methodologies are the two definitions people give to the two thrusts. The features with which people compare the thrusts are course goals, learning styles, course content, tools and assessment (Asogwa *et al*., 2015). Generally, the concise point is the contribution of technology to learning advancement in higher academic institutions (Patel and Joshi, 2016).

On the other hand, we have had the continuous investment in changing technology for the dissemination of education in more than 25 years ago. What is questionable is if there is evidence showing that the use of these technologies brings about better student learning or using the same brings significant learning dissemination routines. A subject of controversy is the association between educational technology and student achievement that is calling for intense study (Hall and Elliot, 2003). We must make provisions for answers to the frequent questions asked about the roles of technology in education. Access to technology in many institutions was not fully available 10 years ago. According to Downing *et al.* (2011) many countries worldwide gave attention to the implementation of quality education for students. The significant investments in the decade brought vast improvement to the situation with many schools having the solution to the utilization of technology in education. As obtained in the secretary's fourth annual report that talks about teacher quality, approximately all the schools with computers did the installation of internet access and 99% of the computers in schools have internet connectivity as compared with 35% in 1994 (Anonymous, 2005). Many public schools have internet access specifically in the developed (Anonymous, 2004). We have the introduction of many forms of technology for the enhancement of learning in these institutions in recent times. Some of the technologies include digital moviemaking, video content, laptop computing including other handheld technologies (Asogwa *et al*., 2015). Not with standing, despite having numerous benefits from the utilization of e-Library services (Haneefa and Aswani, 2017), we still have other challenges coming along. There is a need to consider these challenges for the development of a wider comprehension of the way they influence how students perceive e-Services quality in higher academic libraries.

MATERIALS AND METHODS

Students of higher academic institutions in the U.S. served as the major population for this study. The reason for the choice is that the students are part of the higher academic institutions known to have carried out the implementation of e-Library services. The observation by the researchers is that the users of e-Library services

know the obtainable quality of such e-Services in their universities (Alali, 2017). Hence, the users of e-Library services were involved and how any of them perceived the quality was taken as representative of the entire population.

This study involved the participation of 109 students in higher academic institutions and there were three academic levels, namely: 48 PhD students, 53 master students and 8 bachelors degree students and doctorate degree students. The study involved the administration of survey questionnaires using 'Sendit Media'. There were ten questions in the survey with the first two questions for the measurement of how easy it is to use, the next 6 questions for the measurement of website content and functionality and the last 2 questions for the measurement of delivery speed. Following is the use of 5-point Likert scale for the interpretation of the participants responses to the survey questions. One-way ANOVA statistical test was used to test the research hypothesis. Every electronic services quality factor served as a dependent variable and was examined against "education levels" (independent variable).

RESULTS AND DISCUSSION

The proposed hypothesis is that there is a difference in how students perceive electronic services quality in internet-based libraries with their education level. The independent variable, education level is a multilevel variable. Eight bachelors degree students, fifty three master degree students and forty eight doctorate degree students formed the tested sample. Hypothesis was tested out by carried out against the three variables of electronic services quality.

Education level and ease of use: The study involved the use of one-way ANOVA between groups for the independent variable "education" and the dependent variable "ease of use". The study was able to meet the threshold of ANOVA homogeneity of variances for the variable. The resulting p values of 0.45, 0.83 and 0.8 were obtained on checking in-between groups and were beyond the 0.05 significance level stated for the test. There was the retaining of the null hypothesis for ease of use.

Education level and website content and functionality: Significant values of 0.22, 0.68, 0.25, 0.14, 0.65 and 0.92 were obtained for Levenes test of homogeneity of variances for the six questions associated with the dimension of website content and functionality. The use of a one way ANOVA between groups for the independent variable "education" and the dependent variable "website content and functionality" is also investigated.

The following are the test results. There was no significant difference between the groups for the first question, retaining the null hypothesis and the values for n, M, SD, F (2,108), p and c^2 were 109, 3.59, 1.04, 0.396, 0.68 and 0.007. There was no significant difference between the groups, retaining the null hypothesis. There was no significant difference between the groups for the second question, retaining the null hypothesis and the values for n, M, SD, F (2,108) p and c^2 were 109, 3.51, 0.95, 1.03, 0.36 and 0.02. There was no significant difference between the groups, retaining the null hypothesis. There was no major variation amongst the groups for the third question, retaining the null hypothesis and the values for n, M, SD, F (2,108) p and c^2 were 109, 3.62, 0.92, 0.37, 0.69 and 0.007. There was no major variation amongst the groups, retaining the null hypothesis. There was no significant difference between the groups for the fourth question, retaining the null hypothesis and the values for n, M, SD, F (2,108) p and c^2 were 109, 3.64, 1.0, 0.96, 0.39 and 0.02. There was no major variation amongst the groups, retaining the null hypothesis. For the fifth question no significant difference exists between the groups and the values for n, M, SD, F (2,108), p and c^2 were 109, 3.52, 1.04, 0.63, 0.54, and 0.01. No significant difference was found between groups. For the sixth question, the values for n, M, SD, F (2,108) p and c^2 were 109, 3.54, 93, 0.04, 0.96 and 0.001. No major variation amongst the groups, the null hypothesis was retained.

Education level and speed of delivery: The study involved the conduction of one way ANOVA between groups on the independent variable "education level" and the dependent variable "speed of delivery". There was significance with Levenes test of homogeneity of variances. The p values obtained were 0.25 and 0.57. For the ANOVA test, the values of n, M, SD, F (2,108), p and c^2 for the first question are 109, 3.49, 0.99, 0.67, 0.51 and 0.01. There was no significant difference between the groups, retaining the null hypothesis. The values of n, M, SD, F (2,108), p and c^2 for the second question are 109, 3.71, 0.93, 1.81, 0.17 and 0.03. There was no significant difference between the groups, retaining the null hypothesis. According to the main hypothesis, the education level of students will determine the influence of e-Service quality perception. The hypothesis unconfirmed as there was no significant impact for "education level" on "e-Service quality" perception in the current research.

CONCLUSION

The examination of the statistical significance of education level with e-Service in institutions of higher education in students view in regards to the standard of the quality of the provided e-Services at these institutions was the major aim of this current study. It was assumed for the hypothesis that the education level of the participants is significant with e-Service and has an influence on the way students in higher academic institutions perceive the quality. Not with standing, the study and analysis in this research show that there is no significance for the level of education to determine or predict how students in higher academic institutions perceive the quality of e-Service with this taken as one of the crucial results of this study.

REFERENCES

Alali, H., 2017. Virtual communities of practice success in healthcare sector: A comparative review. Proceedings of the AHFE 2017 International Conference on Human Factors and Ergonomics in Healthcare and Medical Devices, July 17-21, 2017, The Westin Bonaventure Hotel & Suites, Los Angeles, California, USA., ISBN:978-3-319-41651-9, pp: 141-153.

Anonymous, 2004. Editorial note. National Center for Education Statistics, Washington, D.C., USA. https://nces.ed.gov/pubs2004/2004608_1.pdf

Anonymous, 2005. 7IMITURUIs FRXrth annual report on teacher quality. United States Department of Education, Washington, D.C., USA.

Asogwa, B.E., C.I. Ugwu and F.C. Ugwuanyi, 2015. Evaluation of electronic service infrastructures and quality of e-Services in Nigerian academic libraries. Electron. Lib., 33: 1133-1149.

Barak, M., A. Lipson and S. Lerman, 2006. Wireless laptops as means for promoting active learning in large lecture halls. J. Res. Technol. Educ., 38: 245-263.

Beagle, D., 2004. Learning beyond the classroom: Envisioning the information commons future: Conference Report. Lib. Hi Tech News, 21: 4-6.

Downing, K., F. Ning and K. Shin, 2011. Impact of problem-based learning on student experience and metacognitive development. Multicultural Educ. Technol. J., 5: 55-69.

Driver, M., 2002. Exploring student perceptions of group interaction and class satisfaction in the web-enhanced classroom. Internet Higher Educ., 5: 35-45.

Fontanin, M., 2010. e-Learning contribution to the building of a multi-generational workplace learning community in an academic library: Observations drawn from practice. Lib. Hi. Tech News, 27: 15-19.

Hall, M. and K.M. Elliott, 2003. Diffusion of technology into the teaching process: Strategies to encourage faculty members to embrace the laptop environment. J. Educ. Bus., 78: 301-307.

Haneefa, K.M. and B.G. Aswani, 2017. Quality of e-Services of university libraries in Kerala. Proceedings of the 11th International Conference on CALIBER-2017, August, 2-4, 2017, Anna University, Chennai, Tamil Nadu, pp: 494-509.

Khasseh, A., H.S. Moghaddam and A. Jowkar, 2009. Distance education and the role of library services in Iran: A case study of Shiraz University distance learners. Library Hi Tech News, 26: 11-14.

Levine, L.E., 2002. Using technology to enhance the classroom environment. T.H.E. J., 29: 16-18.

Morales, L. and G. Roig, 2002. Connecting a technology faculty development program with student learning. Campus Wide Inf. Syst., 19: 67-72.

Patel, J. and J.S. Joshi, 2016. e-Learning and e-Services in higher education with special reference to library support services. Proceedings of the 10th International Convention PLANNER-2016, NEHU, Shillong, Meghalaya, November 9-11, 2016, pp: 24-30.

Rowley, J., 2006. An analysis of the e-service literature: Towards a research agenda. Internet Res., 16: 339-359.

Schrum, L., R. Skeele and M. Grant, 2002. One college of educations effort to infuse technology: A systemic approach to revisioning teaching and learning. J. Res. Comput. Educ., 35: 256-271.

Thomas, K., 2007. Methods to enhance student learning: A student appraisal of the 2007 Annual Learning Technologies Showcase. Lib. Hi Tech News, 24: 4-6.

Wooden, R.A., 2006. The future of public libraries in an internet age. National Civic Rev., 95: 3-7.