Investigating the linkage between service quality and satisfaction in context of student management system: An evidence from Malaysia

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Abstract. With the rapid growth of information system technology, even more individual access, create, and exchange information online with others. Even though IT technology has been used extensively but there are still individuals who do not fully use it. This research attempts to explore the role of service quality on e-campus usage satisfaction. Data were collected from 500 undergraduate and postgraduate students from private university in Kuantan, Malaysia using a validated set of questionnaire. A series of simple linear regression has been performed to answer the research question. In this study, service quality is shown to have a direct effect on e-campus usage satisfaction. Managerial implications of this finding were then further discussed.

1. Introduction
The rapid development of information technology in higher education has led tertiary institutions to move from the conventional teaching system to the online learning system. The cost of providing information technology infrastructure costs a great deal, and if it is not fully utilized, then it will be considered waste. IT scholars should play a role in resolving concerns around technology rejection. There are several variables, based on the literature review, which can explain how consumers are satisfied with the system used The aim of our research is to study the influence of service quality on the user satisfaction to use e-campus. The remainder of this article is organized as follows: the literature related to service quality and satisfaction are introduced. Next, the research conceptual framework and relevant hypotheses are presented, followed by a description of the study design and research methodology. After reviewing the results of the study, the paper discusses the implication for practice. Finally, the limitations of this research and recommendations for future studies are discussed.
2. Literature review

2.1. Service quality
According to [1] the service quality always attracts priority-concerns in any field. The fundamental difference is intangibility. Services cannot be seen, felt, tasted or touched in the same manner in which goods can be sensed [2].

2.2. Previous study of Service quality on satisfaction
A study carried out by [3] found that service quality has positive relationship with satisfaction to use e-learning. The linkage can be also validated in the context of hospital loyalty through the study by [4]. Another study by [5] have shown that service quality variables are significant factors influencing customer satisfaction levels. Another study by [6] found that the relationship between internet banking service quality, e-customer satisfaction and e-customer loyalty are significant. Study by [7] reveals that perceived e-service quality has a strong influence on customer satisfaction and use of e-banking. While study by [8] also found that service quality as a significant predictor of consumer satisfaction. Same result has been found in several other study such as mobile instant messaging [9], Self Service Technology for Retail Banking Services [10], higher education quality [11], online apparel purchase [12], student loyalty in higher education [13], service quality and satisfaction for a targeted housing customer [14], life-insurance setting [15] customer satisfaction in Malaysia airlines [16] and e-banking [17].

![Research model](image)

**Figure 1.** Research model

3. Methodology
A cross-sectional survey was conducted in one Malaysian private higher learning institution during February to March 2020. Convenience sampling was used as there is no sampling frame can be prepared. A 30-item questionnaire was developed for this study, and in line with existing literature in the IS field, a multi-item Likert scale was applied. The variables were measured using the 5-point Likert Scale, with 5 being ‘Strongly Agree’ and 1 being ‘Strongly Disagree’. The original instrument was in English. We translate it into Malay to ensure that respondents fully understand each item for each construct. The research sample comprises 315 usable respondents.

4. Data analysis
The data were analysed using simple linear regression to test the hypothesis. The findings show that service quality variables have a significant impact on user satisfaction ($\beta = 0.60, p < 0.001$), thereby supporting H1. The significant relationship can be able to produce the explanatory power of 0.36% for explaining the dependent variable which is satisfaction.

| Hypothesis | Beta coefficient | t-value | p-value | remark | Variance explained |
|------------|------------------|---------|---------|--------|------------------|
| Service quality – satisfaction | .597*** | 13.182 | 0.001 | supported | 0.36 |

p<0.001

Table 1. Hypothesis testing
5. Discussion
The empirical results support the hypothesis in this study. The current study indicates that service quality has significant positive influences on satisfaction, which supported [18] and as suggested by[19] that responding to service requests in an appropriate and timely manner may allow users to find what they want more efficiently, which will also influence users’ perceptions when using any particular systems. This finding signals to the service provider that consumers among students of higher education are very important in terms of service quality. Service providers need to take proactive steps by providing services that will satisfy consumers among university students. For examples, when there is system breakdown, there must be a rapid respond from the technician and in a good and polite manner.

6. Conclusion
This study has several limitations related to sampling technique and model development. Firstly, convenience was used in this study and it is well known for its limitation of representativeness. Convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility. Future research should address this issue by adopting probability sampling technique. Secondly, there are only one predictor to explain one dependent variable in this study. Future research should address this issue by extending the research model through incorporating another important determinant of satisfaction: such information system quality dimension.

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References
[1] H.-M. Chuang, Y.-S. Chen, C.-Y. Lin, and P.-C. Yu, “Featuring the e-service quality of online website from a varied perspective,” Human-centric Comput. Inf. Sci., vol. 6, no. 1, p. 6, Dec. 2016.
[2] Ş. Azize, Z. Cemal, and K. ı Hakan, “The effects of brand experience and service quality on repurchase intention: The role of brand relationship quality,” African J. Bus. Manag., vol. 6, no. 45, pp. 11190–11201, Nov. 2012.
[3] S. Almahamid and F. Abu Rub, “Factors that determine continuance intention to use e-learning system: an empirical investigation,” Int. Conf. Telecommun. Technol. Appl. Proc. CSIT, 2011.
[4] T. Lestariningshih, E. Hadiyati, and R. Astuti, “Study of Service Quality and Patient Satisfaction to Trust And Loyalty in Public Hospital, Indonesia,” 2018.
[5] H. Jiang and Y. Zhang, “An investigation of service quality, customer satisfaction and loyalty in China’s airline market,” J. Air Transp. Manag., vol. 57, pp. 80–88, Oct. 2016.
[6] M. Amin, “Internet banking service quality and its implication on e-customer satisfaction and e-customer loyalty,” Int. J. Bank Mark., vol. 34, no. 3, pp. 280–306, May 2016.
[7] C. k. Ayo, A. A. Oni, O. J. Adewoye, and I. O. Eweoya, “E-banking users’ behaviour: e-service quality, attitude, and customer satisfaction,” Int. J. Bank Mark., vol. 34, no. 3, pp. 347–367, May 2016.
[8] R. Rajaguru, “Role of value for money and service quality on behavioural intention: A study of full service and low cost airlines,” J. Air Transp. Manag., vol. 53, pp. 114–122, Jun. 2016.
[9] A. P. Oghuma, C. F. Libaque-Saenz, S. F. Wong, and Y. Chang, “An expectation-confirmation model of continuance intention to use mobile instant messaging,” Telemat. Informatics, vol. 33, no. 1, pp. 34–47, Feb. 2016.
[10] H. Iberahim, N. K. Mohd Taufik, A. S. Mohd Adzmir, and H. Saharuddin, “Customer Satisfaction on Reliability and Responsiveness of Self Service Technology for Retail Banking Services,” Procedia Econ. Financ., vol. 37, pp. 13–20, 2016.
[11] S. Annamdevula and R. S. Bellamkonda, “Effect of student perceived service quality on student satisfaction, loyalty and motivation in Indian universities,” *J. Model. Manag.*, vol. 11, no. 2, pp. 488–517, May 2016.

[12] Y. S. Lim, P. C. Heng, T. H. Ng, and C. S. Cheah, “Customers’ online website satisfaction in online apparel purchase: A study of Generation Y in Malaysia,” *Asia Pacific Manag. Rev.*, vol. 21, no. 2, pp. 74–78, Jun. 2016.

[13] S. Annamdevula and R. S. Bellamkonda, “The effects of service quality on student loyalty: the mediating role of student satisfaction,” *J. Model. Manag.*, vol. 11, no. 2, pp. 446–462, May 2016.

[14] P. J. Forsythe, “Construction service quality and satisfaction for a targeted housing customer,” *Eng. Constr. Archit. Manag.*, 2016.

[15] H. Nguyen, H. Nguyen, N. Nguyen, and A. Phan, “Determinants of Customer Satisfaction and Loyalty in Vietnamese Life-Insurance Setting,” *Sustainability*, vol. 10, no. 4, p. 1151, Apr. 2018.

[16] M. S. Farooq, M. Salam, A. Fayolle, N. Jaafar, and K. Ayupp, “Impact of service quality on customer satisfaction in Malaysia airlines: A PLS-SEM approach,” *J. Air Transp. Manag.*, vol. 67, pp. 169–180, Mar. 2018.

[17] “Impact of E-Banking Service Quality on Customer Satisfaction,” *Int. J. Recent Technol. Eng.*, vol. 8, no. 5, pp. 2296–2300, Jan. 2020.

[18] C. Chang, “Exploring the determinants of e-learning systems continuance intention in academic libraries,” *Libr. Manag.*, vol. 34, no. 1/2, pp. 40–55, Jan. 2013.

[19] C.-W. Chen, “Impact of quality antecedents on taxpayer satisfaction with online tax-filing systems—An empirical study,” *Inf. Manag.*, vol. 47, no. 5–6, pp. 308–315, 2010.

[20] W. H. DeLone and E. R. McLean, “The DeLone and McLean Model of Information Systems Success: A Ten-Year Update,” *J. Manag. Inf. Syst.*, vol. 19, no. 4, pp. 9–30, Apr. 2003.