Antecedents of continuance intention in e-campus system: The moderating effect of internet experience

Fahmi Zaidi Abdul Razak¹, Nur Muneerah Binti Kasim², Siti Aminah Binti Harun² Noor Suhani Sulaiman³

¹Research and Innovation Department, Sultan Ahmad Shah Pahang Islamic University College (KUIPSAS)
²Faculty of Education and Social Science, Widad University College
³Faculty of Faculty of Information & Interactive Technology, Widad University College

Email: fahmizaidi@kuipsas.edu.my

Abstract. This study applies internet experience as a moderator to investigate how the relationship between satisfaction and continuance intention is differ based on user experience. Analysis of 315 usable responses shows that internet experience plays a significant role in moderate the relationship. This empirical study employ quantitative survey as a research design. The data were analysed using the statistical package for data analysis SPSS 22 for Windows. This paper concludes with implications and limitations of the study.

1. Introduction

The Internet experience is an important aspect to address in order to ensure that information systems are implemented effectively. Previous research found that a person with high computer experience appears to have less problems when communicating with the system. To the best of our knowledge, research on the role of internet experience as a moderator has received very little attention in the information system literature. Previous study by [1] who used internet experience as a moderator, however only tested the role of internet experience as a moderator between customer interface quality and switching costs. Likewise, study conducted by [2] concentrates solely on the role of internet experience as a moderator of the relationship between "information overload" and purchase intention, as well as "information disorganization" and purchase intention”. Therefore, this study will attempt to achieve the objective of identifying the role of internet experience as a moderator of the relationship between consumer satisfaction and continuance intention

2. Literature review

2.1. Moderators of the linkages between satisfaction and continuance intention

There are several terms in the literature search that are very similar to the internet experience, such as internet skills. [3] and various definitions given by scholars to internet skill. Scholars like [4] and [5]
have argued that there is no definitive definition of internet experience. According to [6] internet experience is defined as how long they have been using the Internet. Accordingly, our study defines Internet experience as the level of user experience measured by years of use.

Based on the literature search, we found that there are several studies that test certain variables as moderators of the relationship between user satisfaction and continuance intention. For example, study by [7] found that website information satisfaction and system satisfaction play key roles in forming continuance intention through perceived usefulness and perceived enjoyment. It is also noted that computer anxiety serves as an important moderator toward continuance intention. Another study by [8] have shown that the positive effects that satisfaction and trust have on e-finance continuance intention are confirmed, and trust is found to be a significant moderator on the relationship between satisfaction and continuance intention. Study by [9] found that the relationship between satisfaction and continuance intention significantly decreased in the high-habit group, indicating the negatively moderating role of habitual SNS use.

Study by [10] found that temporal dissociation moderates the satisfaction-continuance intention relationship negatively. While study by [11] indicates strong support for the theoretical links of IS continuance model, and for the new moderating effect. Satisfaction as well as prior behaviour have been shown to have important effect on the continuance intention. Furthermore, the results of the study supported the theoretical claim that the strength of purpose to predict continuity was undermined by a high level of information system habit. Our primary argument for the inclusion of internet experience as a moderator between the satisfaction and continuance intention is based on the study by [12] who found that the relationship between satisfaction and continuance intention is stronger for less experienced users than for more experienced users. Therefore, we propose the following hypothesis:

H1: The impact of satisfaction on continuance intention is significantly higher among inexperienced users.

3. Methodology

This study aims to identify the role of internet experience as a moderator variable of the relationship between satisfaction and continuance intention. To answer the research question, this study uses a quantitative approach. This study is a cross-sectional study using non-probability sampling. This analysis used convenience sampling, since a sampling frame was not obtained. The instrument for this study were surveys, and we derived them from the relevant literature to ensure that the content validity is retained. Continuance intention was adapted to reflect the likelihood that an individual will continue using e-campus in the future [13].
Satisfaction is an assessment of that emotion (i.e., whether the experience of a consumption was as enjoyable as intended [13] and once the instrument has been identified, the next process is to translate English-language tools into Malay languages to ensure that every item can be understood and not misconstrued. To achieve the study’s objectives, the research data will be analysed using a hierarchical linear regression.

4. Data analysis

We used hierarchical regression analysis to test our hypotheses. As shown in Tables 1 and Table 2, there are three hierarchical regressions for the dependent variable. The results of the first model (Model 1) revealed that the relationship between satisfaction and continuance intention was significant \( \beta = 0.560, p<0.001 \) with the 0.314 variance explained. The results of the second model (Model 2) revealed that the explained variance was not significantly different with the previous model with an \( R^2 \) of 0.315 with non-significant \( F \) change (\( p >0.05 \)). However, with the inclusion of the interaction term of satisfaction*experience, the explained variance of the third model (Model 3) was significant with an \( R^2 \) of 0.329 with a significant \( F \) change (\( p <0.05 \)). (See Table 1). Thus, H1 was supported.

### Table 1. \( R^2 \) change

| Model | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | F Change | df1 | df2 | Sig. F Change |
|-------|----------|-------------------|---------------------------|-------------------|----------|-----|-----|-------------|
| 1     | .560     | .314              | .737                      | .314              | 143.043  | 1   | 313 | .000        |
| 2     | .561     | .315              | .737                      | .001              | .590     | 1   | 312 | .443        |
| 3     | .573     | .329              | .731                      | .014              | 6.381    | 1   | 311 | .012        |

a. Predictors: (Constant), satisfaction
b. Predictors: (Constant), satisfaction, experience
c. Predictors: (Constant), satisfaction, experience, exp_satis

### Table 2. Beta coefficient of the 3 model

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|---------------------------|---|-----|
|       | B                           | Std. Error                | Beta |     |
| 1     | satisfaction .689           | .058                      | .560 | 11.960 | .000 |
| 2     | satisfaction .694           | .058                      | .564 | 11.966 | .000 |
|       | experience .032             | .041                      | .036 | .768  | .443 |
| 3     | satisfaction 1.200          | .209                      | .975 | 5.756 | .000 |
|       | Experience .506             | .192                      | .577 | 2.633 | .009 |
|       | exp_satis -.133             | .053                      | -.654 | -2.526 | .012 |
Based on the Figure 1, the steepest slope (the strongest positive association) occurs for users who reported low experience. In contrast, the flattest slope (the weakest association) occurs for users who reported high experience. Thus supporting the stated hypothesis.

![Figure 2. moderating effect of experience](image)

5. Discussion

In this research, the role of internet experience as a moderator of the relationship between satisfaction and continuance intention was tested. The results of this research have provided evidence that internet experience plays a significant role in moderating the relationship between satisfaction and continuance intention. The hierarchical linear regression was carried out to determine the role of the internet experience in moderate the relationship between satisfaction and continuance intention. As mentioned in chapter 4, internet experience was found to be significant as a moderator and this means that the impact of satisfaction on the continuance intention is much stronger for users with little experience who are more likely to accept new system than those with higher experience. The university’s management therefore need to raise awareness of the value of e-campus especially for the high experience group. It is also necessary for the e-campus vendor to provide much better system to satisfy the need of higher experience group. Additionally, e-campus vendors must recognize the more innovative students when developing the e-campus software, since they are more likely to accept new system [14]

6. Conclusion

The findings from this research demonstrate the validity of internet as a moderator in information system acceptance. The research model was empirically validated and offers several significant implications for both universities’ management and vendors. There are some drawbacks to be taken into account when evaluating the findings of this research. Due to time limitation, the data was collected only from one private university and may affect the generalizability of the findings. Future research may be carried out on another higher institution. This study uses only one moderator which is internet
experience. Another potential moderator such as social economic status could be included in future research.

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References

[1] H. H. Chang and S. W. Chen, “The impact of customer interface quality, satisfaction and switching costs on e-loyalty: Internet experience as a moderator,” *Comput. Human Behav.*, vol. 24, no. 6, pp. 2927–2944, Sep. 2008.

[2] P. Soto-Acosta, F. Jose Molina-Castillo, C. Lopez-Nicolas, and R. Colomo-Palacios, “The effect of information overload and disorganisation on intention to purchase online,” *Online Inf. Rev.*, 2014.

[3] A. J. A. M. Van Deursen, J. A. G. M. van Dijk, and O. Peters, “Rethinking Internet skills: The contribution of gender, age, education, Internet experience, and hours online to medium-and content-related Internet skills,” *Poetics*, vol. 39, no. 2, pp. 125–144, 2011.

[4] D. Bawden, “Information and digital literacies: A review of concepts,” *J. Doc.*, 2001.

[5] S. Virkus, “Information literacy in Europe: A literature review,” *Information Research*. 2003.

[6] A. Cheema and P. Papatla, “Relative importance of online versus offline information for Internet purchases: Product category and Internet experience effects,” *J. Bus. Res.*, vol. 63, no. 9, pp. 979–985, 2010.

[7] Y. S. Kang and H. Lee, “Understanding the role of an IT artifact in online service continuance: An extended perspective of user satisfaction,” *Comput. Human Behav.*, vol. 26, no. 3, pp. 353–364, May 2010.

[8] W. Zhou, Z. Tsiga, B. Li, S. Zheng, and S. Jiang, “What influence users’ e-finance continuance intention? The moderating role of trust,” *Ind. Manag. Data Syst.*, vol. 118, no. 8, pp. 1647–1670, Sep. 2018.

[9] M. Bae, “Understanding the effect of the discrepancy between sought and obtained gratification on social networking site users’ satisfaction and continuance intention,” *Comput. Human Behav.*, vol. 79, pp. 137–153, Feb. 2018.

[10] W.-K. Tan, P.-W. Lee, and C.-W. Hsu, “Investigation of temporal dissociation and focused immersion as moderators of satisfaction–continuance intention relationship: Smartphone as an example,” *Telemat. Informatics*, vol. 32, no. 4, pp. 745–754, Nov. 2015.

[11] M. Limayem and C. M. K. Cheung, “Understanding information systems continuance: The case of Internet-based learning technologies,” *Inf. Manag.*, vol. 45, no. 4, pp. 227–232, Jun. 2008.

[12] K. M. Lin, “E-Learning continuance intention: Moderating effects of user e-learning experience,” *Comput. Educ.*, 2011.

[13] A. Bhattacherjee, “Understanding Information Systems Continuance: An Expectation-Confirmation Model,” *MIS Q.*, vol. 25, no. 3, p. 351, Sep. 2001.

[14] S. Chauhan and M. Jaiswal, “Determinants of acceptance of ERP software training in business schools: Empirical investigation using UTAUT model,” *Int. J. Manag. Educ.*, vol. 14, no. 3, pp. 248–262, 2016.