

## CHAPTER V

### CONCLUSION AND SUGGESTION

#### 5.1 Discussion

The United Nations' 2030 agenda included Sustainable Development Goals 4 (SDG 4), which aimed to provide a fair and high-quality education that is available to everyone, regardless of their background, age, aptitude, or financial situation. In response, Indonesia aims to prioritize the provision of high-quality education as outlined in its National Long Term Development Plan 2025-2045, with the goal of achieving Indonesia Emas 2045. Nevertheless, a survey conducted by the Programme for International Student Assessment (PISA) indicates that Indonesian students are still in need of enhancement in their reading and numeracy abilities. The situation deteriorated worse during the pandemic of COVID-19.

In order to alleviate the consequences of learning loss, *Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi (Kemendikbudristek)* made modifications to the curriculum, resulting in *Kurikulum Merdeka*. In order to optimize outcomes, *Kurikulum Merdeka* proposes aligning teaching and learning activities with the specific requirements of Generation Z students, who possess a high level of technological literacy. To cater to the students' requirements, the education system undergoes a shift towards digital learning, where technology is integrated into classroom activities to improve the pedagogical and cognitive process. Therefore, the utilization of e-learning and m-learning has become more prevalent.

In order to facilitate digital learning activities in *Kurikulum Merdeka*, a Learning Management System (LMS) has been developed to assist in the digital management and delivery of learning materials. The LMS enables teachers to post educational materials, videos, and assignments, which can be accessed by students on their devices at any given moment and from any given place. Mobile Learning Management Systems (m-LMS) now allow users to access the current LMS utilizing mobile devices such as smartphones and tablets.

Although m-LMS offers advantages to students, their level of interest and practical utilization of mobile learning systems falls below expectations. Ensuring student acceptance of m-LMS is vital for the effective implementation of this technology. This study aims to analyze the factors that influence the adoption of m-LMS among Senior High School (SHS) students in the setting of *Kurikulum Merdeka* in Indonesia. The extended UTAUT model will be applied for this analysis. The study examines five determinants: performance expectancy, effort expectancy, social influence, facilitating conditions, and perceived enjoyment. This study also examined how gender and type of school influence the the actual use of SHS students in adopting the technology.

The study was conducted by distributing online surveys to respondents whose school is applying *Kurikulum Merdeka* and utilizing m-LMS. Total 420 respondents from seven schools in Tangerang participated in the survey. The acquired data was quantitatively evaluated using PLS SEM in SmartPLS version 4.

The result showed that students' behavioral intention to use m-LMS were

Strongly impacted by performance expectancy, perceived enjoyment, and social influence, but not by effort expectancy. Students are eager to use m-LMS when they feel that the systems are able to help them in enhancing their academic performance, when the systems are fun, and when their circles influence them to use m-LMS. The outcome also revealed that actually perceived enjoyment is mediated by performance expectancy, effort expectancy, and social influence in influencing the students' behavioral intention positively. The enjoyment derived by students from using m-LMS will facilitate their comprehension of the system's advantages, enhance their proficiency in utilizing the system, and enable them to disseminate the system within their social network. Furthermore, the facilitating conditions and the strong desire of students to utilize m-LMS resulted in their actual usage of the m-LMS. However, the result showed no difference effect from gender, while types of schools gave different impact on the practical utilization of m-LMS. SPK school's students have tendency to have higher actual use of m-LMS rather than the national school's students.

As a conclusion, the study was able to fulfill the research purpose which is to examine the determinants impacting the acceptance of m-LMS amidst Senior High School students as the implementation of *Kurikulum Merdeka*. School management and m-LMS developers can use the findings in this study to gain more insights useful for investing, designing and determining an effective m-LMS for the students.

## 5.2 Suggestion and Implications

During the study process, the author encountered many limitations due to constraints in both time and funding. The study specifically targeted the Senior High School students in Indonesia. The findings and conclusions may lack generalizability to students in alternative educational levels or diverse geographical places. It is recommended to conduct further research that includes various educational levels, such as primary, junior high school, or university students, as well as additional perspectives, such as those from teachers.

Furthermore, the research is conducted within the specific cultural framework of Indonesia, requiring a certain level of familiarity with the *Kurikulum Merdeka* and the national education system. These conclusions may not be applicable to educational environments in foreign countries. Future research can be carried out by utilizing alternative situations and relevant contexts.

The investigation indicated that 66.8% of the variables employed are capable of elucidating the behavioral intention to utilize a system. The remaining 33.2% of the behavioural intention could potentially be accounted for by unexamined variables in this investigation. It highlights the advantages of studying the connections between factors that come before this intention. Future study is suggested to explore more factors influencing students' acceptance of m-LMS, such as educational quality, habit, students' characteristics, and others.

The UTAUT model served as the foundation for the framework employed in this investigation. However, future study might employ other approach to give deeper and more insightful finding. For example by adding the research variables

from psychological theory, sociocultural theory, environmental education, or other theory.

In this study, the focus is on exploring the effect of main determinant in UTAUT model directly toward the behavioral intention and indirectly as the mediating variables between perceived enjoyment and behavioral intention. Future study can be designed to explore not only the effect of perceived enjoyment to UTAUT variables (performance expectancy, effort expectancy, and social influence) in influencing behavioral intention, but also the effect of UTAUT variables (performance expectancy, effort expectancy, and social influence) to perceived enjoyment in influencing behavioral intention.

This study used gender and types of school as the control variables. Future study may use other variables to be controlled such as from demographic variables (age, ethnicity, educational level, and so on), personal characteristics (personality traits, experience, and so on), psychological factors (motivation, attention, emotional state, and so on), technological factors (software versions, hardware specification, and so on), et cetera. In future research, it may be beneficial to use gender and types of school, or other potential variables, as moderating variables instead of control variables. This would allow for an investigation into whether these variables enhance or diminish the relationship between the independent and dependent variables.

Moreover, this study aimed to figure out factors influencing the acceptance of m-LMS for students. Future study can extend the research into the impact of the actual use towards students' performance such as towards academic performance,

learning outcomes, learning engagement, innovation mindset, et cetera. The results of this prospective investigation can provide educational institutions with valuable insights on the efficacy of m-LMS in improving students' academic achievement, learning outcomes, and overall educational experience.

Due to the specific timeframe in which the research was done, it is possible that it did not fully represent the evolving attitudes and acceptability of the m-LMS over time. Later research ought to employ longitudinal studies to monitor the evolution and progression over a period of time. Longitudinal studies are likely to provide a more comprehensive understanding of the research issues over time.

Finally, quantitative analysis can disregard complex and abundant information provided by respondents. Hence, further investigations might be undertaken using both quantitative and qualitative research methodologies to enhance the dependability and accuracy of the findings. The integrative method may enable an in-depth analysis of results and ensures that the study encompasses the whole range of respondents' responses, so enhancing the research output with more detailed and nuanced insights.

This study concluded that Perceived Enjoyment, Performance Expectancy, Effort Expectancy, and Social Influence influenced the intention to use m-LMS that together with Facilitating Conditions led to the actual use of m-LMS. Therefore, some suggestions for managerial implications were made:

- (1) The main key indicator of Performance Expectancy (PE) that affects the intended utilisation of m-LMS is on its benefit in helping the students to understand the material better (shown by the factor loading result for PE with

the highest value was on PE3 about the benefits for material understanding).

Hence, the implications are:

- For school management:

The school management must proactively share and exhibit the academic and performance advantages that arise from utilising m-LMS.

Emphasising the impact of m-LMS on boosting learning outcomes, retaining knowledge, and achieving academic success can have a favourable effect on students' desire to utilise the system. This can be done for example by:

- holding a workshop for students to explain all the features available in the m-LMS and their benefits for students' works. This workshop can be administered by the school itself or done by inviting the m-LMS vendor to deliver the workshop.
- integrating m-LMS activities with lessons in the classroom and evaluations, especially for IT lesson. The first meeting on the IT lesson can be used by the IT teacher to socialize the features and benefits of m-LMS to students. Next, all the activities in IT lesson is done fully and consistently by utilizing the features in m-LMS, such as for accessing the material, for submitting the assignment, for the students to track their academic performance, agenda, and missing assignments, for doing discussion via virtual meet and chat room, et cetera. In this case, IT lesson acts as the initiator subject and role model on how to use m-LMS effectively and efficiently.

- Showcase successful experiences and favourable results of utilising m-LMS by means of newsletters, social media platforms, and school events. For example, the students made a video project and submitted via m-LMS. The school may open the m-LMS access for parents so that they can observe their kids school progress and projects. The school may also exhibit the students' works in m-LMS during parents meeting or other school events where parents are invited or opened for public. By implementing this approach, both students and parents gain awareness of the advantages of m-LMS and are motivated to utilise it more effectively.

- For m-LMS developer:

The m-LMS developers must acknowledge the varied interests and learning styles of students and offer customisation features that enable students to personalise their learning preferences and then adjust the m-LMS to meet individual requirements. For example by:

- developing and setting up an advanced recommendation system that utilized student preferences and history data to provide personalized suggestions for supplementary learning materials
- providing customizable notifications such as for new assignments, incoming chat messages, announcements, assignment deadlines, or teacher-graded scores.

These modifications guarantee that students are provided with information that could enhance their academic achievement.



(2) The main key indicator of Perceived Enjoyment (PJ) that influence the intended utilisation of m-LMS is on its ability to provide an interesting (shown by the factor loading result for PJ with the highest value was on PJ3 about the system ability to enhance interest in learning). Hence, the implications are:

- For school management:

It is advisable for school management and teachers to establish pleasure of utilizing m-LMS to enhance learning experiences. There are some examples of activities that school might do to increase students' joy in using m-LMS.

- Teachers collaborate with the school multimedia to create, edit, and upload interesting contents like video, animations, music, AR/VR contents, online quizzes, virtual projects, interactive games and simulations. Through this approach, students can access diverse educational resources that cater to their individual learning preferences, so enriching their learning journey and making it more pleasurable. For example instead of sharing the video from youtube as the learning material, the teacher might do recording with green screen to explain the material and upload the video to m-LMS.

Moreover, the teacher might enrich the activities by providing online quizzes or interactive games via m-LMS to test the students' understanding.

- Related to teachers roles in facilitating enjoyable lessons for students, the school should provide traing for teachers on how to

design fun and interesting learning activities for students using the m-LMS. Teachers are essential in creating a supportive learning environment and therefore preparing the teachers to use m-LMS optimally is vital.

- Utilize m-LMS to streamline virtual outings or virtual tour or interactive activities that provide real context to the curriculum. This can enhance the students' learning experience by making it more engaging and pleasurable. For instance, the school may employ virtual trips that are accessible through m-LMS when it organizes an outing program such as camping, live-in, subject trips, or any other activities so that parents and students are well-informed about the location and the activities that will be taking place there.

- For m-LMS developer:

- The m-LMS developers must accommodate the preferences of students so boost up the students' enjoyment in using the system, such as by providing language setting, automatic reading feature for the auditory students, AR/VR contents for kinesthetic students, or dashboard, themes and color schemes, font type and font size customization for visual students.
- The m-LMS developer might insert gamification into the m-LMS to enhance the perception of enjoyment. By offering features like badges, awards, and leaderboards, the learning process will be more captivating and enjoyable for students.

(3) The main key indicator of Social Influence (SI) that influence the intended utilisation of m-LMS is on the influence from friends (shown by the factor loading result for SI with the highest value was on SI1 about the influence from friends). However, school and teachers were also contributed in influencing the students to adopt m-LMS. Hence, the implications are:

- For school management:

School management and teachers could promote the use of m-LMS to students by:

- assigning the collaborative project in m-LMS, such as discussion forums, group projects, and peer-to-peer interactions. By assigning these kinds of assignments, the students might take the benefits of m-LMS. For example, to do the discussion forums, the students might use the feature of virtual meeting and chat room. The students are also able to use m-LMS to share their works, documents, or projects to be edited or added by their team members. Teachers then might assess the progress as well through m-LMS.

- Choose tech-savvy and eager students to be m-LMS ambassadors. These students that have a significant impact on m-LMS promotion in their social networks through the testimonials, school workshop, and peer support.

- Plan peer-led training sessions so that students who are skilled with m-LMS may teach others. For users who are unfamiliar with the site, this might make the learning environment more cozy and

approachable. For instance, when assigning students to groups for a project, teachers may combine students who are proficient with m-LMS with those who find it difficult to use m-LMS in a single group. Afterwards, the group members who are not as proficient in m-LMS might be taught by the students who are skilled with m-LMS.

- For m-LMS developer:
  - Developers of m-LMS should integrate collaborative features, such as chat rooms, group assignments, and peer-to-peer learning instruments. It can promote a feeling of unity in m-LMS and stimulate social engagement among students.

(4) The main key indicator of Facilitating Conditions (FC) that influence the actual to use m-LMS is on students' personal resources (shown by the factor loading result for FC with the highest value was on FC1 about student's personal resources), though other indicators from FC contributed to the actual use as well. Hence, the implications are:

- For school management:
  - The school management should review the policy regarding the use of mobile devices, especially for smartphones, in class and m-learning is more favorable. For example, students are allowed to use their smartphones during the lessons when it is needed and under the supervision of the teacher. Once the smartphones is no longer needed for the teaching learning process, the smartphones might be kept and not being used anymore.

- The school management should provide a strong and speedy internet connection for the students accessing the m-LMS. If possible, the school might also consider to required laptop/Chrome book as the substitute of textbooks. By doing this, the use of m-LMS might be leveraged to be more effective.
  - Providing technical assistance or IT personnel to help students encountering technical difficulties or other constraints. Assistance can be obtained either through the help desk or through online/offline chat support.
  - Ensure regular updates of the m-LMS software to fix any software glitches, enhance functionality, and integrate novel features based on feedback from students. This updates can be done by school IT staff or by contacting the school m-LMS vendor.
- For m-LMS developer:  
The m-LMS developer should conduct periodic improvements by consistently upgrading and refining the m-LMS. The system accurately and rapidly responds to user input, taking appropriate actions and resolving any difficultie and ensuring its up-to-date performance.

To briefly conclude, this study suggests the followings:

- (1) For academics:

The research provides valuable insights into the determinants that impact the acceptability of m-LMS, specifically amidst Senior High School students in Indonesia, in relation to the implementation of *Kurikulum Merdeka*. This

study emphasizes the need of including students' views as a central focus in educational research.

(2) For school management

The results of this study can be used as inputs for school management to decide an effective m-LMS investment according to student's demands as the main focus in education is for students. Besides, it indicates the need for school management to implement a comprehensive training initiative for teachers, such as for online tutorials, webinars, and recording, to enhance teachers comprehension of the operations of m-LMS. Through the provision of training, teachers acquire the necessary skills to assign and monitor student performance using m-LMS. Over time, teachers will become more innovative in leveraging the advantages of m-LMS to foster student development. When teachers consistently utilize m-LMS, students will also exhibit consistency, hence enhancing the effectiveness of m-LMS.

(3) For m-LMS developer

The results of this study gives insights for m-LMS developers in designing and determining an effective m-LMS for students. The m-LMS developer should create innovative features that correspond to the changing requirements of education since it is vital to increase the features of m-LMS to give the best performance and experience for students.