UNDERSTANDING MOOC WEB DESIGN FACTOR FROM THE PERSPECTIVE OF TECHNICAL STUDENT

NUR AINA KHAIRIAH BINTI DA'IM

B061410219

BACHELOR OF TECHNOLOGY MANAGEMENT (TECHNOLOGY INNOVATION) (BTMI)

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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NUR AINA KHAIRIAH BINTI DA'IM

This thesis is submitted in partial fulfilment of the requirements for
Bachelor Degree of Technology Management (Technology Innovation)

Faculty of Technology Management and Technoprenuership
Universiti Teknikal Malaysia Melaka (UTeM)

2018

I/ We hereby declare that I/ we have read this dissertation/report and in my opinion, this dissertation/report is sufficient in terms of scope and quality as a partial fulfillment the requirements for the award of Bachelor of Technology Management
(Technology Innovation)

SIGNATURE	:	……
NAME OF SUPERVISOR	:	……
DATE	:	…….....

SIGNATURE	:	……
NAME OF PANEL	:	…….....
DATE	:	…….....

DECLARATION

I hereby declared that this thesis entitled

"UNDERSTANDING MOOC WEB DESIGN FACTOR FROM THE PERSPECTIVE OF TECHNICAL STUDENT"

is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in the candidature of any other degree.

SIGNATURE : …….....

NAME : …….....

DATE : …….....

DEDICATION

I would like to appreciate the dedication to my precious parents; Da'im Bin Selamat and Lela Binti Lani who educated, motivate and always stand up for me to learn until this level, also do not forget to my siblings for their endless love and prayers, all the lecturers and friends that help me a lot in giving opinion, support, advice, and information throughout the research. Without their blessing and encouragement, this research is impossible to complete in short period of time.

ACKNOWLEDGEMENT

Bismillahirrahmannirrahim,

With the recitation of the glorious, elusive and praise to ALLAH and His Apostle, I offer gratitude to ALLAH for the successful in completing this final year project entitled "Understanding MOOC Web Design Factor from The Perspective of Technical Student". Thanks to the strength and my perseverance overcome all challenges and obstacles to complete my bachelor degree.

I would like to dedicate my deepest gratitude and sincere appreciation to my supervisor, Dr. Nurulizwa binti Abdul Rashid for her valuable guidance and encouragement that were given to me. Without her guiding, supporting and her opinion contribution, it is hard for me to complete this final year project smoothly.

In the meantime, most are not forgotten for my beloved family that believes me in whatever I do. I really appreciate all the sacrifice that they do for me. Last but not least, the appreciation is also extended to those who involved either directly or indirectly towards this project. Hopefully, this research will be a reference to the others in the future.

ABSTRACT

In today world, technical element has been part of the world leading trend as it has become needs nowadays to measure level of technology adoption in any institutional. Even now in academic institution, dependence toward technology need to be continuously evaluate as to keep up with level of thinking and perceived toward adoption. This study examines how technical students rate Massive Open Online Courses (MOOCs) in terms of the web design element impact toward MOOC adoption and perceived ease of use. The research participants were 152 technical undergraduate students from Universiti Teknikal Malaysia Melaka (UTeM) through questionnaire distribution data in UTeM main campus and were analyzed using Statistical Package for the Social Science (SPSS 23.0). This research proposed MOOC web design factor to be the site design, information usefulness, content, and interactivity as to evaluate it effect toward perceived ease of use. Finding from the research shows the result of three hypothesis accepted and one were rejected. It is significance to the three independent variable which is site design, information usefulness, and interactivity. While one independent variable that was rejected is content.

Keyword *– Massive Open Online Courses (MOOC), MOOC platform, web design, perceived ease of use, learning environment*

ABSTRAK

Di dunia hari ini, elemen teknikal telah menjadi sebahagian daripada trend utama dunia kerana ia menjadi keperluan pada masa kini untuk mengukur tahap penggunaan teknologi di mana-mana institusi. Di institusi akademik, ketergantungan ke arah teknologi perlulah sentiasa dinilai untuk bersaing dengan tahap pemikiran dan dilihat terhadap penerimaan. Kajian ini mengkaji bagaimana pelajar teknikal menilai Kursus Online Terbuka (KOTs) dari segi impak unsur reka bentuk web ke arah penggunaan MOOC dan kemudahan penggunaan. Peserta penyelidikan terdiri daripada 152 orang pelajar teknikal dari Universiti Teknikal Malaysia Melaka (UTeM) menerusi data pengedaran kuantiti di kampus utama UTeM dan dianalisis menggunakan Pakej Statistik untuk Sains Sosial (PSSS 23.0). Kajian ini mencadangkan faktor reka bentuk web MOOC terdiri daripada reka bentuk laman web, kegunaan maklumat, kandungan, dan interaktiviti untuk menilai ia memberi kesan ke atas penggunaan yang mudah dilihat. Hasil daripada penyelidikan menunjukkan hasil tiga hipotesis yang diterima dan satu ditolak. Ia adalah penting kepada tiga pemboleh ubah bebas iaitu reka bentuk tapak, kegunaan maklumat, dan interaktiviti. Walaupun satu pemboleh ubah bebas yang ditolak adalah kandungan.

Kata Kunci *- Massive Open Online Courses (MOOC), platform MOOC, reka bentuk web, kemudahan penggunaan, suasana pembelajaran*

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LIST OF ABBREVIATIONS

ABBREVIATION	MEANING
H_0	Null hypothesis
MOOC	Massive Open Online Courses
E-Learning	Electronic learning
M-Learning	Mobile learning
PSTP	Pusat Sumber Teknologi Pengajaran
PSPTN	Pelan Strategik Pendidikan Tinggi Negara
DePAN	Dasar e-pembelajaran Negara
MOHE	Ministry of Higher Education
SD	Site Design
IU	Information Usefulness
CT	Content
IA	Interactivity
EU	Perceived Ease of Use
UTeM	Universiti Teknikal Malaysia Melaka
FKM	Fakulti Kejuruteraan Mekanikal
FTK	Fakulti Teknologi Kejuruteraan
FPTT	Fakulti Pengurusan Teknologi & Teknousahawan
FTMK	Fakulti Teknologi Maklumat
PBPI	Pusat Bahasa & Pembangunan Insan
ICT	Information Communication Technology
HLI	Higher Learning Institution
MEBHE	Malaysia Education Blueprint in Higher Education
GOL	Globalized Online Learning
TITAS	Islamic Civilisation and Asian Civilisation

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Research study background, relatable discussion of a problem faced currently, the objective along with the research question for this thesis is being discussed in this chapter.

1.2 Research Background

These days, digitalized has become one of the vital element in every aspect as to capture the intention of moving toward the developed country. Revolution in digital is one of the reason for the massive transformation that education world is now faced (Allan and Richard, 2009). Somehow it has become a trend and needs to be among the circle. From all area specifically education, a lot of efforts has been taken by the world and also Malaysia to improve how education is being delivered. Accessing knowledge through MOOC is the best approach and the simplest method as for knowledge transfer. MOOC has become a platform where no limitation and boundaries exist in gaining knowledge. According to Firat et al. (2016) with good design of web it can lead to ensure self-directed learning, with the major six elements that is user sensitive, ensure ease of access, compatible in wide environments, providing social web support, make use of the analytics of learning, and should encompasses the element of motivating.

According to Billy (2015), what makes using MOOC an effective teaching tool are because of course delivery, namely, preparation, attraction, participation, interaction, consolidation and post-course support. With the existence of latest technology applied in the classroom, online education provides an advantage for student flexibility to access. Besides, one other aspect that indicates toward the opportunity of web-based learning is an advancement in Information Communication Technology (ICT) or the Internet (Nathaniel et al. 2015) which has changed how the world is now connecting and adapting towards the innovativeness.

1.3 Education Overview

Education has been one vital element in world perspective nowadays. Looking into the country education performance and commonly use to benchmark their level of attainment makes each country sprinting and competing to be among the best. Nevertheless, accepting an education to be the element to compete for is something to be proud of. Having top education, enable the country to strive the challenges and work for improvement in easier phase. Education excites society to keep improving themselves and having the knowledge and skill enliven others to achieve the success making the society to compete for a healthy lead-up. Formal education nowadays has started as early as three years old. Parents nowadays have applied education from their child early development. That emphasize more on education importance in today era and the effort continue to be developed in a higher level of education. The difference of formal and informal learning is that the formal learning is a more direct manner in terms of speaking, educating and training while informal learning is more freely in term or organization with no direct objective set in terms of education and is hardly intentional from the learner's perspective.

In the formal education system, examinations are used as a measurement tool as to quantify the degree of one's ability in concept understanding and topics related that they have been educated in a variety of settings. Degrees, such as Bachelor's, Master's, and PhDs is one way to evaluate the extent of formal education in specific subjects. Formal or informal education plays a big role in providing benefits in developing the capabilities to think critically and creatively and enable the person to make a sound and well-think judgment. People who awarded in higher education live a more leisure and secure future compare to people who have a minimum level of education. Hence, it is important to be grateful and fully work hard for the opportunity to have education in life since some are not capable to have it even if they want it.

1.3.2 Malaysia Education Blueprint in Higher Education

Significant progress has been made in the ministry in satisfying the core objectives specifically in higher education, and most particularly in increasing the access and intensifying total perspective and element of the system and it established quality.

In 2012, gross higher education enrolment rate in Malaysia had reached 48%. Representing increasing of 70% over the last decade in student enrolment to reach 1.2 million students in public and private universities. Higher Learning Institution (HLI)s includes public universities, polytechnics, community colleges, private universities, private university colleges, and private colleges. Getting into detail for the ninth shift since it will give profound sight of the objective of online education that is, Globalization Learning Online shift that Ministry has the plan to visualize the targeted expectation.

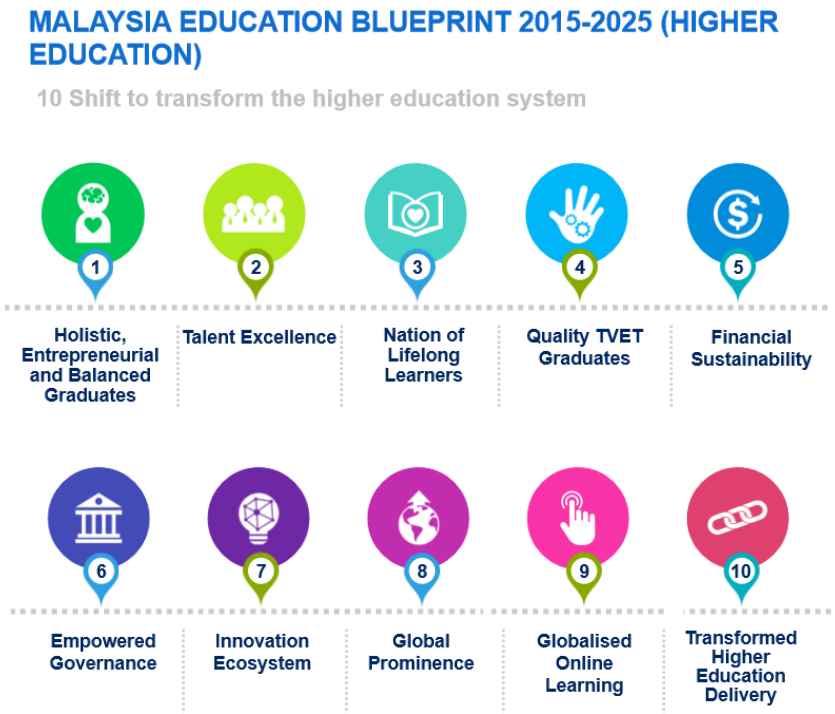

Figure 1.1: Malaysia Education Blueprint Shift

Three main principles in the plans and initiatives in ninth shift targeted are supported by

- ICT-enabled education has huge transformative likely
- Blended education models which assimilate the best of ICT-enabled learning with face-to-face instruction
- Online education as a key enabler for the other Shifts

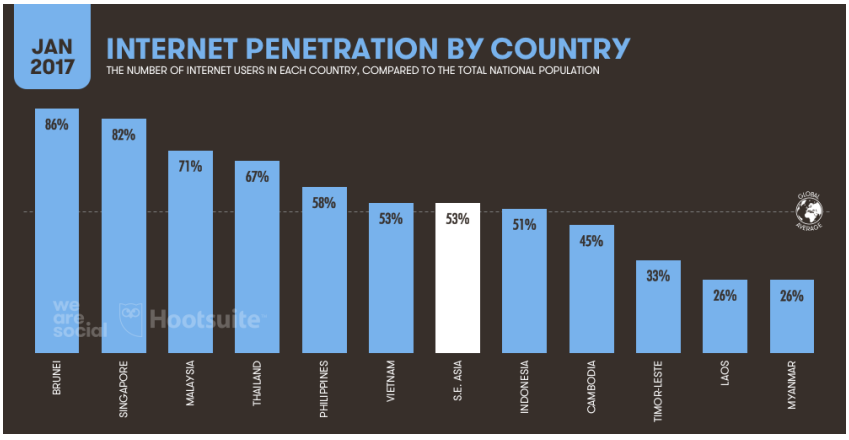

Figure 1.2: Internet Penetration Data by Simon Kemp (2017)

From the figure above, Malaysia is in the third place country with the most of internet penetration compared with other Asian countries. With the evidence to show that internet connectivity in Malaysia is at a good level, makes the online learning is applicable for an institution in Malaysia to fully adopt. A strong support of cyberinfrastructure also gives benefit for students to use the technology such as video conference, live streaming, and MOOC eventually lead to the improvement of the country internet reliability. Malaysian higher education institutions will also assign MOOC expertise in a particular field while partaking in an international MOOC consortium and shape Malaysia education brand at the global level. As to achieve these results, the Ministry will cooperate with the higher education institutions to shape the capacities of the academic community, to discover the institution of a nationwide e-learning platform to manage and forefront the content growth.

Therefore, the Ministry's overriding ambition is to form a higher education system that lines between the world's leading instruction systems and allows Malaysia to strive in the global economy. The Malaysia Education Blueprint in Higher Education (MEBHE) figures on the system's accomplishments to date and suggests major changes in the way the Ministry and system will function in order to realize this goal. Precisely, the Ministry aspires to:

- Instill a tactical mentality in Malaysia's higher education system and generate a structure that produces graduates with an ambition to create jobs, rather than to only pursue jobs
- Develop a system that is less attentive on old-style, academic paths and places an identical value on much-needed technical and vocational training
- Emphasis on results over efforts and to aggressively chase technologies and innovations that address students' requirements and empower greater personalization of the education experience

- Harmonise how private and public institutes are structured, and to shift the current, highly-centralized governance structure for HLIs to a model constructed on earned autonomy inside the regulatory context
- Ensure the economic sustainability of higher education structure by reducing HLIs dependence on government incomes and requesting all investors that directly gain profit from it to contribute as well

1.3.3 Policy of E-Learning

On the initial stage of Phase 2 PSPTN, Dasar e-pembelajaran Negara (DePAN) was launch on 16 April 2011. Infrastructure, Organization Structure, Curriculum and Content, Professional Development, and Enculturation are five main pillars of Malaysia e-Learning Roadmap (Dasar e-Pembelajaran Negara Institut Pengajian Tinggi, 2011). One of the initiatives taken to visualize DePAN, is the Globalized Online Learning (GOL), which is one of the 10 shifts to transform the higher education system in Malaysia. Providing admission in education by taking technology-enabled innovations and personalized learning experience to all students is the benefit in shifting mass production delivery model. By moving forward, means that improvement and alteration need to be done to ensure that the implementation of the initiatives is going to plan. DePAN 2.0 was the upgraded and improved version of DePAN.

For detail policies and improvement in DePAN 2.0, it emphasizes on the encouragement of innovation in education, branding of Malaysian education, cost reduction, the efficiency of human resource, and lifelong learning hence it was not only focused to the feature on the quality. Mainly in the GOL initiative, nation e-learning development is also one element that is taken into the improvement of DePAN 2.0.