

LEARN JAWI USING GAMING APPROACH ON MOBILE DEVICES



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4. Report

4.1 Proposed Executive Summary

Students are exposed to various learning environments such as classrooms, schools and at home with their family. Traditional method used in school give the controls on overall learning procedures including the methods and materials to the assigned teachers. At the same time the teachers are required to design the teaching material on their own. Most application developed for mobile devices are not educational oriented but emphasis more on entertainment purposes. Although similar educational application is developed for personal computers, but very few are for mobile devices and none for learning Jawi. Research main objectives are, to design content for learning Jawi through mobile game for children aged 10 to 12 years old based on Jawi Syllabus in Malaysian primary schools and to develop a prototype of an interactive mobile game based on the design. Based on the evaluation that has been conducted on children about learning Jawi on mobile, children are delighted to use the application. Children are hooked on the application and repetitively trying to accomplish the task designed in the application. This shows that mobile application is a good alternative approach for teaching and learning of Jawi writing.

4.2 Introduction

Jawi is an art of writing that has existed since the arrival of Islam to Tanah Melayu centuries ago. Jawi writing was originated from the Arabic writing in which Arabic letters were infused into the Malay writing system. Malay writing had evolved since the arrival of Islam to the land. It evolved from ancient Pallava script to Jawi basically consist of Arabic characters. It was widely used as the official form of writing in Tanah Melayu during the era of Malacca's Malay governing institution which is proven by the discovery of the Terengganu Stone inscription that is fully written in Jawi as mentioned by Kratz [1] in his review.

Nowadays Jawi is no longer exist as the official writing in Malaysia as Malay writing system once again evolved from Jawi to Rumi which is also known as the Roman or Latin script. The review conducted by Kratz [1] inform that the changes is due to the influence of the intrusion by the invaders including the Portuguese, the Dutch, and finally the British which slowly changes the administration structures, culture of the Malays as well as the writing system. Bukhari *et al.* [2] said that changes began after romanized letters were introduced and taught in schools and being used by the new influenced administration.

Even though Jawi has existed long time ago in the history of Malaysia but today there are people that cannot read or write Jawi as it is not widely used in writings. Refer to Gato [3], people are having trouble in transliterating Asian scripts (including Arabic script) into Roman script. Some measures have been taken by several parties to preserve the Jawi writings. Examples of the initiative that have been done are by using Jawi alternatively in major road names, the publishing of the Jawi newspaper by Utusan Malaysia Publishing, the use of Jawi in primary and secondary school textbook of Pendidikan Islam and is actively practiced in Johor [2]. According to Aniza Abullah *et al* [4], previous methods of teaching jawi are being done manually through writings and learning activities using boards and cards.

Study conducted by Hafizullah *et al.* [5] shows that nowadays games are becoming more famously used as the form of education in Institute of Higher Learning in Malaysia. It has given birth to the concept of Edutainment which means educational entertainment or entertainment education. It involves the process of learning that is being represented in the form of entertainments such as television

programs, computer and video games, music and multimedia application. Hafizah and Fung [6] stated that the concept makes the educational process more interesting than the traditional way by attracting students to study. Examples of edutainment types in television programs; Barney and Friends, Dora the Explorer, and Blue's Clues, computer or video games; Bookworm Deluxe by Pop Cap, Electronic Sudoku, and Kana no Senshi by Stubbs [7], and also in other areas such as music; folks music, and multimedia application; courseware, e-learning.

Research done by Zaidi Abd Rozan *et al* [8], students are more looking forward to the use of ICT as a tool of learning because of the flexibility and the advancement of related technology. Apart from the computer games, mobile games are also getting well-known among the youths since most of them have their own mobile hand phones. Mobile games will grant the user flexibility and mobility as mobile phones is portable and easy to carry around wherever they go and the games can be played whenever they prefer.

4.3 Brief Literature Review

Mobile technology has advance from time to time. In view of to its portability, people chose to use mobile devices as a new tool for learning among students as discussed in Dragan *et al.* [9] and Prensky [10] research. Even though there are limitations of the mobile devices especially mobile phones, applications are still being developed with the consideration of the limitation. The limitations include the size of display, cache, memory, and storage and input keys due to the process of miniaturization as explained by Lee [11] and England and Finney [12]. Among the applications that have been developed are electronic games and educational courseware.

Electronic games have evolved from one platform to another accordingly to the technology that is available. Now electronic games have gone mobile along with the mobile devices. Lee [11] proves that many people spend more time playing games. According to the survey conducted in Malaysia's institute of higher learning (IHL) by Hafizullah *et al.* [5] also approved the fact that 59% from the total respondents would play games on mobile phone. Although games are considered as a form of entertainment, many believed that it can also stimulate the learning process [11]. The concept of edutainment that were proposed by Hafizah and Fung [6] to incorporate education and entertainment in creating mobile learning games and supported by Ardito *et al.* [13].

The learning domain that the project is going to focus is on the cognitive learning domain. Lee and Owens [14] defined that cognitive learning domain is about