



INVESTIGATING KEY FACTORS FOR SUCCESSFUL E-LEARNING IMPLEMENTATION

Kumar Raman*

Faculty of Education
Universiti Kebangsaan Malaysia
Malaysia

Norasmah Othman

Faculty of Education
Universiti Kebangsaan Malaysia
Malaysia

Grace Danaraj

SK Putra Perdana
Kementerian Pendidikan Malaysia
Malaysia

**Corrospoding author's Email: p88480@siswa.ukm.edu.my*

*Peer-review under responsibility of 3rd Asia International Multidisciplanry Conference 2019 editorial board
(<http://www.utm.my/asia/our-team/>)*

*© 2019 Published by Readers Insight Publisher,
lat 306 Savoy Residencia, Block 3 F11/1,44000 Islamabad. Pakistan,
info@readersinsight.net*

This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

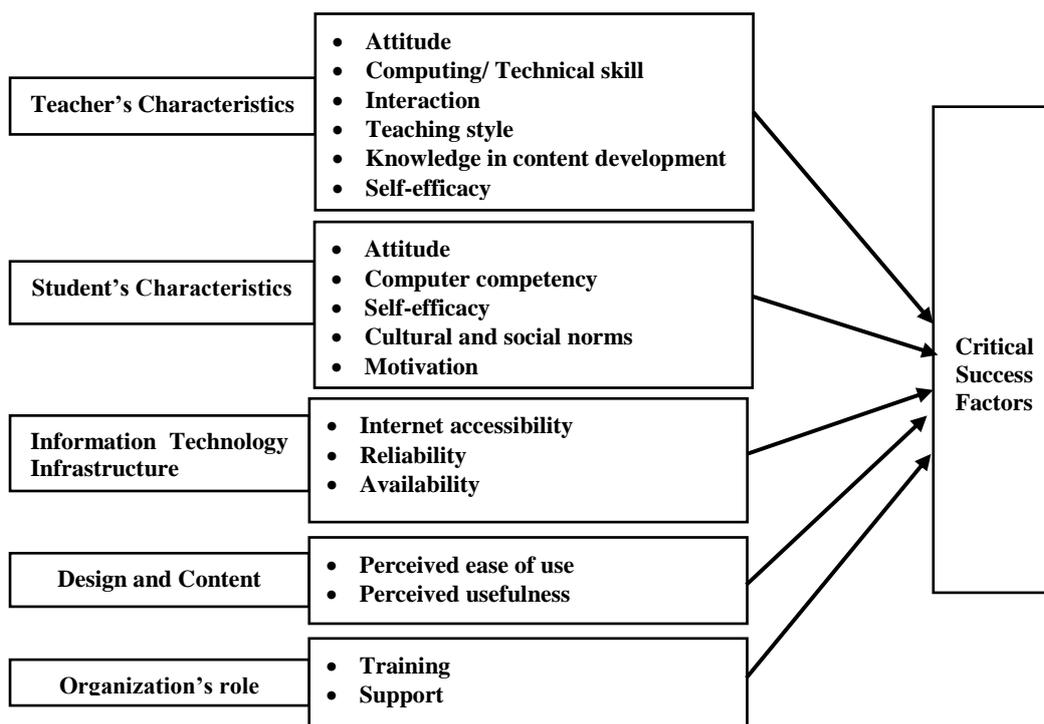


Research Highlights

Majority of educational institutions have begun venturing into e-learning. Although the e-learning market is growing rapidly, it cannot be denied that the failure rates are increasing in the implementation and usage of e-learning. The Critical Success Factors (CSFs) are the foundation of success behind the implementation of e-learning (Frimpon (2012)). Based on the literature analysis, five main factors and eighteen sub-factors were identified as a CSFs for successful e-learning implementation. The CSFs are teacher's characteristics (teacher's attitude, teacher's computing technical skills, interaction among teaches-students, teaching style, knowledge in e-learning content development and self-efficacy), student's characteristics (attitude, computer competency, interaction, self-efficacy, motivation and cultural and social norms), information technology infrastructure (internet accessibility, reliability and availability), design and content (perceived ease of use and perceived usefulness) and organization characteristics (training and support).

Graphical Abstract

Fig. 1 shows a conceptual framework based on the CSFs.



Research Objectives

The purpose of this study is to discover the CSFs for successful e-learning implementation.

Methodology

The method employ by this study is systematic literature literature analysis. The process of reviewing articles started with shortlisting previous studies based on the keywords, "Critical



Success Factors for E-Learning". Each paper must be published in a peer-reviewed and/archival journal. Since there is a large number of papers, only articles that discuss e-learning at "university" and / or "educational institutions" are taken into consideration for analysis. Finally, the articles with the keywords "Critical Success Factors" and/or "affecting factors" appeared in the title and / or abstract are also selected in this study. Out of 133 searching papers only 100 papers were selected for reviewing. The selected papers were reselected by reading the abstract of the papers. At the end of this process only 44 papers were selected.

Results

Previous studies have investigated the importance of CSFs in the application of e-learning. Al-Fadhli (2008) synthesized that the teacher's dimension is a crucial factor which significantly influences the student's satisfaction in e-learning environment. Besides that Alhomod and Shafi (2013); Chokri (2012); Presley and Presley (2009); Taha (2013) classified student's characteristics and the use of a variety of teaching integration technology are the main factors of successful e-learning implementation. Moreover, Pituch and Lee (2006) have identified that the effectiveness of information technology infrastructure plays an important role in influencing the user's acceptance of e-learning. On the other hand, the institution's support were classified as a vital factor which enhances the user's usage, satisfaction and acceptance of e-learning (Abdel-Wahab, 2008; Ahmed, 2010; Broadley, 2007; Goi & Ng, 2009; Masoumi, 2006; Mosakhani & Jamporazmey, 2010; Selim, 2007). Several researchers have argued that besides teacher's characteristics, student's characteristics, and information technology infrastructure, the design and content of the e-learning are also a crucial factor in implementing successful e-learning (Alhomod & Shafi, 2013; Chokri, 2012; Fageeh, 2011; FitzPatrick, 2012; Fuad, Trayek, & . 2013; Jan & Contreras, 2011; Mosakhani & Jamporazmey, 2010; Presley & Presley, 2009; Selim, 2007; Sun, Tasi, Finger, Chen, & Yeh, 2008).

Findings

Based on the literature analysis, five main factors and eighteen sub-factors were identified as a CSFs for successful e-learning implementation. The CSFs are teacher's characteristics (teacher's attitude, teacher's computing technical skills, interaction among teaches-students, teaching style, knowledge in e-learning content development and self-efficacy), student's characteristics (attitude, computer competency, interaction, self-efficacy, motivation and cultural and social norms), information technology infrastructure (internet accessibility, reliability and availability), design and content (perceived ease of use and perceived usefulness) and organization characteristics (training and support). A proposed conceptual framework was designed based on these CSFs as per shown in Figure 1.

References

- Abdel-Wahab, A. G. (2008). Modeling students' intention to adopt e-learning a case from Egypt. *Turkish Online Journal of Distance Education*, 9(1).
- Ahmed, H. M. S. (2010). Hybrid E-Learning Acceptance Model: Learner Perceptions. *Decision Sciences Journal of Innovative Education* . 8(2).
- Al-Fadhli, S. (2008). Students' Perceptions of E-learning in Arab Society: Kuwait University as a case study. . *E-Learning and Digital Media*, 5(4), 418-428.
- Alhomod, S., & Shafi, M. M. (2013). Success Factors of E-Learning Projects: A Technical Perspective. *Turkish Online Journal of Educational Technology-TOJET*, 12(2), 247-253.
- Broadley, T. (2007). Implementation of E-Learning: A Case Study of Three Schools. Curtin University of Technology www.academia.edu





- Chokri, B. (2012). Factors Influencing the Adoption of the E-Learning Technology in Teaching and Learning by Students of a University Class. *European Scientific Journal* 8(28), 165-190.
- Fageeh. (2011). ELF students' readiness for e-learning: factors influencing e-learners' acceptance of the Blackboard in a Saudi university. *The JALT CALL Journal*, 7(1), 19-42.
- FitzPatrick, T. (2012). Key success factors of eLearning in education: A professional development model to evaluate and support eLearning. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED537174&site=eds-live>.
- Frimpon, M. (2012). A Re-Structuring of the Critical Success Factors for E-Learning Deployment. . *American International Journal of Contemporary Research*, 2(3).
- Fuad, A. A., Trayek, & ., S. S. S. H. (2013). Attitude towards the use of learning management system among university students: A case study. . *Turkish Online Journal of Distance Education*, 14(3), 91-103.
- Goi, C., & Ng, P. Y. (2009). E-learning in Malaysia: Success factors in implementing e-learning program. *International Journal of Teaching and Learning in Higher Education*, 20(2).
- Jan, A. U., & Contreras, V. (2011). Technology acceptance model for the use of information technology in universities. . *Computers in Human Behavior*, 27, 845-851.
- Masoumi, D. (2006). Critical factors for effective E-learning. . Retrieved from http://www.e-quality-eu.org/pdf/seminar/e-Quality_WS3_DMasoumi.pdf.
- Mosakhani, M., & Jamporzmei, M. (2010). *Introduce critical success factors (CSFs) of elearning for evaluating e-learning implementation success*. . Paper presented at the International Conference on Educational and Information Technology.
- Pituch, K. A., & Lee, Y.-K. (2006). The influence of system characteristics on e-learning use. *Computer and Education*, 47, 222-224.
- Presley, A., & Presley, T. (2009). Factors influencing student acceptance and use of academic portals. . *Journal of computing in higher education*, 21(3), 167-182.
- Selim, H. M. (2007). Critical success factors for e-learning acceptance: Confirmatory factor models. . *Computers & Education*, 49, 396-413.
- Sun, P. C., Tasi, R. J., Finger, G., Chen, Y. Y., & Yeh, D. (2008). What drives a successful e- learning? An empirical investigation of the critical factors influencing learner satisfaction. . *Computer and Education*, 50, 1183-1202.
- Taha, M. (2013). *Investigating Critical Factors Influencing the Success of E-Learning*. . Paper presented at the PhD Doctoral Symposium, Bahrain.