

The Strategies to Improve the Cultural Awareness among Senior High School Students through Learning Media Based on Android Application of Digital Comic

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Abstract

The purposes of this study are to: 1) develop the historical learning media of android app based digital comics legend of Kyai Kolodete, 2) determine the eligibility of historical learning media based on android app nearness digital comics legend of Kyai Kolodete in the learning process, 3) determine the effectiveness of the historical learning based on android media apps, digital comics of Kyai Kolodete legend in improving learning achievement and cultural awareness of students. This research was conducted in SMA Negeri 1 Sapuran Wonosobo for 2.5 months. The historical development research based on learning media of android apps of digital comics legend Kyai Kolodete to increase cultural awareness in SMA Negeri 1 Sapuran used the method of Research and Development (R & D), which uses a model ADDIE of Molenda. The research model consists of five stages 1) analysis, 2) product design, 3) product development, 4) implementation, and 5) evaluation. The eligibility of test model in this study used the model of Likert scale 1 to 5, and testing the effectiveness of using independent sample t test using SPSS. The results of this research are: 1) the lack of interesting learning media in SMA Negeri 1 Sapuran, 2) the learning media based on android is produced decently based on the results of validation of media experts and also the material, 3) the historical learning using digital comics media android apps was proven to improve learning achievement and also cultural awareness of students in SMA Negeri 1 Sapuran Wonosobo.

Keywords: Android Application, Digital Comic, Historical Learning, Cultural Awareness

Introduction

The paradigm of traditional learning that utilizes e-learning has brought new learning paradigm based on mobile or can be called by mobile learning. This proves that the technological development moves rapidly so it can give impact on the teaching and learning process (G. Stead in Mahamad 2010: 77). The changing in learning paradigms is influenced by the rapid development of technology. Therefore, the teachers need to respond quickly the changes in this digital era. The important significance of this learning explains that learning is a process that can not be underestimated in the process of national progress. In the historical learning, the important role of learning is clearly seen not only as the transferring of ideas, but also the maturing process for students to understand identity and national identity through an understanding of historical events (Susanto, 2014: 56). Traditional learning in the present era is less support in the implementation of teaching and learning activities outside the class. The using of appropriate media can certainly improve the making process of learning more fun and not boring. The Making of the digital comic media based on android is according to the curriculum. It is not only to improve the achievement but also to raise local culture awareness of students. The Utilizing of social circumstances in the digital era depends on the Smart phone which makes researchers attract to create android applications of teaching and learning activities for students.

The Research Method

This research used Research and Development method and this study aims to test historical learning media of android-based digital comic to the legend of Kyai Kolodete. These research population was the students in SMA Negeri 1 Sapuran Wonosobo. There will have two classes as the controlled class and experimental class from class X both in social science or natural science. The determination of the experimental class and controlled class was conducted by using pre-test testing achievement and attitude. In this study, there is a difference in treatment between the experimental group and the controlled group. The experimental group learning process used the historical learning source based on android application of digital comic to the Kyai Kolodete legend. The learning process in experimental group used historical learning source based on the android application of digital comic to the Kyai Kolodete legend. In this study there is a difference in treatment between the experimental group and the control group. The experimental group learning process used historical learning source based on android application of digital comic to the Kyai Kolodete legend. The learning process in controlled class used conventional method, the usual lecturing and material used power point media. There are 3 stages in the research that will be conducted to reveal completely the objectives posed in this research, 1) The phase stage of experiment, 2) the conduct stage of experiment 3) the final stage of experiment. The data used in this research was the average achievement score and the cultural awareness behavior of students. The achievement score used pre-test and post-test. The behavior value of students is measured by filling out the questionnaire method. The measurement instrument of value toward the students' cultural awareness in SMA Negeri 1 Sapuran is 30 questions.

The learning design refers to the process that determines the learning objectives, strategies and techniques to achieve the goals and design a medium used for the effectiveness of the achievement of the objectives (Vienna Sanjaya, 2012: 65). In this study design adopted ADDIE development. Subjects were students of SMA Negeri 1 Sapuran class X IPS 2. The number of students who used the experimental class is 30 students. This study was focused on the evaluation of the media learning implementation of android apps based on history of digital comic to the legend of Kyai Kolodete. The evaluation activities consist of three phases, namely the phase to test the quality of learning media in theoretical (expert testing, well testing materials experts, expert test models and test expert on comics), (small group trial), (large group trial), and (broad group trial). To capture information from various sources used methods of data collection in the form of a questionnaire. The questionnaire method used in expert test models of learning, learning materials and expert test expert test the feasibility of comics history. Besides, it is also used in the description test of large groups and a broad group.

The Result and Discussion

1. The Discussion of Learning Media

Hamzah B. Uno (2010: p122) reveals that media in learning is a form of communication that can be used to transfer information from the source to the learners. The goal is to stimulate them to participate in learning activities of the media. Besides being used to deliver learning as a whole, it can also be used to transfer a certain part of the learning activities, provide reinforcement and motivation. Sri Anitah (2011: 2) said that the media of learning is everyone, material, tool, or events that can create conditions that enable learners receive the knowledge, skills, and attitudes. With that understanding, teachers or lecturers, textbooks, environments are the learning media. Each media is a means to get to a destination. It contains information that can be communicated to others. This information may be obtained from books, recordings, internet, films, microfilm, and so forth. All of it is a learning media because it contains information that can be communicated to the learners. Asyhar (2012: 8) stated that learning media can be understood as "everything that can deliver or distribute a message from a planned source, so it results a conducive learning environment in which the recipient can make the learning process efficiently and effectively. According to Everett M. Rogers (in Abrar, 2003: 17-18) summarized the development of communication media into four eras. The first is the era of written communications. The second is the era of print communications. The third is the telecommunications era. The fourth is the era of interactive communication. New media is media that thrives in the era of interactive communication. Therefore, the media in the form of the original object can be solved by changing the characteristic / structure to a digital form of interactive multimedia.

From all the various terms of learning media by the experts, they can be concluded that the definition of learning media is a tool or intermediaries which facilitate the learning process in this case is to facilitate the delivery of the message or information (subject matter) by the teacher to the students, which in the learning media contained stimulus motivational elements that bring the curiosity of learners so that learners become more critical.

2. Mobile Learning

The concept of m-learning is learning with the help of mobile devices which was first emerged in the 1970's and 1980's. This idea originated from an idea to create a mini-computer as a more practical replacement book. Soon, this innovation was able to be acceptable by world community. In the 21st century, Europe has been seriously working on learning by mobile learning because they believe that the system is effective for the applied learning. El-Hussein and Cronje (2010), define mobile learning into three concepts. The first is mobility of technology. Technology meant is portable technology such as mobile phones, laptops, tablets and others that can be connected to the Internet to send and receive learning content, and can be used anywhere and anytime. The emergence of Java mobile and Android extremely support this concept. The second is the mobility of learners. It meant that students can learn to be more flexible, access control in every aspect of personal resources, and can compare a variety of sources with a fast time. Furthermore, the third is the mobility of learning. A variety of content, text, images, audio and video allow for inclusion in mobile devices. As the example, if the concepts are applied in learning English with Java and Android mobile devices facilities, it would enable students to learn the theory and practice of reading, writing, listening or speaking in a flexible way, whenever and wherever.

Benefits of Mobile Learning in Learning

As stated by Baek & Cheong in Mahamad, et al (2010: 80) m-learning has many benefits for education which enables to be flexible learning (anytime, anywhere), supports the concept of lifelong learning, becomes edutainment, enables to collaborative learning, attracts the attention of participants learners, becomes efficient in terms of time, as well as removes barriers in information technology. The results of other studies on the benefits of m-learning, Valk, et al in Kim (2013: 52) mentions the using of mobile learning with phone on students students in developing countries could increase the access to learning materials and educational services, particularly in rural and remote areas of the city. In some previous researches related to visual attention and perception of students, they are reported that many students wanted to create or use learning materials more comfortable, so that they could study whenever and wherever they are.

The Supporting Devices in Mobile Learning

Without the mobile devices, m-learning course will not be able to run well. The most commonly used of mobile devices are laptops, mobile phones / smart phones, i-pod, i-phone and tablet. Right now, these items are no longer a luxury item. The price is relatively inexpensive and tends to decrease from year to year so it makes almost anyone can have it, not even a rare one person has more than one phone. In the world of education, phone is increasingly believed to be used to improve the vocabularies knowledge, grammar, listening and speaking skills, both in formal and informal education (Demouy & Kukulska in Kim, Daesangetal. 2013). Kim also assess that the using of mobile technology as the supporting content of learning with social communication features can empower students to participate in a more collaborative learning environment.

3. Culture Awareness

According Sujarwa (2010: 134) awareness comes from the word "conscious" means to understand, remember, understanding and be open-minded to act in accordance with his conscience. Awareness also means the opening of his heart and mind in the act. While in terms of psychology, Alfie (1979) explains that consciousness is defined as the individual preparing level to environmental events, the body atmosphere, memory and mind. According to Koentjaraningrat (1990: p181-205), the culture is derived from the Sanskrit "buddhayah", the plural is defined as things that are concerned with the mind. It accordance with the culture, as follows: (1) the culture shape as a complex of ideas, ideas, values, norms, rules and so on;(2) the culture shape as a complex pattern of activity and man in society action; (3) the culture form as human work objects. All forms of cultures that exist in this world have a common element that universal, they are: ((1) a religion system and religious ceremonies, (2) social organization system, (3) the knowledge system, (4) language, (5) art, (6) subsistence system, (7) technology systems and equipments.

Cultural awareness is the ability to see and aware to cultural values that exist in it and in the surrounding neighborhood. Furthermore, a person can judge whether it is normal and acceptable by common sense or may not be accepted by common sense. Therefore, it is necessary to understand the different cultures of itself and realizes his beliefs and customs and able to respect it (VACC et al, 2003). The explanation above shows that cultural awareness should be owned by every community. Cultural awareness makes people more aware of their own culture and other group's cultures, so that tolerance sense for cultural differences is higher because knowledge about the custom is deeper. Then, the historical awareness makes power to keep the culture or customs which are preserved for the culture loves that has been inherited.

Research Instrument

This research uses several instruments as support questionnaires to media experts, material experts, teachers, students. The next Instrument regarding is a questionnaire to determine cultural awareness level at SMA Negeri 1 Sapuran. Trial media in historical learning based android digital application of legend Kyai Kolodete comics is conducted by media experts and material experts also aims to determine the media feasibility and also the material content in application mobile learning that will be used by the students. Questionnaire on cultural awareness are tested to students to determine the difference between students who use the media and do not use the media for cultural awareness and also improve the students achievement in the materials historical learning.

Research Procedures

This hypothetical model adopts ADDIE models (Molenda, 2008: 107-109). ADDIE model uses five development stages, They are:1) Analysis (analysis), 2) Design (design/design), 3) Development (Development), 4) Implementation (implementation/execution), 5) Evaluation (evaluate/bait behind).

4. The affectivity of android-based digital comic media

Mobile Learning developed about historical learning materials, it is about the legend of Kyai Kolodete included in KD understand more precisely the historical material about the legend. In addition to containing materials in these applications are digital comic about Kyai Kolodete as a islam propagator in the Dieng highlands region and also the result of acculturation cultures between Islam and Hindu-Buddhist is ruwatan tangled hair. Mobile learning is made using Cordova and Corel Draw applications to create perform of comic image android mobile learning applications, digital comic's legend of Kyai Kolodete. Determine the media feasibility that will be applied is the purpose of the data analysis by material experts. Based on the assessment of the media aspects with 12 indicators derived from the average of Rinto Budi Santoso, M.Pd is 4.41 and the average of Retno, S.Pd is 3.91. This indicates that the material developed learning media has a good category to scale liket. Test the effectiveness of digital learning media on the attitudes of cultural awareness is done by comparing the results of the post test experimental class attitude (X IPS 2 and the control class (X IPS 1). The results of post-test between the experimental class and control class compared to the comparison average test between the cultural awareness classes with new learning media (media that is developed). To view the differences between the mean attitude experimental class and control class that is using T test (Independent Samples T Test) with the help of program SPSS 20. The hypothesis is as follows:

Hypothesis:

H0 = There is no difference in the mean attitude between the experimental class and control class

H1 = There was a mean difference between the attitude of the experimental class and control class

T test Decision:

1. If t with significance level (two-tailed) > 0.025 , the second mean the same class (H0)
2. If t with a significance level (two-tailed) < 0.025 , the mean of the two classes are not equal (H0).

Before the implementation of T test, the requirements in the data must be distributed and homogeneous. Therefore, first tested the normality and homogeneity of the post test results of the experimental and control classes. Here are the results of tests of normality, homogeneity, as well as T test statistical calculations state that the data is said to be normally distributed if the significance value greater than 0.05. Post test significance value of 0.975 attitudes experimental class and control class is 0.279. Thus, it can be concluded that the value of post test experimental and control class attitude is a normal distribution. Statistical calculations state that the data can be said to be homogeneous if the significance value greater than 0.05. Based on test results obtained statistical significance value homogeneity of 0.217 ($0.217 > 0.05$) so that it can be concluded that the value of post test experimental and control class attitude is homogen.

Uji statistical differences between the mean attitude after the treatment in the experimental class and control with the help of SPSS program 20 obtained a mean value of post test experimental class and control class amounted to 126.73 at 123.70. While the test results T obtained a value of 2.330 with a significance level of 0.023 <0.025. While the test results T obtained a value of 2.330 with a significance level of 0.023 <0.025. Due to the value of T test with significance level of less than 0.025 (0.023 <0.025), it can be concluded that there are differences between the mean attitude between the experimental class and control class. While the effectiveness of the learning achievement test results obtained test the effectiveness historical media digital learning is done by comparing the results of the post test achievement experimental class (X IPS 2) the control class (X IPS 1). The results of the post-test between the experimental class and control class compared to the mean comparison test between classes with instructional media (the media developed). To view the differences between the mean experimental class and control class that use T test (Independent Samples T Test) with the help of SPSS 20 program. The hypothesis as follows:

Hypothesis:

H0 = No mean difference between experimental class and control class

H1 = There was a mean difference between experimental class and control class

Test Decision

1. If t with significance level (two-tailed) > 0.025, the second mean the same class (H0).
2. If t with a significance level (two-tailed) <0.025, the mean of the two classes are not equal (H0)

The Requirements before performing the T test that the data should be normally distributed and homogeneous. Thus, in this research before the T test, the post test result of class achievement in experimental and control class. It should be tested the normality and homogeneity first. Here, it will be presented the normality, homogeneity, and test T results. Based on the statistical test result with the help of SPSS 20 program can be concluded that the data said to be normally distributed if the significance value is greater than 0.05. Significance value of post test in experimental class 0.434 and 0.418 of the control class. Thus, it can be concluded that the value of post test experimental class and control class normal distribution. Statistical calculations state that the data can be said to be homogeneous if the value of more significance than 0.05. Based on statistical test results obtained significance value of homogeneity 0.934, so it can be concluded that the value of achievement post test between the experimental and control classes are homogeny. Setelah T test requirements are full fill, they are normality and homogeneity test, the next step is T test with Independent Sample T Test. Based on the test results with the help of statistical program SPSS 20, obtained a mean post test experimental class at 54.83 and post test control class at 50,50. Besides, the T test obtained by value of 2.398 with 0.020 significance level less than 0.025 (0.020 <0.025), then Ho is rejected or there is a difference average between experimental class and control class. Effectiveness test results above shows how the differences in achievement results or cultural awareness between classes using instructional media researchers developed a class that does not use the media. This certainly shows how the effectiveness of instructional media, android-based digital comics on student achievement, especially in historical subject the data above shows how the different student before using the media and also after menggunakan media. It can be said that digital comics based on android media is impacting on achievement and cultural awareness.

Conclusion

This study shows how media learning more attractive and of course can be taken anywhere (mobile) makes students more enthusiastic in material understanding, especially historical lesson. In the digital era, there are a lot of learning media that can be used by teachers. One of them is smart phone that has been spreading in various people it affects a lot of people especially the students who have android-based smart phone. Utilizing the facilities owned by the student researchers develop digital comics android application which contains the historical learning materials, The development media is certainly not exclude the local historical values which aims to increase historical awareness for students. In the globalization era, Spreading information both news and culture from the outside, it can influence the cultural awareness of local students certainly who began eroded by foreign cultures. This study aims not only to improve student achievement but the moral values that have been inherited by our ancestors and of course still be able to preserve this culture that is not lose by the changing era.

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