PERCEIVED CHALLENGES AND SOLUTIONS IN IMPLEMENTING E-LEARNING AS EDUTAINMENT APPROACH AMONG EDUCATORS AND STUDENTS AT SELECTED UNIVERSITIES IN MALAYSIA

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DESMOND CHEAH SWEE CHEONG

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ABSTRACT

Edutainment involves the practice of teaching and learning in a light-hearted and informal setting, utilizing techniques such as role-playing, simulations, and games. Despite e-learning being the primary platform for delivering lessons in current educational institutions, the application of e-learning as an edutainment strategy is comparatively new within Malaysia's educational system. This study aims to investigate the challenges and solutions associated with the implementation of e-learning as an edutainment approach among educators and students at higher educational levels. The study further explores the correlation between educators' and students' demographic data and their perceived challenges in the implementation of e-learning as an edutainment approach. Employing a quantitative methodology, two distinct sets of questionnaires were administered to educators and students, respectively, as research instruments. The sample comprised 170 educators and 350 Bachelor of Arts (BA) students selected from five higher educational institutions in the Klang Valley, Malaysia, using random sampling techniques. Results indicate that both educators (M=4.32) and students (M=4.34) perceive challenges at a high level, while the perceived solutions for educators (M=4.15) and students (M=4.23) also rank at a high level. Chi-Square and Binary Regression analyses reveal that educators' gender, age, teaching experience, and familiarity with edutainment significantly correlate with and predict the perceived challenges in implementing e-learning as an edutainment approach. Conversely, students' gender, age, and familiarity with edutainment do not significantly predict perceived challenges. In conclusion, implementing e-learning through an edutainment approach can be an effective teaching and learning strategy, provided educators and students are equipped to address associated challenges. This study has practical implications for both educators and students, offering a range of solutions to overcome challenges tied to the implementation of e-learning as an edutainment approach.

Keywords: E-Learning, edutainment, higher education, perceived challenges

APPROVAL

This is to certify that this thesis conforms to acceptable standards of scholarly presentation and is fully adequate, in quality and scope, for the fulfillment of the requirements for the degree of Doctor of Philosophy

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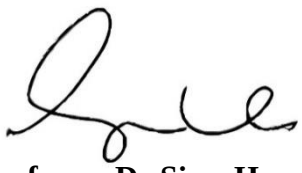

Professor Dr Siow Heng Loke

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(16 October 2023)

DECLARATION

I hereby declare that the thesis submitted in fulfillment of the PhD degree is my own work, and that all contributions from any other persons or sources are properly and duly cited. I further declare that the material has not been submitted, either in whole or in part, for a degree at this or any other university. In making this declaration, I understand and acknowledge that any breaches in this declaration constitute academic misconduct, which may result in my expulsion from the programme and/or exclusion from the award of the degree.

Name: Desmond Cheah Swee Cheong

Signature of Candidate: **Date**: 16 October 2023

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LIST OF ABBREVIATION

AECT	Association for Educational Communication and Technology
AI	Artificial Intelligence
BA	Bachelor of Arts
C.G.P.A.	Cumulative Grade Point Average
COVID-19	Coronavirus Disease 2019
Delima	Digital Educational Learning Initiative Malaysia
EFA	Exploratory Factor Analysis
ERP	Enterprise Resource Planning
ICT	Information and Communication Technology
ICTL	Information and Communication Technology Literacy
IoT	Internet of Things
KMO	Kaiser-Meyer-Olkin Measure
KRI	Khazanah Research Institute
LCD	Liquid-Crystal Display
LMS	Learning Management System
M	Mean Score
M-Learning	Mobile Learning
MOE	Ministry of Education
MOOC	Massive Open Online Courses
ODL	Online Distance Learning
PCK	Pedagogical-Content Knowledge
PDF	Portable Document Format
SAMR	Substitution, Augmentation, Modification, and Redefinition
SDG4	Sustainable Development Goals 4

SOP	Standard Operating Procedures
SPSS	Statistical Package for Social Science
Std. Dev.	Standard Deviation
STEM	Science, Technology, Engineering, and Mathematics
TAM	Theory of Acceptance Model
TCK	Technological-Content Knowledge
TPCK	Technological Pedagogical Content Knowledge
TPK	Technological-Pedagogical Knowledge
TRA	Theory of Reasoned Action

CHAPTER 1

INTRODUCTION

1.0 Introduction

The term "lifelong learning" refers to the continuous and democratic process of acquiring knowledge, skills, and competencies, either formally or informally, throughout one's life (Kumar and Kumar, 2022). In the contemporary era of globalization, individuals face increasing pressure to continually improve their education and expertise to remain competitive on a global scale. This imperative is not only a personal pursuit but also a central contributor to the socio-economic development of the country. Recognizing education as a lifelong effort has become essential to fostering individual growth and societal advancement, aligning with the goals set forth by the Malaysian government.

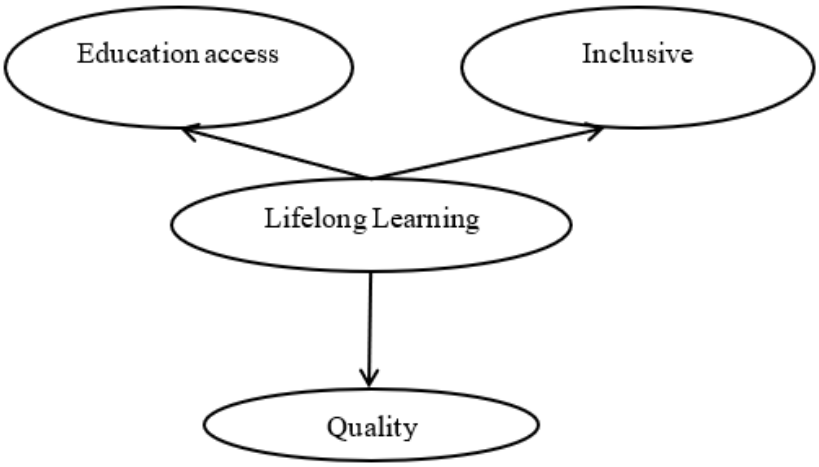
Lifelong learning is actively promoted in Malaysia to achieve objectives related to social equity, civic engagement, and the diverse needs of individuals and the workforce. The Third Outline Perspective Plan (2001-2010) played a pivotal role in laying the foundation for lifelong learning by emphasizing the provision of facilities for ongoing knowledge mastery and skill enhancement beyond formal education (Hazwani and Nor Aishah, 2018). The 9th Malaysia Plan allocated substantial financial resources, totaling RM45.15 billion, for the development of the country's human resources. A significant portion of this budget, RM11.27 billion, was specifically earmarked for additional educational support, with an additional RM4.793 billion allocated for training-related activities.

Complementing these initiatives, the government also set aside RM5.462 billion for youth development programs encompassing leadership training, upskilling, business and management education, as well as prevention and rehabilitation efforts.

Aligned with global aspirations, Malaysia has committed to the Education 2030 agenda, emphasizing Sustainable Development Goal 4 (SDG4). This goal aims to ensure access to high-quality, inclusive, and egalitarian education for all Malaysians, encouraging continuous learning throughout their lives. The pillars of accessibility, inclusivity, and quality underpin SDG4, striving to eliminate gender disparities, ensure equal access to educational opportunities, and promote vocational and technical skills (Wulff, 2020).

In the realm of higher education, lifelong learning takes diverse forms, including flexible education, remote education, recognition of job experience, and access to short-term courses, all aimed at providing individuals with opportunities to upgrade their knowledge and skills. E-learning, also known as distance education, stands out as a time-tested educational method, offering a flexible and location-independent model for lifelong learning (Zeng et al., 2020).

Figure 1.1: The principles of lifelong learning



E-learning, a subset of lifelong learning, encompasses various platforms such as Massive Open Online Courses (MOOC), which have gained prominence in the process of studying and instructing (Mohd Rosmadi et al., 2020). Educational technology plays a crucial role in facilitating e-learning, involving the transformation

of conventional teaching and learning methods, including the transition from physical books to digital materials (Sudarsana et al., 2019).

The growing demand for online learning, emphasized by the rapid expansion of prestigious educational institutions offering online classes, predates the COVID-19 pandemic. Institutions like Stanford University and Harvard University have been at the forefront, providing online courses spanning mathematics, computer sciences, engineering, business arts, and personal development (Koksal, 2020). The popularity of online education is attributed to its accessibility, allowing students to revisit instructional materials at their own pace, fostering a deeper comprehension of covered concepts.

Educational technologies, particularly Big Data, Machine Learning, and the Internet of Things (IoT), contribute to the evolution of e-learning. Lately, ChatGPT (AI) has had a significant effect on improving learning and instruction in higher education. These advancements are integral components of distance learning, a paradigm further emphasized by the global shift to online education due to the COVID-19 pandemic (Winter et al., 2021). The COVID-19 pandemic, leading to the closure of schools and educational institutions, propelled distance learning through e-learning platforms into the forefront of educational technology trends (Coman et al., 2020). E-learning, characterized by instruction or education delivered via electronic media, assumed a central role in overcoming the challenges posed by social distancing measures and restrictions on the use of physical facilities (Quah, 2020).

The shift to e-learning necessitated students and educators to adapt to new modes of instruction, utilizing personal electronic devices to ensure continuity in education and compliance with Standard Operating Procedures (SOP). However, the challenges stemming from decreased motivation, reduced attention in virtual classes,

and difficulties in time management highlight the need for innovative approaches, particularly in the realm of edutainment within e-learning contexts. Edutainment, as a strategic adaptation to regulate students' motivation, becomes crucial in making e-learning sessions more engaging and enjoyable, particularly when interaction is limited to virtual environments. The use of internet-connected devices, such as computers, laptops, tablets, and smartphones, enables students to participate in e-learning programs, fostering a more participatory and flexible form of instruction (Coman et al., 2020).

Despite the prolonged existence of e-learning, its continued expansion, especially in the wake of the COVID-19 pandemic, underscores its dominant role in the contemporary educational technology landscape. Leveraging the benefits of technology, educators have produced a multitude of online learning courses and hybrid learning modalities, integrating e-learning into traditional classroom settings using platforms like Zoom or Microsoft Teams. The integration of e-learning with Learning Management Systems (LMS) further enhances the monitoring of students' learning outcomes (Wan Faiziah et al., 2020).

Global educational institutions have diligently sought effective strategies for delivering education through remote learning, offering diverse programs and software to facilitate students' educational progress. The familiarity of students and educators with the advantages and disadvantages of online education, coupled with the adaptability to innovative media formats, has significantly increased the efficacy of education delivery, promoting flexibility in time and location.

The benefits of online learning extend beyond accessibility and flexibility, addressing the issue of student engagement through various media formats, including films, PDFs, podcasts, and software. The ability to record and store learning sessions