

UNIVERSITI TEKNOLOGI MARA

**MAH MERI: MOBILE GAME BASED LEARNING
ABOUT MAH MERI PEOPLE**

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BACHELOR OF INFORMATION TECHNOLOGY

(Hons.)

JANUARY 2022

ACKNOWLEDGMENT

In the name of Allah, the Most Gracious and the Most Merciful

Alhamdulillah, all praises to Allah SWT and His blessing for the all the trials, strengths and opportunities that has been given to me since the beginning until I finally complete the proposal for my final year project in time.

First of all, I would like to express my gratitude to my supervisor Associate Professor Ts. Dr. Wan Abdul Rahim Bin Wan Mohd Isa for guiding and providing me with necessary information that was very helpful for me to complete the proposal for my final year project. It has been a great honour and pleasure to have Associate Professor Ts. Dr. Wan Abdul Rahim as my supervisors for this project. Furthermore, I wish to extend my sincere thanks to my CSP600 and CSP650 lecturer, Dr. Emma Nuraihan Binti Mior Ibrahim for her patience and determination in teaching this course to me and my classmates. Her constant instruction, unwavering support, and positive encouragement have enabled me to overcome numerous obstacles and problems in completing my task. Her determination and effort to ensure that I and my classmates comprehend and complete our proposal always inspires me.

Apart from that, I am also thankful to my examiner, PM Dr Wan Adilah Wan Adnan for her valuable comments and suggestion on this project. Her positive response has given me more insight on the things that can be improved for this project. In addition, my deepest gratitude goes also to my family members who have given me a lot of endless support and prayers throughout this project. Last but not least, I would like to give my special appreciation to my classmates who were with me and support me through thick and thin. Their advice and support have aid me in shaping my project Thank you for the support and the help that has been given. May Allah SWT bless us with peace and happiness. Amin.

ABSTRACT

Currently, there is a lack of mobile application that teach the people about the indigenous people especially on Mah Meri ethnic on gamification elements. Thus, in this project aims to use gamification features to develop a mobile game-based learning application of Mah Meri people on the digital platform. The objectives of this project are to identify the requirements needed for “Mah Meri” apps with gamification elements, to design the “Mah Meri” apps with gamification elements and to develop the “Mah Meri” apps with gamification elements. This mobile application would be aimed at the public to participate in studying subject matter. Next, this application will be used on Malay language. Furthermore, this project utilizes methodology Digital Educational Game Life Cycle (DEG) which consists of four process which are game design, software design, implementation and publishing, and game-based learning and feedback. Several features have been built such as Loading page, Storytelling, Scoring, Timer, Reward and Challenge. The testing is done using System Usability Scale (SUS). Furthermore, all of the functionality of the Mah Meri mobile application perform as expected, according to user testing results. The application is simple to use, according to the testers, and all information presented is simple to comprehend. The significance for this project is General Public to gain information about Mah Meri people, Museum Orang Asli that can promote Mah Meri ethnic, and Mah Meri's people that can sustain their culture for the next generation. As for future works the apps need to develop to Android Operating System and IOS to increase the target audience, provide more tutorials and explanations on learning Mah Meri ethnic, improve features and include dual language. To conclude, this apps give knowledge about Mah Meri ethnic that focusing on musical instrument, Mah Meri's language and handcraft mask that will increase user's motivation, experience and engagement.

Keyword: Digital Educational Game Life Cycle (DEG), Timer, System Usability Scale (SUS), Gamification Elements, Android.

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1 CHAPTER 1

INTRODUCTION

An outline of this project is given in this section. This chapter includes background information, problem statements, project aims, objectives, scope & limitations, and project significance.

1.1 Project Background

“When we are actively engaged in a game, our brains like the challenge of grappling with and coming to understand new systems, concepts, and views. The same principles apply to digital games learning” (Jukes, 2017). Game-based learning is not a new concept in education; in fact, it has been around for over three decades, with increased use and popularity due to improvements in information technology and the Internet (Brom, Sisler, & Slavik, 2010). Furthermore, Game-based learning is attracting a lot of attention from both the educational and commercial communities. Mobile learning benefits can be enhanced through game-based learning to achieve learning outcomes. There are two elements which are education and entertainment.

Furthermore, game-based learning can motivate people to participate in studying while having fun, making the learning process more engaging and it is beneficial to cognitive development. According to Gee (2003), games can provide players a sense of control, encourage critical thinking, and the development of problem-solving and teamwork skills. It can also inspire players to explore the learning content while playing the game, allowing them to actively participate in learning rather than passively receiving information. In addition, games and courses are combined because the traditional learning process is uninteresting, and game-based learning can boost users’ learning motivation (Liu, 2010). In addition, the user's focus is higher than usual while they are in a flow state while playing (Squire, 2003).

In addition, based on (Dichev & Dicheva, 2017), gamification has been extensively used in educational environments and instructional practices to enhance user's engagement and motivation through the employment of game design elements outside