

CHAPTER 1

INTRODUCTION

1.1 Research Background

Education is a fundamental human right and a significant catalyst for promoting long-term and sustainable progress. “Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all” is one of the targets outlined in Sustainable Development Goals 4 (SDG 4) of the United Nations’ 2030 agenda for sustainable development (UN, 2023). This target emphasizes the need to provide education that is accessible to all, regardless of their background, age, ability, or socioeconomic status. Indonesia responded to this global goal by targeting quality education in its National Long Term Development Plan 2025-2045 to achieve Indonesia Emas 2045 (Kementerian PPN/Bappenas, 2023).

In order to enhance the quality of human resources in Indonesia, the Ministry of Education and Culture (*Kementerian Pendidikan dan Kebudayaan - kemdikbud*) put focus on the preparation for the skillful generation for high school levels (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2019). However, a poll done by Programme for International Student Assessment (PISA) showed that around 70% of students below 15 years old still need improvement in reading and numeracy skills. It even got worse during the pandemic of COVID-19. To mitigate the impact of learning loss, *Kemendikbudristek (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi)* simplified the curriculum into

Kurikulum Darurat then to *Kurikulum Merdeka* for a better recovery in the pedagogical process. *Kurikulum Merdeka* concentrates on students' requirements, abilities, and characteristics. Schools and teachers are now free to create teaching-learning programs according to students' needs and characteristics to facilitate the effective learning process.

As stated on the Kemdikbud's website, the census done by Badan Pusat Statistik in 2020 showed that most of the Indonesian population as 27.94% are Generation Z (Rakhmah, 2021). Generation Z (Gen Z) are those who were born between 1996 to 2010 (Mckinsey, 2023). They live in the digital era, grow up with the internet as part of their daily life, and therefore are literate in technology. These make Gen Z known as the "digital natives". Nowadays, most Gen Z are at school-age. Data from Badan Pusat Statistik showed that in Indonesia in 2022, there were 93.21% of teenagers and adults of age 15-24 years old already had skills related to computers (Badan Pusat Statistik Indonesia, n.d.).

On that account, to adjust with the students' needs, the education system transforms into digital learning, which means that there will be technology-enhanced learning that allows students to have autonomy over the timing, location, and speed of their learning (Achievement, 2021). In embracing the 5.0 society where everything is connected to technology (World Economic Forum, 2019), integrating classroom activities with technology is becoming one of the best practices in the education sector to optimize the educational process. This allows lessons to be more interactive and engaging, more personalized, and have more access to educational information and resources (Hamidi, 2019). In the Presidential

Forum of G20 in 2020, digital technology for education was included in one of the priority agendas (Kementerian Pendidikan, Kebudayaan, Riset dan Teknologi, 2020). The Head of DKI Jakarta Provincial of Education Board, Nadhiana S.Pd., M.Pd., in Acer Edu Summit 2023 said that digital transformation in the education sector was needed to encourage the students to think critically and create an even distribution of qualified education for all students in Indonesia (Wulandari, 2023). Zulfikri Anaz, the Acting Head of the ministry's Curriculum and Learning Centre told ANTARA that the growing influence of science, technology, and culture cannot be avoided and therefore critical thinking is needed in the digital age. According to him, *Kurikulum Merdeka* can address this need (Antaraneews, 2021). The occurrence of COVID-19 even boosts the urgency and acceleration of digital transformation since during the pandemic, the teaching-learning process was done online.

Kong et al. (2014) believed that in order to maximize students' potential for meaningful learning, 21st-century teaching and learning will need to add context outside the classroom, such as through mobile learning applications and websites. Mobile learning tools have been proven to significantly enhance behavioral, social, cognitive, and emotional learning engagement and outcomes of students (Guler, 2021; Bamidele, 2021; Zhonggen Yu et al., 2020; Al-Razgan, 2019). *Kemendikbudristek*, schools, educational courses, educators and educational practitioners work together to facilitate digital learning. Websites and platforms are prepared for teachers and students to provide various digital teaching-learning contents such as digital video, audio, AR, and VR which are accessible by their

mobile phones, tablets, or laptops at any location and at any time. If schools are better equipped, they can utilize the available teaching tools to execute *Kurikulum Merdeka*, or they can even develop their own teaching tools according to their needs (Almaiah, 2018; Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2022).

To support this mobile learning activities in *Kurikulum Merdeka*, Learning Management Systems (LMS) was created to help the administration and the delivery of learning materials digitally. LMS allows teachers to upload the materials, videos, and assignments and students can access those materials anywhere and anytime through their devices (Foreman, n.d.). As in Indonesia the use of smartphones and tablets is getting rising year by year and forecast to continuously rising until 51.08% in 2028 (Statista, 2023), the current LMS can now be accessible using mobile devices like smartphones and tablets, which are referred to as mobile Learning Management Systems (m-LMS).

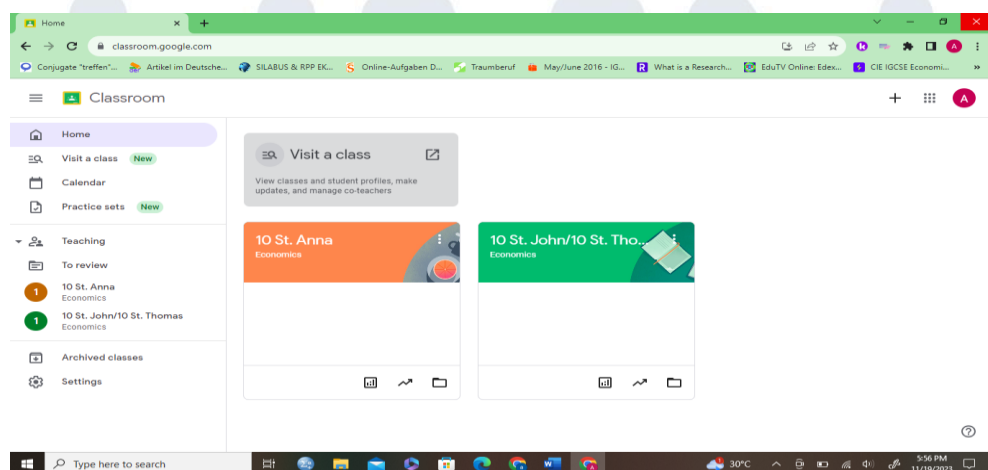


Figure 1.1: Google Classroom as one of the LMS used to support *Kurikulum Merdeka* implementation

Source: <https://marketbrief.edweek.org/>

Despite the fact that many colleges have expanded their educational platforms to include mobile devices, students' interest and actual use of mobile learning systems is lower than projected (Chao, 2019). Some main obstacles to applying e-learning in Azerbaijan were access to the internet, infrastructure and safety concerns, technical capabilities, university administration's support, and student motivation (Chang, 2017). The cost of the internet, mobile device features, and the effort to find suitable mobile applications were also challenges for mobile learning use (Kaliisa, et.al, 2017). There were a number of pedagogical and technological problems with mobile learning platforms (Yousafzai et al., 2016).

A simple survey done by the author in a private Senior High School in Tangerang in March 2023 showed that all 29 participants have used mobile devices for learning purposes. However, 24.1% found out that the efficacy of mobile learning was limited. Around 13.8% thought that mobile learning failed to improve their academic performance, thus the mobile learning was not really effective for students. An observation was also conducted and the result was that some students were not aware of the information and resources given in the LMS so that personal reminders and face-to-face deliverance by the teachers were still needed to be done, indicating low effectiveness of m-LMS usage. From what the author observed, it happened in several other schools. In fact, getting students to accept mobile Learning Management Systems (m-LMS) is essential for its adoption to be successful (Almaiah et al., 2019).

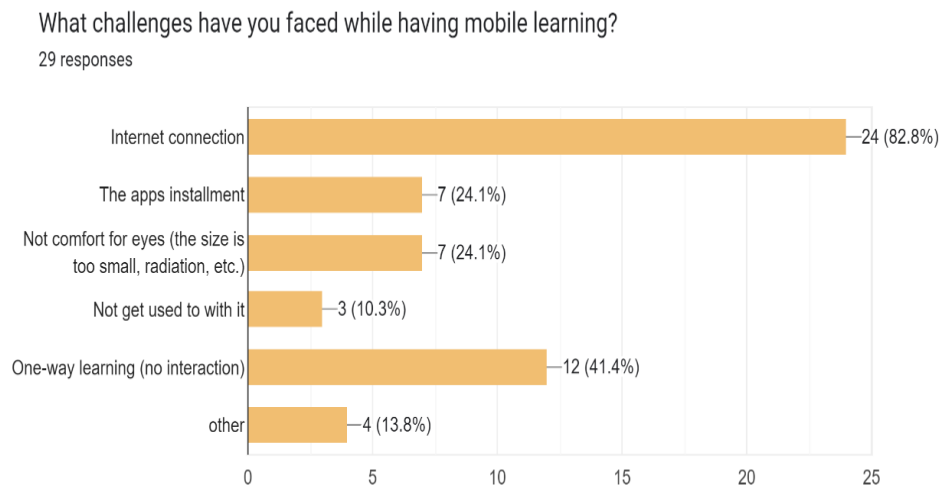


Figure 1.2: The survey about the use of mobile learning application for Senior High School students

Source: survey done in SHS St. John's Catholic School on March 17, 2023.

The previous studies indicated perceived ease of use and perceived usefulness (Al-Basyareh, 2022; Al-Emran, 2020; Almaiah, 2018; Alshurideh, 2020; Ching, 2017; Voicu, 2023) as well as performance expectancy, effort expectancy, facilitating conditions, and social influence (Almaiah, 2019; Alowayr, 2021; Batucan, 2022; Chao, 2019; Chavoshi, 2018; Fagan, 2019; Kaliisa, 2017; Kumar, 2019; Sidik, 2020) were the main factors influencing students' embrace of mobile learning systems, and consequently led to the adoption of mobile learning. Some other external factors such as perceived enjoyment, perceived information quality, perceived awareness, perceived trust, perceived compatibility, availability of resources, self-efficacy, and perceived security (Al-Basyareh, 2021; Almaiah, 2019; Alowayr, 2021; Batucan, 2022; Chao, 2019; Ching, 2017; Fagan 2019; Kumar, 2019; Voicu, 2023; Wei, 2020) were additional factors impacting the

mobile learning systems' acceptance. In general, some studies showed that internal and external factors exerted a substantial favorable influence on students' inclination to utilize mobile learning systems that in the end will succeed in the actual use of the system, while some other studies figured out some variables had no effect on the intention to use the systems. For instance, social influence and effort expectancy that displayed a negligible effect on the students' intention to employ mobile learning systems.

Considering the growing prevalence of intelligent technologies in nearly every aspect of life, it is especially crucial to consistently do research on variables affecting technology adoption (Seibert, 2021). Examining the factors that impact students' embrace of mobile learning systems and their intention to use it comprehensively and seamlessly is vital (Nikou and Ecomides, 2017). Therefore, this study aimed to investigate the determinants that impact the adoption of mobile learning systems, particularly m-LMS, among students at the Senior High School level by employing the Unified Theory of Acceptance and Use of Technology (UTAUT) model. Four main factors influencing the intention and usage in UTAUT were examined: performance expectancy, effort expectancy, social influence, and facilitating conditions.

However, the UTAUT model is focusing more on the extrinsic motivation in technology adoption, while referring to Deci & Ryan (2000) about Self-Determination Theory, one's behavior is driven by not only extrinsic motivation but also intrinsic motivation. When someone is motivated by intrinsic factors, they participate in an activity because they find it fascinating or delightful in and of

itself. Enjoyment has a good influence on motivation levels, influencing what the students learn and how much knowledge they remember (Cloke, 2023). Thus, a noteworthy attribute in the adoption of mobile technology is the degree of enjoyment experienced (Sitar-Taut, 2021). Schutz & Pekrun (2007) and Al-Shara (2015) stated that formal education entails not just supplying students with knowledge, information, and skills, but also offering the sense of enjoyment connected with learning and accomplishment among students. For that reason, perceived enjoyment was investigated as well as the additional determinant.

Furthermore, gender and types of school were examined as the control variables to evaluate whether gender and types of school bring different significant impact on the actual use of m-LMS. This study specifically examined the utilisation of m-LMS for the implementation of *Kurikulum Merdeka*.

1.2 Research Problem

Mobile learning systems and its tools, such as m-LMS, do not fully satisfy Senior High School students. The emergence of digital era and the digital literacy owned by Generation Z, supported by the government programs of school digital transformation and *Kurikulum Merdeka*, and hastened by the COVID-19 widespread, have enabled the students in High Schools to take benefits from mobile learning systems. However, some students face problems in applying mobile learning due to technical problems or personal concerns; therefore, they are not satisfied yet with mobile learning. There are lots of factors that were found influencing the mobile learning acceptance for students, such as performance

expectancy, effort expectancy, perceived enjoyment, social influence, and facilitating conditions. In some studies, these variables were significantly influencing the mobile learning acceptance for students, but in some other research, these factors showed no significant effect to the mobile learning adoption. Inconsistency was being found regarding this mobile learning acceptance. This is the problem that tried to be analyzed in this research.

After reviewing past studies, a population gap was found. In most earlier research, the analysis of Senior High School students has received insufficient attention. The previous research focused more on the acceptance of mobile learning among higher education students. University students were the most frequently selected sample group in the vast majority of the examined studies (explicitly 83%), indicating that the majority of empirical data was gathered at universities. Out of all sample groups, only 17% involve additional individuals (high school students, faculty, staff, and teachers) which might be regarded as a research limitation (Granic & Marangunic, 2019). This research analyzed the factors influencing the acceptance of mobile learning systems, specifically m-LMS, among Senior High School students in Indonesia, considering that certain factors may become more or less significant in one culture than they are in another due to the model's potential for performing differently in various cultural contexts (Venkatesh et al., 2010).

A knowledge gap was also found. Most of the previous research applied age, gender, and experience as their moderating variables. However, this research used gender and type of schools as the control variables. The variable was

investigated to know whether different gender (male and female students) and different types of school (Satuan Pendidikan Kerjasama (SPK) schools and national schools) bring significant effect on the actual use of m-LMS.

Lastly, this study's goal was to determine how openly students would accept mobile learning applications, particularly mobile Learning Management Systems (m-LMS), by doing a study on Senior High School students coming from whose schools are applying m-LMS as the implementation of *Kurikulum Merdeka*. The research focused on the analysis of performance expectancy, effort expectancy, social influence, facilitating conditions, and perceived enjoyment as factors influencing the level of acceptance for the m-LMS and used gender and type of schools as its control variables.

1.3 Research Objectives

In response to the research problem found, it is necessary to examine the variables impacting Senior High School students' acceptance of m-LMS as a *Kurikulum Merdeka* implementation using the UTAUT model. To figure out the factors influencing m-LMS acceptance, this research was addressed to respond the subsequent inquiries:

- (1) Do performance expectancy, effort expectancy, social influence, and perceived enjoyment significantly impact the behavioral intention of Senior High School students when utilizing m-LMS in the context of *Kurikulum Merdeka*?

- (2) Does perceived enjoyment have significant effects on performance expectancy, effort expectancy and social influence?
- (3) Do the facilitating conditions and behavioral intention of Senior High School students in using m-LMS significantly influence the actual use of m-LMS?
- (4) Do gender and type of schools give different significant effect on the actual use of m-LMS for Senior High School students?

1.4 Research Benefits

This research was expected to bring benefits to multiple parties, including:

- (1) For academics:

The findings of this research may provide a knowledge contribution and enrich the previous research about the factors influencing m-LMS' acceptance specifically for Senior High School students in Indonesia as the implementation of *Kurikulum Merdeka*.

- (2) For managerial:

The results of this study may furnish essential data for the school management and school IT developer or independent m-LMS developers in identifying, determining, and designing an effective m-LMS for the students based on the consideration on factors that influencing the students' acceptance of m-LMS. Furthermore, this finding will help the school management in making informed decisions regarding the investment of m-LMS and to design strategy to encourage the students' use of m-LMS to facilitate the integration of digital technologies in educational process.

- (3) For personal development:

By doing this research, the researcher will be able to develop her own hard-skills and soft-skills that are beneficial for the researcher's self-development and career development.

1.5 Scope Limitations

In doing the investigation on factors impacting the use of m-LMS among Senior High School students, the research used constraints as follows:

- (1) The study focused on Senior High School students who have ever used or are using the mobile Learning Management System and whose schools are adopting *Kurikulum Merdeka*.
- (2) The study focused specifically on Senior High School students in Indonesia.
- (3) The study was carried out in the Indonesian cultural context and implied some knowledge of the *Kurikulum Merdeka* and the national education system.

