

HiFi (History Fun Learning): Historical Learning Media to Improve the Knowledge of Indonesian Heroes based on ‘Construct’ for Elementary School Students in Yogyakarta

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Abstract— Indonesia has a big number of national heroes compared to other countries in the world. In 9 November 2017, the president of Indonesia, Joko Widodo bestowed the title of National Hero on four citizens through Presidential Decree of the Republic of Indonesia number 115/TK/2017. So far, Indonesia has 173 national heroes. However, children in Indonesia have a very limited knowledge of those heroes. This is caused by the low reading interest among the children. The National Library of Indonesia recorded that there are 90% of Indonesian citizens above 10 years old who like to watch television but do not like to read books. The low level of reading interest in children causes them to possess limited amount of knowledge. For now, the education about national heroes in elementary schools only uses monotonous printed media so that it does not enhance children’s interest about the heroes. Hence, a new historical learning media is needed as a solution to the problem. HiFi is a combination of introductions about national heroes of Indonesia in historical learning as an educative learning media based on construct application for elementary school students. HiFi is applied in a form of educative game with four main menu which are play, help, about, and exit. This media contains questions in the game which will be solved easily and amusingly in accordance with competency standards of the History subject in elementary schools in Yogyakarta. The forms of the game which will be showed are guessing pictures, videos, map of regions, and puzzle. Thus, the historical learning in introducing national heroes will be easy and effective.

Keywords- *HiFi, Learning Media, Heroes, Game, History*

A. INTRODUCTION

The existence of a nation is not separated by the heroes of its nation. From them, a nation could be independent, developed, and even “globalized”. They who kept struggling to grab and maintain our independence by a physical war or diplomation as

well could be titled as a national heroes. Nowadays, about 173 people have been recorded as a national heroes.

As stated in law No. 20 Tahun 2009 concerning on titles, services, and honors, national heroes are titles given to Indonesian citizens or someone who fights against invaders in the region that is now the Republic of Indonesia to defend the nation and state, or someone who carried out acts of heroism or produced exceptional performances and works for the nation’s development and progress.

Still remembered in memory how great the courage they fought for and defended our independence from the invaders. From that, we can conclude that in a hero there is a value willing to sacrifice, prioritizing the interests of the country rather than one’s own or group interests, sincere, and nationalist. This value is very important to be implmented in the character of the nation.

Nowdays, the effort to introduce heroes has been done as early as possible, namely since in elementary school. This can be seen from the photos of national heroes in the classroom. These photos are expected to be effectively applied as a learning medium to get to know their national heroes. However, in reality the students feel monotonous towards learning methods that are still fairly conventional. Of course, it has an impact on student learning outcomes. (Agus, 2014).

Here the role of technology is really needed to solve this problem. We exect that multimedia technology can facilitate students to learn the history of the struggle of Indonesan national heroes. The delivery will be interesting and easy for students to increaese their spirit of heroism. For this reason we created an android application called HiFi (*History Fun Learning*) that is combining a text, sound, images, and animation to facilitate students’ understanding of Indonesian national heroes.

B. CONTENT

A. Construct 2

Construct 2 is a game maker or HTML5-based application specifically for 2D platforms. This software was developed by Scirra. Unlike Adobe Flash CS6, Construct 2 does not use a special programming language, because all the commands used in the game are arranged in an EventSheet consisting of Event and Action. Construct 2 can publish games or applications with a variety of platform options with just one project. Game Construct 2 can be published on web-based platforms such as Chrome Web Store, Facebook, Kongregate, Newgrounds, Firefox Marketplace. Construct 2 can also be exported to PC, Mac, and Linux desktops using Webkit Nodes, besides publishing to Windows 8 Store or as a Windows Phone 8 application. Users can also export the games to iOS and Android by using CocoonJS, appMobi and PhoneGap. With the support of a broad platform users can have wide access in playing the game.

B. Game Making Process With Construct 2

1. Preparing the Project

First, open software construct 2, and the initial display will appear. Select start new object or type ctrl + N then select "new empty project", the layout will appear.

2. Layout Design

After, typing ctrl + N and selecting "new empty project" it will display a white layout. Here we can design layouts according to our desires or creativity. On the left side of the screen there are several setting options that function to adjust the layout size, layout form, etc. And on the right side there will be files contained in our project.

3. Entering Characters or Material into Layout

To be able to enter materials or characters that will be used in the game, you can double-click on the white layout that is available. Then there will appear several choices, if you want to enter the background select "tiled background", if you want to enter characters select "sprite", if you want to enter text select "spritefont" etc.

4. Giving Behavior to The Game Materials

In a game, the materials in the game have several functions - each. Like, the material for the land that functions as the foundation of the character, the character itself is the main character in a game so that it can run, etc. In that case, it is necessary to give a level of behavior to each of the existing materials. To give it, we can press the material that has been inserted into the layout then pay attention to the left side of the screen and select "Insert New Behavior" in the sub-section "Behavior". In making the behavior for the main character to move we can choose

"Platform" in its behavior, and to make the effect of ground footing we can choose "Solid" on its behavior etc..

5. Giving Action to Every Game Material

Action for each game material is the core of a game itself, in-game action like if we press this object something will appear. In this case, what can make it that way depends on when we make the action of each object in the game. We can make it through the "Event Sheet" which is on the right side of the screen, under the "Layout" section there will be an "Event Sheet" section in this section that requires detailed understanding of the game to be made and the required logic - logical logic in creating a action in this game. We can set if this object is pressed what appears, or it can also be if object A meets object B what will appear etc.

6. Export Project

The final step in game creation in Construct 2 is the export project, where after we design the layout, it gives behavior, giving actions to each game object needed. So, the final step is export project. We can do this by pressing the file menu and selecting "export project" and selecting what the export will be like, want to form an HTML file, an android application or something else.

C. HiFi's Display and the Game Mode



1. Main View

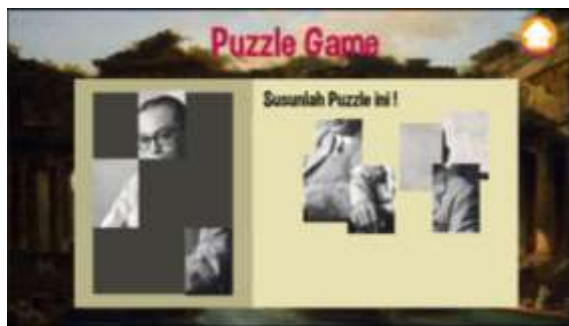


2. Game Mode



3. Guess the Picture Mode

HiFi consists of 3 game modes, namely Guess Images, Puzzel, and Maps, each of which consists of 5 different questions. In Guess Picture mode the player will be faced with an image in each problem. Players are required to answer who is the hero in the picture. If the answer is wrong, the player can choose another answer and if correct, a brief biographical description of the hero will appear. It is hoped that this information will make players read and know the hero.



4. Puzzle Mode

The next mode is Puzzle. In this mode the player will be faced with pieces of hero images which are divided into 9 parts that must be compiled. As usual if a player succeeds in compiling an automatic drawing, a brief biographical description of the hero appears.



5. Map Mode

The last mode is Map. In this mode players will answer questions by choosing 5 major islands in Indonesia (Sumatra, Kalimantan, Java, Sulawesi, and Papua) which have 1 problem

in each island. In this mode the player is expected to know the origin of the hero.

D. Conclusion

1. HiFi interactive application to introduce Indonesia's national hero based on multimedia by using Construct 2. In this application players can be more active because there are texts, images and tools that make it easier for students to know hero characters, where they come from and their struggle.
2. HiFi interactive application to introduce Indonesia's national hero based on multimedia is very easy to use, players can answer the existing questions and a brief biographical description of the hero will appear.
3. Hifi application consists of 3 game modes, namely Guess Images, Puzzel, and Maps which each model has 5 questions with a brief discussion to facilitate players in understanding the heroes in Indonesia.

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AUTHORS PROFILE

Ammar Muhammad is a 5th semester history study program student. He has carried out a joint study of history and science since he first entered college. And this scientific work is the umpteenth time I have produced it. Together with Aditya

Wisnugraha Sugiyarto from the Mathematics study program and Abror Faturohman from the English Language study program we managed to make PC and android applications about the game history containing Indonesian national heroes.