Theoretical Framework of Learners Acceptance of MOOCs a Preliminary Report

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Abstract - Massive Open Online Courses (MOOCs) in recent times have become popular among Malaysian Universities. At the time of starting this research in 2016, MOOCs adoption in Malaysia was developing in tandem with several important national plans, e.g. the upcoming 11th Malaysia Plan (2016-2020), the National Economic Mode, Economic Transformation Programme and the anticipated Malaysian Education Blueprint for Higher Education; the last of which has specifically addressed MOOCs in its preliminary discussion document. Further, online learning, as an essential component of the delivery mechanism in MOOCs, is also addressed in the soon-to-be-released Blueprint (Fadzil, Abdol, Tengku, & Munira, 2016). Therefore, what seems to be a challenge for pedagogical experts is to find if MOOCs has turned online learning paradigm in Higher Education Institution (HEI) to the next level as this needs a counter support from student acceptance of MOOCs. This article discusses the theoretical framework and its implication based on a larger study which is currently ongoing at Taylors' University, Malaysia, which is expected to be completed in December 2016.

Keywords: MOOCs, Blueprint, Higher Educational Institution.

I. INTRODUCTION

With the tremendous growth in Information Technology (IT), particularly in the field Educational technology, learners' autonomy is viewed as a central factor in online learning. Numerous distance education researchers have identified learner autonomy as an important factor in academic success (Holmberg, 1995; Jung, 2001; Kearsley, 2000; Keegan, 1996; Peters, 1998). Massive Open Online Courses (MOOCs), which has penetrated into the Higher Learning Institutions in Malaysia seems to be governing the learners' autonomy via online learning (Jennymackness, 2011). Further, Jannymackness (2011) states that being an autonomous learner seems to be a pre-requisite for successful participation in a MOOC/OOC.

MOOCs has turned online learning paradigm in Higher Education Institution (HEI) to the next level as this needs a counter support from student acceptance of MOOCs. This is because, student acceptance is often a neglected or taken-for-granted aspect of successful implementation of Web-based instructional technologies (e.g., Arbaugh, 2000a; Parikh and Verma 2002; Salmon, 2000). Further, users' acceptance of Information Technology is a precondition before users can recognize IT's value and then utilize it (Jong & Wang, 2009). Technology Acceptance Model (TAM), is one such factor that has been used in prior research in management education to access users' acceptance (Arbaugh, 2000a), and explains user acceptance of an information system as a function of users' perceptions of usefulness and ease of use of the system (Lederer, Maupin, Sena, & Zhuang, 2000). TAM has been highly regarded both because of its parsimony and because of its high predictive power in explaining IT acceptance behavior across various contexts (Mathieson, 1991; Venkatesh, 2000). However, TAM is a model which has been developed a decade ago and has not been tested in the field of Education (Lee et al., 2003). Since UTAUT 2 Model is a valid tool for measuring usage intention within an educational settings and TAM and the first UTAUT model were less customer oriented, the UTAUT2 model can be argued to be the best applicable technology acceptance model to measure the usage intention of online lectures among students(Prins, 2014.). Therefore, this research attempts to focus on UTAUT 2 Model to identify leaners acceptance of MOOCs.

II. BACKGROUND OF THE STUDY

Educational technology is the effective utilization of technological resources in the teaching-learning process. It refers to a wide array of tools, media, computers and networking hardware, as well as taking into account underlying theoretical perspectives for their effective application (Educational technology, 2005). Today, online education has evolved to such a degree that as a method of educating and as a platform for global branding, it bears little resemblance to what it was merely a few years ago. Changing trends in educational technology are thus the driving force behind many of the educational strategies institutions now introduce. These include new delivery methods, increased access to courses (e.g., MOOCs), and different ways of employing technology in teaching (such as "flipped classroom" teaching, "gamified" courses, and employing adaptive learning) (Hanover Research, 2014). Further, within the dynamic context and ambiguous nature of e-learning, MOOCs (Massive Open Online Courses), the newest form of (potentially) automated instruction has arisen (Cole & Ph, 2015). MOOCs are defined by signature characteristics that include: lectures formatted as short videos combined with formative quizzes (Orn, 2012); automated assessment and/or peer and self–assessment and an online forum for peer support and discussion (Suen & Pursel, 2014).

Significance and Usefulness of this Research Study

The growing popularity of MOOCs is evident in the millions (e.g.over thirteen million on Coursera in spring 2015) of students across the globe who have registered for the courses, in the growing number of courses offered (e.g. over 1000 on Coursera and over 575 on edX as of summer 2015), and in their breadth of subject areas (Evans, Baker, & Dee, 2016). Despite ongoing discussions over using MOOCs in higher educational institutions, together withvarious debates and critiques on MOOCs, it becomes inevitable to pay attention to

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students' perception, attitude and acceptance towards MOOCs. Further, it is unclear how familiar university students are in line with the MOOCs and how they hone their pedagogical belief on MOOCs as a source of learning. Thus, it is in this interest an attempt has been made to find factors affecting learners' acceptancy towards using MOOCS in six Universities in Malaysia that had introduced MOOCs in their pedagogy by using the technology acceptance model (UTAUT 2 Model).

III. RESEARCH PROBLEM

Massive Open Online Courses (MOOCs) in recent times have become popular among Malaysian Universities. At the time of starting this research in 2016, MOOCs adoption in Malaysia was developing in tandem with several important national plans, e.g. the upcoming 11th Malaysia Plan (2016-2020), the National Economic Mode, Economic Transformation Programme and the anticipated Malaysian Education Blueprint for Higher Education; the last of which has specifically addressed MOOCs in its preliminary discussion document. Further, online learning, as an essential component of the delivery mechanism in MOOCs, is also addressed in the soon-to-be-released Blueprint (Fadzil, Abdol, Tengku, & Munira, 2016). Also, Vignare (2006) states that 20 percent of all higher education students now take online courses, a dramatic increase from a mere one percent in 1995. So, what is needed is successfully prepare all learners with the skills and capacities for 21st century citizenship, namely, global awareness, creativity, collaborative problem-solving, self-directed learning – is no small order, and many educational leaders are finding that the traditional forms of education that have evolved though the end of the last century are simply inadequate for achieving these goals. Therefore, what seems to be a challenge for pedagogical experts and practitioners is to find if MOOCs has turned online learning paradigm in Higher Education Institutions (HEIs) to the next level as this needs a counter support from student acceptance of MOOCs. This is because, student acceptance is often a neglected or taken-for-granted aspect of successful implementation of Web-based instructional technologies (e.g., Arbaugh, 2000; Parikh @ Verma 2002; Salmon, 2000). Further, users' acceptance of Information Technology is a precondition before users can recognize IT's value and then utilize it (Jong & Wang, 2009). Therefore, what is important now is to see if there is a universal acceptance of MOOCs with respect to the student's needs in the Higher Educational Institutions across Malaysia.

Research Aim and Objectives

The aim of the this research study is to encapsulate the learners' adoption of MOOCs in the Malaysian Universities and to ascertain the possibility of other possible attributes that may influence the learners' acceptance with respect to the UTAUT2 Model. Based on the above Aim we have the following objectives of the study:

1. To assess the level of adoption of MOOCs among learners in institutions of Higher Educational Institutions (HEI);
2. To investigate the factors that inhibit, encourage and moderate the adoption of MOOCs with respect to the seven factors in UTAUT 2 Model;

3. To make recommendations to researchers, policy makers and practitioners as to how to increase the learners' adoption of MOOCs;
4. Lastly, to find the possibility of a new framework for accessing the learners' adoption of MOOCs by identifying the attributes over and above those specified in the UTAUT 2 Model.

IV. RESEARCH METHODOLOGY

This research is based on Quantitative research methods and involves 5 Universities across Malaysia. Questionnaire based on the eight attributes of the UTAUT 2 Model will be distributed to send to the intended users of MOOCs at various Universities. Statistical analysis test SPSS(Version 21) and Structure Equation Model Software (AMOS Version 21) will be used to analysis the respondents' data.

V. ACADEMIC CONTRIBUTION OF THE RESEARCH

The purpose of this proposed study is to better conceptualize and validate the attributes affecting the learners' acceptance of MOOCs with respect to the UTAUT 2 model. This research will therefore, allow all the academicians who wish to adopt and adapt to MOOCs to think of this entity, namely, "learners' acceptance", as one of the key factors for successful integration of pedagogy. At the same time, identifying various factors, over and above those discussed in the UTAUT 2 model will provide a new framework for learners' acceptance of MOOC. This in turn will serve as a better measurement indicator for all who wish to adopt MOOCs successfully by accessing the learners' acceptance. Last but not the least, the outcome of this study may influence academic proficiency of MOOCs learners at the Malaysian universities, as academic proficiency can be expected to influence an individual's technology acceptance factors (Buche et al., 2007).

VI. THEORETICAL FRAMEWORK OF THIS STUDY

Theoretical framework is a conceptual model of how one theorizes or makes logical sense of the relationships among several factors that have been identified as important to the problem (Sekaran, 2000). Therefore, it is important to deduce the theoretical framework for this study, so that, the impact and influence of various variables on one another and its relevance with respect the learning objectives of the study is well known before the conduct of the study. It has always been a challenging task to build Web-based Lecture Technologies. This is because, student's knowledge of understanding differs from one student to another and to design a learning environment that best suits them is a very challenging task (Ong & Ramachandran, 2000). Therefore, what is important now is to see how far the learning environment designed with the intension of delivering pedagogy supports learners' acceptance. In this study, since the learning environment where the learners would hone their learning is a MOOCs platform, the theoretical framework is described with MOOCs as its central focus and to examine the learners' acceptance the UTAUT 2 model is used. Figure 1 below is the Theoretical Framework of this study.

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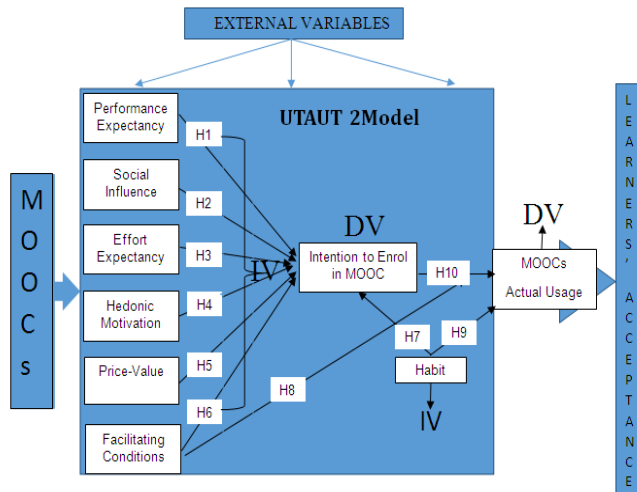Volume: 06 Issue: 01 June 2017 Page No.36-40
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Figure 1: Theoretical Framework in Temporal order

The variables in UTAUT 2 model are Performance Expectancy, Social Influence, Effort Expectancy, Hedonic Motivation, Price-Value and Facilitating Conditions. The definition of each of these variables are summarized below.

Table 1: Definition of constructs in the UTAUT2

Constructs	Conceptual Definitions
Performance expectancy	The degree to which using a technology will provide benefits to consumers in performing certain activities.
Social influence	The consumers perceive that important others (e.g. family & friends) believe that they should use a particular technology.
Effort expectancy	The degree of ease/effort associated with consumers' use of the technology.
Hedonic motivation	The pleasure or enjoyment derived from using a technology.
Price-value	Consumers' cognitive trade-off between the perceived benefits of the applications and the monetary cost of using them.
Facilities conditions	Consumers' perceptions of the resources and support available to perform a behavior.
Habit	The extent to which people tend to perform behaviors automatically because of learning Adapted from:(Escobar-Rodríguez & Carvajal-Trujillo, 2014; p 73)

VII. RESEARCH QUESTIONS

The main research question focusing this study is to examine the various factors that influence the learners' acceptance towards MOOCs by using the UTAUT 2 model. Emerging from this main research question we have the following statistical hypotheses. Formally, a statistical hypothesis-testing problem includes two hypotheses. The hypothesis are referred to as the null (H_0) and the alternative hypothesis (H_1). Although we would like to directly test research hypothesis, we actually test the null. If we disprove the null, then we indirectly support the research hypothesis since it competes directly with the null. RQ1: Is there a significance between the Performance expectancy and the leaners MOOCs enrolment. The Following are the Statistical hypotheses.

Statistical hypotheses 1:
H_0: There is no significant difference among the Performance expectancy and the learners MOOCS enrolment.
H_1: There is a significant difference among the Performance expectancy and the learners MOOCs enrolment.
RQ2: Is there a significance between the Social influence and the leaners MOOCs enrolment.

Statistical hypotheses 2:
H_0: There is no significant difference among the Social influence and the learners MOOCS enrolment.
H_1: There is a significant difference among the Social influence and the learners MOOCs enrolment.
RQ3: Is there a significance between the Effort expectancy and the leaners MOOCs enrolment.

Statistical hypotheses 3:
H_0: There is no significant difference among the Effort expectancy and the learners MOOCS enrolment.
H_1: There is a significant difference among the Effort expectancy and the learners MOOCs enrolment.
RQ4: Is there a significance between the Hedonic motivationand the leaners MOOCs enrolment.

Statistical hypotheses 4:
H_0: There is no significant difference among the Hedonic motivationand the learners MOOCS enrolment.
H_1: There is a significant difference among the Hedonic motivationand the learners MOOCs enrolment.
RQ5: Is there a significance between the Price-valueand the leaners MOOCs enrolment.

Statistical hypotheses 5:
H_0: There is no significant difference among the Price-valueand the learners MOOCS enrolment.
H_1: There is a significant difference among the Price-valueand the learners MOOCs enrolment.
RQ6: Is there a significance between the Facilities conditions and the leaners MOOCs enrolment.

Statistical hypotheses 6:
H_0: There is no significant difference among the Facilities conditions and the learners MOOCS enrolment.
H_1: There is a significant difference among the Facilities conditions and the learners MOOCs enrolment.
RQ7: Is there a significance between the Facilities conditions and learners' actual usage in MOOCs.

Statistical hypotheses 7:
H_0: There is no significant difference among the Facilities conditions and the learners' actual usage in MOOCS.
H_1: There is a significant difference among the Facilities conditions and the learners' actual usage in MOOCs.
RQ8: Is there a significance between the Habit and the leaners MOOCs enrolment.

Statistical hypotheses 7:
H_0: There is no significant difference among the Habitand the learners MOOCs enrolment.

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H_1: There is a significant difference among the Habitand the learners MOOCs enrolment.

RQ9: Is there a significance between the Habit and learners' actual usage in MOOCs.

Statistical hypotheses 9:

H_0: There is no significant difference among the Habit and the learners' actual usage in MOOCS.

H_1: There is a significant difference among the Habit and the learners' actual usage in MOOCs.

RQ10: Is there a significance between the Learners' intention and actual usage in MOOCs.

Statistical hypotheses 10:

H_0: There is no significant difference among the Learners' intention and the learners' actual usage in MOOCS.

H_1: There is a significant difference among the Learners' intention and the learners' actual usage in MOOCs.

VIII.   CONCLUSION

Universities today have number of trends in recruitment and enrolment that are having a significant impact on how institutions go about attracting students. All types of online and hybrid courses are thriving as the marketplace, seeks cost-effective access and convenient delivery system. With no doubt, MOOCs plays an important role in course delivery as the growing popularity of MOOCs is evident in the millions (e.g.over thirteen million on Coursera in spring 2015) (Evans, Baker, & Dee, 2016). With lots of innovation being done globally to implant MOOCs into the educational system, in Malaysia MOOCs is viewed as an important national plan, e.g. the upcoming 11th Malaysia Plan (2016-2020), the National Economic Mode, Economic Transformation Programme and the anticipated Malaysian Education Blueprint for Higher Education (Fadzil, Abdol, Tengku, & Munira, 2016). However, with so much of focus given to MOOCs by the policy makers and pedagogical experts, it is equally important to check to see how far this MOOCs' mania is prevalent among the students of Higher Educational Institutions and how they perceive in accepting it as an alternative to their classroom learning experience . Certainly, this research is an attempt in that direction.

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