Developing Android-Based Mobile Learning as a Media in Teaching English

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ABSTRACT

This research aims to find out the teaching learning process of English in SMA N 3 Wera, the procedure of developing Android-based Mobile learning media, and the effectiveness of this media. The type of this research is Research and Development. The research uses ADDIE model (Analysis, Design, Development, Implementation and Evaluation). The subjects are 26 students in Class X A (experimental group) and 27 students in class X C (control group). The technique of collecting data is using questionnaire and test. The data analysis is descriptive analysis and t-test. This research indicates that (1) the validation of material experts is in a very good category with the average of 4,5; (2) the validation of media experts is in good category with the average of 3,7; (3) the preliminary field test is in excellent category with the mean of 4,9 and; (4) the main field test is in the excellent category with the mean of 4,9 too;(5) the calculation result of the t-test in operational field try-out is that Ho is confirmed, which means that the scores of the pretest are different from those of posttest. It can be concluded that there is a difference between experimental and control group.

Keywords: Mobile learning, Android, Media, Teaching English

1 INTRODUCTION

The development of information, communication and technologies from year to year has increased and provided a lifestyle change and human viewpoints from various aspects, both aspects of politics, business, health and education. The presence of technology in educational field gives enormous benefit in enhancing the quality of education. Technology can be used as one of sources and learning media which is effective and capable of changing a conventional learning into a modern one so that the learning process is no longer centered on the educator (Teacher-Centered), but it is subjected to the learners (student-centered) (Anitah, 2009).

Creep (2012) states that the technological media which are used in the process of teaching and learning provide a very significant benefit towards the learning itself.

One of technological devices that continue to evolve every time is Mobile Phone. Mobile phone is a wireless device that can be brought everywhere by the users. The number of Mobile phone users in Indonesia is experiencing a very significant development from year to year. This issue is in accordance with the data presented by DS Annual Starup in that active mobile phone users in Indonesia have reached 281.9 million people. It illustrates that every person in Indonesia has a cell-phone in the average around 1.13 units (www.goodnewsfromindonesia.org). Yahoo! and Mindshare convey research results related to their largest smartphone users in which the users are oriented to young people with the range of age between 16 to 21 years old representing the percentage as high as 39%.

The presence of mobile phone in the youth environment under the range of that educational age (16-21 years old) can be made useful as one of the solutions to solve a variety of problems concerning with learning, ones which are especially related to the limitation of time, resources and learning Media. The media are no longer considered and utilized as mere teaching-learning tools for educators, but more than those, namely as a means of message conveyance from the message giver (teacher) to the recipient of the message (learners) (Sadiman, 2010).

Mobile phone which is known as a mobile learning will make the learning process more flexible so that students do not have to attend a special place to undergo the learning process. It means that the learners can learn anywhere and anytime. G Staed in Muhammad (2010:77) states "The evolution of learning paradigm from traditional classroom based learning and learning electronic had brought out the new learning paradigm based on mobiles which is known as M – learning". The statement can be interpreted that the traditional learning and e- learning have brought a new paradigm namely Mobile based-learning or M- learning.

Mobile learning, sometimes called m-learning, is the learning accomplished by the use of small, portable computing devices. These computing devices may include: smart phones, personal digital assistants (PDAs) and similar handheld devices.

The benefit of mobile learning according to Elias, 2011; Crescente and Lee, 2011 in Yousef and Hamideh (2013) are:

1. Relatively inexpensive opportunities, as the cost of mobile devices are significantly less than PCs and laptops
2. Multimedia content delivery and creation options
3. Continuous and situated learning support
4. Decrease in training costs
5. Potentially a more rewarding learning experience
6. Improving levels of literacy, numeracy and participation in education amongst young adults.
7. Using the communication features of a mobile phone the US part of a larger learning activity, e.g.: sending media or texts into a central portfolio, or exporting audio files from a learning platform to your phone.

Mobile learning or M-learning which is very popular in Indonesia at the moment is M-learning-based android. Android is an operating system for mobile devices which includes the Linux-based operating system, mildware and applications. Android provides an open platform for developers to create their applications.

There are various versions of the Android OS such as: version 1.1, Android version 1.5 (cupcake), the Android version 1.6 (Donut), the Android version 2.0/2.1 (Aclair), the android version 2.2 (Froyo: Frozen yogurt), Android 2.3 (Gingerbread), Android version 3.0/3.1 (Honeycomb), Android version 4.0 (Ice Cream Sandwich) Android version 4.1 (Jellly Beans), the android version 4.4 (Kitkat), Android version 5.0 (Lollipop), Android version 6.0 (Marshmallows), and android version 7.0 (Nougat).

The utilization of current Android focuses not only as an instrument or means of communication or entertainment but also as a source of learning and media. Learning media is expected to serve as one reference or learning tool which makes the learners easier to understand the material being learned. Smaldino et all (2011:7) define that the media refers to what brings information between a source (sender) message to the recipients of the message. There are six basic categories of

media such as: Text, audio, visual, video, and engineering (manipulative) and humans. From some previous researches, mobile learning has been recognized as one of the approaches that is good at improving learners' skills, especially for students who are learning English as a foreign language.

The development of learning media, both used for formal and informal learning, is undertaken based on the main reference, the current applicable curriculum. In addition the ease of use, interesting features, and the usefulness should also be noticed. This corresponds to what is conveyed by the Mulyanta (2009) in that the criterion of a good learning media ideally has 4 main factors, namely: the relevance, simplicity, interesting features, and also benefit.

Based on the results of grand tour observations undertaken by the author through doing observations and interviews toward the English teacher in Senior high school N 3 Wera, there have been found some problems which become the major obstacles concerning with the English learning process. Those range into: the time limitation to learn English which is delimited on only two meetings a week, 2 X 45 minutes each, the educators who seem to still use conventional learning methods, and the lack of utilization of innovative teaching-learning media.

Based on some problems above, it is considered important to develop creative and innovative learning media that can be set as one of learning sources or references to help solve time and other related problems as found in the above phenomena.

The purpose of this research is to encounter the English-teaching-learning process in Senior High School N 3 Wera, the procedure of developing Android- based Mobile-learning-media, and the effectiveness of this media.

2 RESEARCH METHOD

This research will be conducted on the tenth grade students in senior high school N 3 Wera located in Jln. Cross Sangian-Tawali Kec. Wera Kab. Bima (NTB). This research will be undertaken to the odd semester students, academic year 2016/2017. This research is categorized into a research development. Research development is one which is projected to produce particular product, examine a situation or certain objects (Punaji, 2015).

The development of model used in this study is a Model of ADDIE. ADDIE model is one of learning system design models that considers the basic stages of learning system which is simple and easy to learn. This model is at the core of instructional design and becomes the base of instructional design system (Instructional Systems design-ISD). This model is composed of five main stages including Analysis, Design, Development, Implementation, and evaluation (Molenda, 2008).
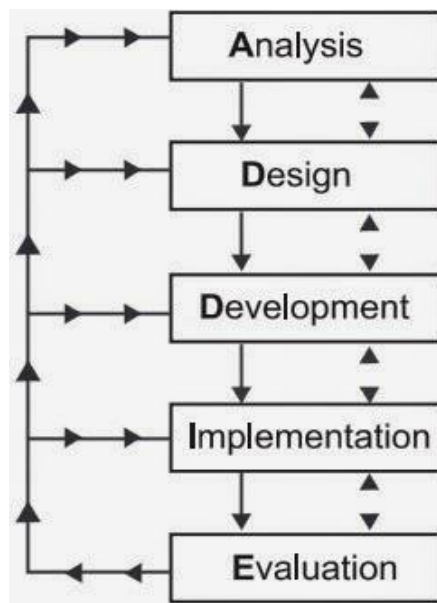
Figure 1. ADDIE model according to Molenda (2008)

The five main stages as indicated by Figure 1 will be elaborated in details as follows:

1. Analysis

   Analysis is an initial stage that should be done by the developers in which it becomes one of need assessment processes (need analysis), problem identification (needs), and the conduction of task analysis. Output generated from this stage becomes the characteristics or profiles of prospective students, identification of needs, and a detailed task analysis based on the needs.

2. Design

   This stage is one where the developers begin designing, or it is known as draft making (blue print) of media which will be developed by them.

3. Development

   It is the process of yielding or producing the blue print from designing results.

4. Implementation

   Implementation is the step where the product has been made ready to be used and applied in the learning systems which have been made. This means that at this stage all that has been developed is installed or set in accordance with the role or functions to be implemented. Once the product is ready, it is subsequently attempted to a large group, and it is then evaluated and revised. In addition, the test can be performed on a large group, then re-evaluated and revised so as to produce a final product that is readily disseminated.

5. Evaluation (evaluation)

   Evaluation is a process that is done to see if the learning system that we construct is successful or not according to what is expected at the beginning. Stages of the evaluation can be done on any of the above four stages called the formative evaluation because the goal is for the needs of revision. For example, in the drafting process, we need some experts' reviews to provide input towards the draft which has been made.

   Subjects used for the attempt as planned in this research are students on the tenth

grade of SMA having study on the odd semester school, academic year 2016/2017 with details as follows: a). As many as 3 tenth grade students of Senior High School N 3 Wera are involved in the initial field trial or attempt; b) as many as 10 tenth grade students are involved in the major field trial; c) 30 persons from tenth grade students of vocational school N 1 Wera are engaged in the operational field trial; d) 26 students serve as the experimental group; and e) 27 tenth grade students are used as the control group.

The instruments that will be used as the data collection tools are questionnaire and test to measure students' learning achievement. The questionnaire will be on the stage of evaluation before and after the trials of product in which it will firstly be given to some qualified experts on both the content and media with the aim to find out whether the product that is made can be judged valid or not. The questionnaire is also used to know the teachers and students' response toward the media that will be developed. Achievement-oriented test will be given to students after the have learned through the use of M learning media. The test result is relied on to know the effectiveness of media that is being developed.

The data analysis techniques which will be used are descriptive statistics analysis and t test analysis. The analysis of descriptive statistics is used to analyze and describe the data that have been collected. The quantitative data from the questionnaires will then be converted into qualitative data by using the scale of five. Here, the scoring in single digits started from 1 up to 5 will then be converted into qualitative data with the following description: excellent, good, sufficient, less and not very good.

The t-test is used to measure the effectiveness of the product under the purpose to assess how far the learning media, android-based mobile learning, can affect the improvement of students' learning outcomes on the subject of English narrative text. The data analyzed in this effectiveness test is the scores obtained from the students' achievement test results from the experimental group and the control group. The mean scores of the two groups are then analyzed by using t- test.

3 THE EXPECTED RESULTS

The development of information, communication and technologies from year to year has increased and provided a lifestyle change and human viewpoints from various aspects, both aspects of politics, business, health and education. The presence of technology in educational field gives enormous benefit in enhancing the quality of education. Technology can be used as one of sources and learning media which is effective and capable of changing a conventional learning into a modern one so that the learning process is no longer centered on the educator (Teacher-Centered), but it is subjected to the learners (student-centered) (Anitah, 2009).

The development of android-based mobile learning as the learning media can serve as one of the solutions to cope with the learning problems, both in terms of time limitations, media & broadcasting, and learning methods. The utilization of android-based-mobile learning media which uses offline system operation can run well and effectively so that the media give effect on the improvement of the students' learning results in learning English as a foreign language.

ACKNOWLEDGEMENT

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