

# History of Indonesian Independence Learning Media Using Interactive Story Telling For Elementary Schools Based on Android Platform

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## *Abstract*

*The development of a country can be seen from various aspects, one of them is the educational aspect. Education is also one of the main aspect to create qualified human resources. On the other hand, the technology continues to evolve rapidly from a variety of fields. One of them is the field of education. Social Science Lesson is one of the factors that affects education world. Particularly, history lesson is a lesson that is often considered dull and unattractive. It can not be denied, because until now the methods used are still the same and monotonous, one of them is the history of the Indonesian Republic Independence. There are many primary school students that do not understand much about historical lesson, therefore that event is very important to be understood. Therefore a new interactive and very interesting learning media by using picture books media is needed. Applications built by using prototype method, testing each step, until the results according to user requirements. The results can also help to increase childrens attractiveness to read and to know more about the history of the independence of the Indonesian Republic.*

**Keywords :** *Android, History, Independence, Interactive Story Telling, Prototype*

## 1 INTRODUCTION

Education is the main thing in building a developed nation. Quoting the Nobel Prize winner in economics, Professor Amartya Sen, the President stated prerequisite progress of a nation lies in the education and health sectors. "Education is the most appropriate way to eradicate poverty, expanding the middle class and build modern Indonesia in the 21st century", said President Bambang Yudhoyono (Kompas, 2014).

In education, there is a wide range of subjects that can be studied by the students. For example: Natural Sciences, Bahasa, Mathematics, Social Sciences, and many more. Basically, all subjects are important to be learned by the students but some subjects are often overlooked by students for example, social studies lesson.

Since 1915 the US education experts concluded that social studies consisting of several disciplines, such as history, geography, economics, and others will be taught simultaneously to equip learners to recognize and understand the social problems that exist in the surrounding (Kompasiana, 2012).

The many benefits require learners to study history. The importance of studying history is, because of the human condition that exists today is the result of past events (Sosiosejarah, 2013). For instance, a country independence day event. The current state of the Indonesian state is a state that is independent and free from various colonies of other countries. The glorious Independence of Indonesian to this day came through from the struggle of national patriots to achieve an independent state. The struggle that should not be forgotten by the people of Indonesia, especially learners.

But often found that students feel bored, sleepy, and bored to learn the science of history because the media used is relatively less (Nilawati, 2013). Yet according to the results of interviews conducted with elementary social studies teacher Kristen Satya Discourse, Salatiga, many students are more understand about the field of technology, art, and science lessons. The medium used to convey the history of science is still in the form of printed books.

Where students have to memorize any events that have occurred in the past. Another alternative that can be used is to invite students visited museums or historic sites. According to professor of history, University of Indonesia Susanto Zuhdi, teaching methods should be designed in such a way as to make it more fun (Zuhdi, 2012). Therefore a new technology is needed to make study process more fun, with the use of interactive and interesting study media.

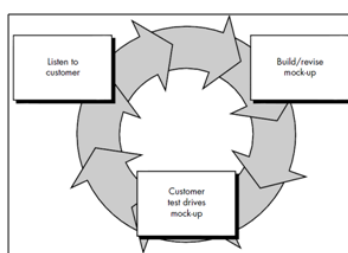


Figure 1: Prototype Method Char(Pressman, 1992)

The development of science and technology today allows users to obtain information and as a communication tool in many fields. One of the current technological developments is smart phones. It is powered by the Android operating system that is increasingly global. Based on a survey conducted by Gartner Android operating system is an operating system on smart phones that have the largest market share, with sales of 78.4%. With a free license, also received support from the hardware developers are increasingly supporting the development of software (Gartner, 2014).

Various software can be applied to the Android smart phone. One of them is in the field of education. Software on Android smart phones in the field of education commonly referred to as mobile learning (Georgiev et al., 2004). Mobile learning is a media of learning in which learners are not stand still at one place but it is learning activities that take advantage of mobile technology devices (O'Malley, 2003). The use of Android smart phone is the

most effective media to provide a different experience in the learning process because it can be accessed anywhere and anytime. Therefore Android smart phone use is very suitable for increasing student interest to get more attracted on learning history.

## 2 RESEARCH METHODOLOGY

### 2.1 Multimedia

Definition Multimedia by Vaughan (2006) is a combination of text, photo, graphic art, sound, animation and video digitally manipulated and can be delivered and interactively controlled. According to Vaughan (2006) that the interactive multimedia form if the user can control what and when multimedia elements will be sent or displayed. Multimedia elements include: Text, Image, Sound, Video.

### 2.2 Animation



Figure 2: Gestures Tap

Understanding the animation is a process of recording and playing back a series of static images to get an illusion of movement (McGraw-Hill and Ibiz, 2002). Basically animation has some kind of one of them is a 2D animation. Animation 2D (two-dimensional) is the simplest animation (Vaughan, 2011).

### 2.3 Interactive Story Telling

Interactive story or interactive story telling or commonly referred to as the IS is a new device that allows users to interact and participate in the story. IS utilize computers and pictures as well as interesting stories (Crawford, 2004). Therefore, the selection of an interesting story and the right media is able to make the children feel happy in learning.

### 2.4 Independence of The Republic of Indonesia History

According Numan Somantri the book Teaching Civics say Social Sciences (IPS) is an educational program that has educational material of social and humanity disciplines (science education and history) are organized and presented scientifically and psychologically for educational purposes based on Pancasila and culture Indonesia (Sumantri, 1976).

The importance of studying history is, because of the human condition that exists today is the result of past events (Sosiosejarah, 2013). An example is the independence of the Republic of Indonesia (RI). Before becoming an independent state, Indonesia is a country colonized other nations such as Japan and the Netherlands. This independence of events that should always be remembered, especially by the citizens of Indonesia. Important figures in the event of independence is Ir. Sukarno and Dr. Moh. Hatta. They along with Ahmad Soebardjo designing copy of the proclamation in Admiral Maedas house. The manuscript was then read and approved by the PPKI. A draft then typed by Sajuti Melik. When typing occurred three changes. Once the script is finished typed, then the script is signed by Ir. Sukarno and Dr. Moh.Hatta on behalf of the Indonesian nation. The manuscript that has been signed then read by Ir. Sukarno in his yard located at Pegangsaan East Street on 17 August 1945 at 10:00 a.m. After the reading of the text of the proclamation carried the red and white colored flag raising accompanied by the song Indonesia Raya.

## 2.5 Android



Figure 3: Main Menu GUI Design Results

Smart phone Android is amoving operating system (mobile) withmodification version from Linux. As a software, this system have superiority, that is software based on computer codethat can be distributedfreely, so programmerscanmakenew applications in it (Cooper, 2010).

## 2.6 Method

Design method used in this research is the prototype method. Prototype method is a method of designing the approach of the needs of users of the system.

Figure 1 shows the schematic of prototype method, the prototype method begin with listen to the customer stage which is an early stage of applications development. At this stage the data has been collected from research that has been doing on Satya Wacana Christian elementary school. The second stage is the stage of the build / revise mock-up that aims to define user requirements and obtain the information needed. To begin designing the system started with designing and implementing the system in the form of application. The final stage of the prototype method is the customer stage mock-up test drives. At this stage of the analysis carried out applications built to find application failures that may exist, is done by testing the application to children whose average was 5th grade elementary school. If there are deficiencies, then returned to the stage of the build / revisemock-up. This phase continue until the application according to user requirements.



Figure 4: Story Pages GUI Results

### 3 RESULTS AND DISCUSSION

This section will explain the results and discussion of instructional media interactive story based on data and design contained in Chapter 3. Learning media interactive story entitled "Tahoen '05" The title selection drew inspiration from the writing of the text of the proclamation that has been typed.

This interactive story telling study mediadesign will be applied on smart phone Android. Therefore, resolution to be used need to be noted. Resolution that will be used is 1280 x 720 pixel with 16 : 9 comparison. This comparison is a standard display size of Android smart phone with big resolution.

In Indonesian Republic Proclamation interactive learning media, users are granted access to fully control on the use of application. Through available menu user can interact directly with application to produce effects or reaction that will appear in the form of animation and audio. Users can use gesture tap on specific characters and choices on available menus. Gestures tap can be seen on Figure 2.

Adobe Air is an application that is used to operate flash digital technology devices such as desktop, laptop or mobile. Adobe AIR have the same function as Adobe Flash.

GUI implementation adapted to the concept and design elements. GUI design made based on the needs of the menu. The concept of main menu GUI was inspired from the flag wave with options menu located on the right side of the application. On this menu, there are two language choices, Bahasa and English language (bilingual). It can be seen on Figure 3.

Design on the story pages highlighting the animation that will be displayed, Animation made different on every page of the story. Story pages design can be seen in Figure 4.

Biography menu GUI design use red and white flag wave background. Biography menu background design use scrolling paper with a larger size. Biography menu GUI Design can be seen in Figure 5.



Figure 5: Biography Menu Design

GUI design tutorial menu similar to the menu biography. But in the animation displayed using digital images of Android smart phone. GUI design tutorial menu can be seen in Figure 6.



Figure 6: Tutorial Menu GUI Design

## 4 CONCLUSION

It can be concluded that the Interactive storytelling can be used as a medium of learning the history of independence of the Republic of Indonesia. Color, writing, and music used in this exciting learning media and according to user needs. In terms of interaction, the application is able to build a child's interest to see the object that gave rise to suppress any animation. The function of each key can be run properly. In terms of benefits, users who use instructional media applications can understand this interactive story about the events and actors historians independence of the Republic of Indonesia. In application development, there are suggestions that could be considered for future research such as the manufacture of other historical story, the addition of interaction such as additional mini-games, as well as development on various platforms other than Android.

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