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# MOBILE GAME FOR STUDENT STANDARD SIX TO LEARN MALAY PROVERB USING GAME-BASED LEARNING THEORY

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## ABSTRACT

Mobile devices have become important part in people's life including children as they grown up with digital technologies. Edutainment is a form of entertainment designed to educate as entertain and games is one of the mediums of edutainment. There are a lot of educational game that can be found in market including Malay proverb. The use of Malay proverb is very important in the promotion of Malay as national language so Ministry of Education take steps incorporate proverb in the syllabus. However, students find it difficult to understand the meaning of proverb as it has implicit meaning and it is using figurative language. The objectives of this project are to identify the level of proverb for student standard six, develop mobile game to learn Malay proverb and evaluate user acceptance towards the use of mobile game to learn Malay proverb. The project has been successfully developed by using Waterfall Methodology. The efficiency of this mobile game is demonstrated by conducting a usability test with 20 students of Sekolah Kebangsaan Seri Gedong. Results show that student like use the application as an additional learning material.

**Keywords:** edutainment, malay proverb

## 1. INTRODUCTION

Student today tend to think that they have excel in Malay language as they capable to express themselves fluently, but the true is Malay language is not just learning grammar only but also vocabulary, spelling and proverb. Proverb is included in the syllabus so that student can practice Malay language in a right way. However, most student memorizing proverb without understanding the meaning of proverb (Ibrahim, 2013). There are a lot of educational game in the market including Malay proverb. Educational game software was more motivational and practical compare to educational software without any game component (Zirawaga, 2017). Game-based learning theory is one of the relevant theories in edutainment. Game-based learning is being used as a means transferring knowledge of a specific subject that focuses on that game to the target game users where there are elements of entertainment in the form of variety games and educational element that being combined. Objective of this project is to develop mobile game for students of standard six as the end users and evaluate user acceptance towards the use of mobile game to learn Malay proverb.
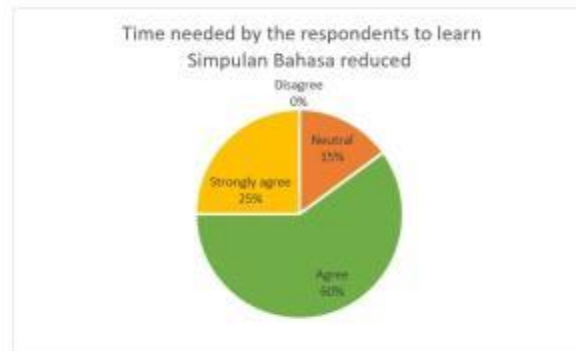
## 2. METHODOLOGY

The methodology that used for this project is waterfall model where it consists of five stages which are analysis, design, implementation, testing and maintenance. However, for maintenance phase, it is not included as this project focuses only on development. To develop this mobile game, Unity is used as a game engine as it is easy to use. For the first stage which is analysis, Malay proverb is being analyzed

based on their difficulty and designed the user interface for the next stage. C# is implemented as Unity support C#. After the implementation stage, the stage is testing where the system by its functionality by testing each function of the game and usability test.

## 3. RESULTS

This project subject to two kinds of tests which are Functionality Test and Usability Test. For the functionality test, the testers tested all the core functionality of the project, all the functionalities tested were successful as the tester encountered no problems and difficulties during the testing. The second test is Usability testing to obtain the acceptability of the application among students. For the usability test, questionnaire is distributed electronically by using Google Form service and the testing process involved a total of 20 respondents who are students from Sekolah Kebangsaan Seri Gedong. The questionnaires consisted of Likert-type scale questions. Figure 1 illustrates pie chart of time needed by the respondents to learn Simpulan Bahasa is reduced.



**Figure 1.** Time needed by the respondents to learn Simpulan Bahasa is reduced

The chart showed that 60% of respondents agree that after using this app, the time needed to learn Simpulan Bahasa is reduced, while 25% of them are strongly in agreement and 15% of respondents are neither agree nor disagree that the time is required to learn Simpulan Bahasa after use it.

## 4. CONCLUSION

In conclusion, this mobile gaming project designed for students of standard six as the end users. This mobile game can also be used as an additional learning material by teachers who teach Bahasa Malaysia at school. In addition, this mobile game development is also intended to replace the conventional way of learning and be an enhancement to current existing applications in the market. This project is subject to two kinds of tests which are Functionality Test and Usability Test, based on the outcomes of these evaluations and findings indicate that the application met requirements and expectations of end users successfully and the end-users were pleased with the results too. However, the development of mobile gaming also faced restrictions which are time constraints. On top of that, proverb can be categorized into four, but only Simpulan Bahasa is selected to be introduced in this mobile game as the mobile app was only solely as a prototype so it includes a limited amount of content in it. Of more research carried out, the app should be completely developed with more areas and more questions for each level to choose from and an interface improved.

# REFERENCES

1   Ibrahim, K. (2013). Mastering Malay Idioms among Young Non-Malays. Pertanika J. Soc. Sci. & Hum. 21,51-62.
2   Zirawaga, V. S. A. I. T. (2017). Gaming in Education: Using Games as a Support Tool to Teach History. Journal of Education and Practice, 8(15), 55–64.

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