An Emerging of E-learning and Continuance Satisfaction in Higher Education: A Review

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KEYWORDS	ABSTRACT
E-learning Higher Education Distance Education	The main purpose of this analysis to identify factor influence e-learning continuance in higher education context. The topic of interest was successful critical factor, indicator of e-learning satisfaction and criteria for success e-learning in higher education context. In the initial phase, 70 articles were retrieved and only 20 papers were selected mainly from google scholar. The result can be grouped into three factors: 1) Instructor quality, 2) learning environment and 3) service support. Each of these 3 factors included several important elements that can support for successful implementation of e-learning. It is a concrete measurement to online institution or online courses for achieving the meaningful success of online learning experience.

1.0   INTRODUCTION

Many areas of social, cultural and economic life, including education, have been affected by the COVID-19 pandemic. Although each stage of education faces specific challenges, higher education is leading the way in a learning revolution. The challenge for universities is to thrive in digital education, as the requirement for an almost immediate digital transformation of both graduate and postgraduate courses requires not only technical integration, but also the creation or further adaptation of teaching and learning processes in order to meet the needs of each field of study (IESALC, 2020). Indeed, the real problem is how quickly in the sense of the current pandemic the necessary changes will be made. Some of the changes to successful university education are related to objectives that have not existed in the past but have emerged as a result of the pandemic. Some of these changes may vanish in the future, but some may continue to be "new normal" as the academic community returns to regular teaching conditions in lecture halls and workshops.

In Malaysia, the Movement Control Order (MCO) was enforced like many countries across the globe, to flatten the Covid-19 spread curve. The Ministry of Higher Education has announced that teaching and learning activities will be carried out by all public and private universities in Malaysia through online learning until December 2020 (Sani, 2020). In Philippines, the nation immediately opted for online learning while most teachers are not prepared to deal with online education. However, the online method of instruction was suspended by the Commission on Higher Education (CHED) as the number of students, including teachers who strived against the online mode of learning, increased due to different factors. The fact is that numerous higher education institutions in the Philippines, both private and state colleges and universities, are not ready to introduce online system (Toquero, 2020).

According to Aparicio et al., (2016), the definition of e-learning was not the first term used to conceptualise the use of computerised systems in order to enable or promote the learning process. They established 23 principles related to the use of computers for learning purposes (e.g., online learning, virtual learning, distance learning, m-learning, MOOC, learning management systems). There are benefits and drawbacks to the introduction of online learning in higher education. The benefits of online learning are that it is scalable and can be commonly used, whereas the drawback is that plagiarism, internet signal intensity and devices that enable plagiarism activities are quite highly possible (Arkorful & Abaidoo, 2015; Pande et al., 2016).

E-learning continuance intention been used in studies as a dependent construct for predicting e-learning continuation. Notably, many studies have examined e-learning continuance intentions and found that they were strongly dependent on the satisfaction regarding the use of an e-learning system (Chang, 2013; Ismail et al., 2012; Lin, 2011). In this study, satisfaction was found play role as mediating between e-learning continuance factor and user intention to use e-learning. Bhattacherjee (2001) support that user satisfaction is attached with their continuance intention and is a key for creating and retaining use for long term. In the context of higher education, long term satisfaction is needed to promote life long learning and provide meaningful experience of education system.

In some higher education institute in sub-Saharan Africa, the adoption and use of different e-learning systems such as Moodle, Sakai, and Blackboard to boost teaching and learning is gaining popularity (Mtebe & Raphael, 2018). In Asia countries, Google classroom, Edmodo, e-learning portals, Zoom, Webex, Google Meet, WebQuest, Microsoft Teams are the most frequently used as learning management system platforms (Irfan et al., 2020; Toquero, 2020).

E-learning has its own unique features that make it stand out from conventional face-to-face learning. Digitally advanced teaching methods and techniques must be adapted to modern integrated teaching methodologies that are suitable for the target group of students to teach and learn (Holmes et al., 2019). Even the teaching method is different and also has a different aim than standard curriculum because it gives opportunities to individuals who either cannot or will not engage in classroom learning (F. H. Wang, 2017). The potential consequences can be disengaged for the whole programme or during the process of learning even they are still a student. In addition, the instructors will confront new challenges in conjunction with online education. For instance, students who are reluctant to take part and remain silent and truants simply link to the class, but do not participate. They must also educate themselves with online teaching and be able to solve any technological problems that may arise (Farrell O., 2019). Thus, to provide efficient and effective online learning experience, it is crucial to ensure that e-learning platforms successfully support solutions to ensure the long-term use of an invention or piece of information technology after its initial acceptance.

Bhattacherjee (2001) explain continued technology use is 'a temporal phenomenon, and can only be measured using the initial set of perceptions intentions related to technology continuance'. However, the intention and impact of our behaviour do not necessarily line up. With all this in mind, the potential for satisfaction should be regarded by future research as a factor that drives online learning stakeholders to continue using e-learning systems in the context of higher education. In this paper, it will look further factors related to e-learning continuation.

2.0   METHOD

The main purpose of this analysis was to identify factors influence e-learning continuance in higher education context. The topic of interest was successful critical factor, indicator of e-learning satisfaction and criteria for success e-learning in higher education context. In the initial phase, 70 articles were retrieved and only 20 papers were selected mainly from google scholar.

3.0   RESULTS AND DISCUSSION

The result form data analysis and synthesis method of literature review is to specify the factor influence continuance satisfaction in e-learning. It can be grouped into 4 factors: 1) Instructor quality, 2) Learning environment, 3) service support.

Factor 1   Instructor Quality

Instructor Attitude - Several researchers indicated instructor performance become a driver of successful implementation of e-learning (Cidral et al., 2018; Sun et al., 2008). The competence instructor who able to manage e-learning activities and responds quickly to the needs and issues of students, it will increase the learning quality and satisfaction (Levy & Ramim, 2017).

Instructor Competencies – There are certain competencies needed when instructor dealing with learning through internet. Among the competencies are presentation skills, interpersonal communication skills and skills with internet tools for instruction (Abdulla, 2004). According to Legowo et al. (2019) instructor readiness towards e-learning and information technology capability will influence the success of e-learning.

Teaching Style – Finding indicates assignment related to project based and high critical thinking among the most effective for online learning outcome (Zheng et al., 2020). This method support by Romeu Fontanillas et al. (2016) stated a project team based learning able to reach high level of satisfaction to online learners.

Factor 2   Learning Environment

Information Quality - According to Pham et al., (2019), the quality of learning material able to influence students satisfaction and loyalty in e-learning. A finding by Martín-Rodríguez et al., (2015) claimed the key components that affect the degree of satisfaction of students with e-learning were course design and contents. Another factor which is course quality were significant impact continuance use of e-learning (Yang et al., 2017). This point giving a view for instructors who become a reference person to ensure students able to complete the courses successfully.

System Quality – Misut & Pribilova (2015) technological support and infrastructure for e-learning including Learning Management System - (LMS) and Virtual Classroom are possible to accelerate student's satisfaction. It is necessary to provide learning content appropriate to the selection of teaching methods. The efficiency of the page and the quick access of information must be fast enough was accounted to meet the needs of learners (Martín-Rodríguez et al., 2015).

Service Quality – Numerous study measuring online learning satisfaction using SERVQUAL model (Khan et al., 2011; Mamun-ur-Rashid & Rhman, 2017; R. Wang et al., 2010)**.** SERVQUAL is a multi-dimensional research method designed to capture customer preferences and service perceptions around the five dimensions that are assumed to reflect the quality of service

Factor 3   Service support

Communication Tools – communication tools are used to facilitate engagement between instructor and students (Chaiprasurt & Esichaiku, 2013; Martin & Bolliger, 2018). The structured communication may lead to consistency with projected learning outcome (Dinov et al., 2008; Lim, 2017). Finding by Khalil & Ebner, (2017) claimed electronic communication instruments have an impact on the growth of collaborative skills. However, the researcher found the synchronous (e.g. live communication) communication tools are more helpful than asynchronous (e.g. anytime communication) communication tools in online group activities to improve interactive learning abilities.

Training – The success of e-learning implementation is influenced by differences in computer and knowledge literacy for both students and educators. Study by Button et al., (2014) concluded there is a demand for time and skill to be adapted to integrate e-learning in education methodology and teaching method. Another view by Johnson et al., (2018) faculty play a critical role In the process of online quality education. Faculty need to work optimally in term of pedagogy, technology and key decision maker to ensure the online learning environment run smoothly. To develop the level of skills, beliefs, and understanding of the possibilities of online teaching and engagement, institutions are needed to provide instructor training due to the growing demand for online learning.

Help desk availability – Marshall (2014) significant positive correlation between technical assistant requests and students retention to communicate their technology needs and staff members who offer inconsistent support to students. On the other hand, technical support is not only an electronic resource, but also an ability to assist students requesting direct support, such as terms and glossary (Puri, 2012).

4.0   CONCLUSION

Online learning becoming popular and demand among the students worldwide. The emerging research related to e-learning makes it can be translated in many terms. The increasing popularity make higher education use e-learning as medium to support its learning activities. Therefore, identify factors contribute to satisfaction experience in e-learning is crucial to measure the implementation of it success and better than traditional learning.

In conclusion, the factors contribute to satisfaction continuance use of e-learning from a review of the literature are: 1) Instructor Quality - instructor attitude, instructor competencies,

teaching style, 2) Learning Environment - information quality, system quality, service quality, 3) service support – communication tool, training, help desk availability.

It is suggested that each of these 3 factors is importance to enhance effectiveness of online learning courses. It is a concrete measurement to online institution or online courses for achieving the meaningful success of online learning experience.

The future work to explore consistency of institution strategic management decision to support e-learning process and to explore other factors contribute towards e-learning related to digital and millennium generation to get better view about actual satisfaction.

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