Understanding the effects of system quality on continuance intention to use student's information system management: An empirical evidence from Malaysia

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Abstract. This paper examines the role of system quality on continuance intention to use e-campus. The scale used in this study is adapted from previously validated instrument derive from the relevant literature. using a paper-and-pencil self-administered questionnaire survey, data was collected from 315 undergraduate and post graduate students from private higher learning institution in East Coast Malaysia. The results suggest that users’ continuance intention to use e-campus is determined by system quality. Implications for research and practice are discussed.

1. Introduction

The sustainability of the information technology system depends on how well the user uses it. In the context of higher education, IT systems make a significant contribution to facilitating the teaching and learning process of lecturers and students. Administrators are also not excluded from the use of IT systems especially in managing the data of student affairs, financial data and others. Though IT systems can make things simpler, even if the system is not well understood or even poor quality, the system can be rejected. Studies in IT acceptance literature always place a strong emphasis on quality aspects. Among the most well-theories used by scholars is De Lone & Mclean, which argues that the success of implementing an IT system depends largely on quality. De Lone & McLean argue that there are three different quality dimensions, namely quality systems, quality information and quality service. De Lone & Mc Lean [1] have been applied in several different contexts and technologies. One of the research using the De Lone & Mclean model was [2] work which examined e-learning user satisfaction. However, a significant flaw which IT infrastructure providers are unaware of is the need to provide their users with quality systems. In the context of higher education, the majority of users are among younger students and have high expectations of the system provided. If the system fails to meet their expectations, the system will not be fully utilized. This study will therefore examine the role of system quality in influencing the acceptance of e-campus systems. The remainder of the paper is structured the following way. The next section provides a summary of the related system quality literature in the field of IS. The third section discusses the research model and hypotheses, and the fourth section describes an e-campus user survey through empirical analysis of the research model.
2. Literature review

2.1. System quality on continuance intention linkage
Study by [3] indicate that system quality, course quality, and service quality were significant antecedents of the continuance intention to participation in massive open online course (MOOCs). Study by [4] found that system quality positively influences intention to continue using e-filing. Another study by [5] found that system quality has a positive relationship with the intention to use of m-banking. While study by [6] found that system quality had significant effect on mobile learning acceptance. Another study by [7] found that system quality has a positive impact on the intention to use the PharmaCloud. Another study by [8] found that game system quality is positively associated with behavioural intention. Study by [9] found that behavioural intention to use the online community was predicted by system quality has a positive. Another study by [10] found that higher perceived system quality will influence consumers intention to use shopping websites. While study by [11] found that behaviour intention to use ClassStart successfully determined by system quality. Study by [12] found that intention to use e-learning technologies was predicted by system interactivity.

![Figure 1. Research model](image)

3. Methodology
For this research an 8-item questionnaire was designed, and a multi-item Likert scale was adopted in line with available literature in the IS field. The variables were evaluated using the 5-point Likert Scale where 5 were 'Strongly Agree' and 1 were 'Strongly Disagree'. The instrument was first identified in a previous study to ensure the content validity is met. The next process, after the instrument has been identified, is to translate the original instrument, which is in English into Malay, in order to ensure that the respondents fully understand the contents of the instrument. Before hypothesis testing is performed, data is first filtered to ensure there is no missing value issue. Based on the missing value analysis, the amount of missing value is small and ten respondents who did not respond was discarded. The next step is to perform the expectation-maximization procedure to treat missing value. The rationale for using expectation-maximization (EM) is based on it being able to provide more reliable statistical estimates of parameters as can be found in [13].

4. Data analysis
Simple linear regression analysis was conducted to confirm the hypotheses which included the direct impacts of system quality on the intention to continue. As shown in Table 1, the analysis showed that system quality has important impacts on continuance intention "System quality" can explain up to 31 percent of the variance in the intention to continue using e-campus.

![Table 1. Hypothesis testing](image)

| Hypothesis                              | Beta coefficient | t-value | p-value | remark     | Variance explained |
|----------------------------------------|------------------|---------|---------|------------|-------------------|
| System quality – continuance intention | .556***          | 11.844  | 0.001   | supported  | 0.31              |

***p< 0.01
5. Discussion
This research aims to establish the relationship between service quality as an antecedent of continuance intention to use e-campus. Based on data analysis, system quality can influence users to continue using e-campus applications. This finding is consistent with the findings of the [14]. The study has shown that system quality can explain why consumers continue to use information systems in e-learning context. In addition, this study is also consistent with the findings of the study [15] which examines the impact of quality service on the continued use of e-learning in higher learning institutions.

6. Conclusion
These results support the argument that the quality system elements have a significant effect on the acceptance of new systems. This result also benefits IT providers and university administrators by first recognizing the key factors in the effective implementation of a system before actually implementing the system.

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