Application of IPS Learning about Humans and Geographical Environment Based on Multimedia

B Hardiyana* and R Yudistira

Program Studi Sistem Informasi, Universitas Komputer Indonesia, Bandung, Indonesia, Jl. Dipatiukur No. 112-116, Coblong, Lebakgede, Bandung, Jawa Barat 40132

*bellahardiyana@gmail.com

Abstract. The purpose of this study was to show the application of IPS learning about humans and geographical environment based on multimedia. Educational media in children with special character compared with children is needed, therefore the teachers in extraordinary schools (SLB) prohibit interesting, creative and positive methods, so that the participants can help the learning activities, the learners which is deaf people does have a shortage in hearing, hence the most effective way is with multimedia visual methods, especially in social science lessons (IPS) Geography is quite difficult to be implemented in a dialogue between teachers and students especially in SLB-B Prima Bhakti Mulia where they are in their learning using oral methods. They can help in learning. In designing the application using descriptive research method, object oriented approach method and prototype development method. So with the method can provide information about the object and the procedure studied. The result of this research is a multimedia-based learning application that is implemented using Adobe Flash CS6 Professional. Has an advantage in the more interesting lessons of human relationships with the economic environment and may be used as a method of therapy for children with special needs.

1. Introduction

At this time in SLB-B Prima Bhakti Mulia in doing the teaching system is done by conventional way that is still using the blackboard method, textbook, so the method of teaching method is done as in other public schools, therefore in communication do not be too high cues in every learning. If there is a vocabulary that is quite difficult to digest, the teacher must write the word on the writing. It can also be an obstacle to learning when it is necessary to illustrate conventionally (drawing on the blackboard) with a lot of intensity and complexity. Hence require special assistance to learn for students or study material back repeatedly. Especially in subjects that are difficult to digest verbally as well as subjects IPS Geography of the school where the curriculum in 2013 there is no application of IPS learning applied in schools, so what they learn there is a limited tool on the material discussed conventionally.

Multimedia is the use of computers to present and convey information by combining multimedia elements, including: text, image, graph, sound, animation, audio and video with tools and connections so users can navigate, interact, work and communicate [1-4]. The use of multimedia is not limited from education / education, business, entertainment, websites and other areas of limu. Adobe Flash CS6 can be used to create multimedia applications that can combine multimedia elements into a single application [1, 5]. With this research is expected Prima Bhakti Mulia Primary School students become more

enthusiastic and add their experience in studying IPS about various social human differences that exist in the environment.

The purpose of this study was to show the application of IPS learning about humans and geographical environment based on multimedia.

2. Methods

2.1. Object of research
The object of research that the author carefully is about the learning system at SLB-B Prima Bhakti Mulia in Jl. Budhi No.123, Pasirkaliki, North Cimahi, Kota Cimahi, West Java 40514.

2.2. Research methods
The method used in this research is descriptive method, descriptive research is a method in researching a group of people, an object, a set of conditions, a system of thought, or a class of events in the present. The purpose of this descriptive study is to create a description, description or painting systematically, factually, and accurately about the facts, traits and relationships among the phenomena under investigation.

2.3. Systems approach method
The system approach is used using Object-oriented method or also called OOAD (Object Oriented Analysis and Design). Object-oriented methodology is a software development strategy that organizes software as a result object that contains data and operations applied to it. Researchers chose this method because in the process of making the application to be able to walk gradually by looking at the objects that run is needed and designing the system using UML (Unified Modeling Language) which offers a standard for designing a model system with focus on the object.

2.4. Systems development method
In the development of this system the researcher uses the prototype method, because by using this method is suitable for designing software where the client in providing general software needs sometimes do not provide input details, process, output and not to mention the designer must be able to adjust the software to the needs of the object, the development must be repeated to be able to clarify the needs of the software.

3. Results and discussion

3.1. System planning
The design of the system is an advanced stage of how the system is designed from the analysis of the system where the design will be described in the system design that will be built before the coding into a programming language.

3.2. System overview proposed
The general overview of the proposed system is a multimedia-based application in the study of social science interactively in order to understand material about human interaction with its geographic environment. In this application has a feature that consists of the menu indicator, the menu material learning human relationships with geographical environment, the quiz menu of exercise questions and the game menu that can test the dexterity of students.

With this it is expected to be able to improve any pre-existing evaluation on social science learning system to understand the material "Human relationship with geographical environment".

3.3. Use case diagram proposed
The proposed system consists of learning materials, learning evaluations in the form of quiz questions and learning reflections in the form of games described in the form of use case diagram as follows:
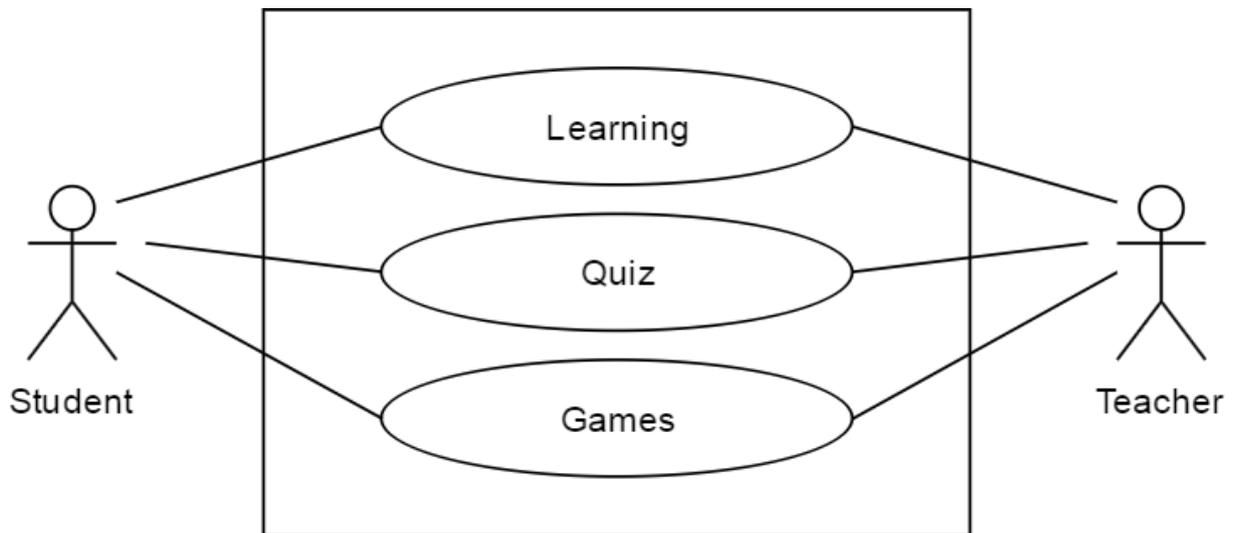
Figure 1. Use case diagram proposed.

3.4. Interface implementation

Here's the interface of the page from the real results of learning applications that have been built.

Figure	Explanation
Figure 2. Intro interface.	Figure 2 shows the intro view you will see an animated character named Kiki, he will guide you to run the application. Click the *"Masuk"* (Sign in) button to proceed to another page.
Figure 3. Main menu interface.	Figure 3 is the main page of the application. You can access the main functions of this app, namely: basic competencies & learning indicators *(kompetensi dasar & indikator pembelajaran)*, learning materials *(materi pembelajaran)*, quiz and games *(permainan)*.
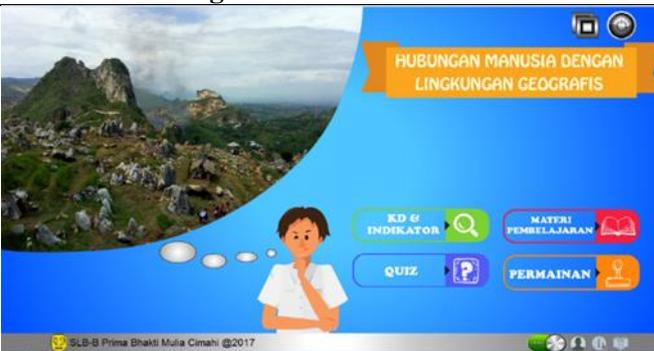
Figure	Explanation
Figure 4. Learning material interface.	Figure 4 appears when we select the learning material menu on the main page. On this page there are 4 types of material, namely: introduction (*pendahuluan*), plateau (*dataran tinggi*), lowland (*dataran rendah*) and coast (*pantai*). The content of the material is explained in the form of animation and video.
Figure 5. Chapter quiz interface.	Figure 5 appears when we select the quiz menu on the main page. Quiz is divided into 2 i.e., daily quiz and final quiz. Daily quiz consists of 3 levels. Each level has 10 questions. While the main quiz there is only 1 level and there are 40 questions.
Figure 6. Interface picture guess games.	Game is divided into 2, the game guess images and crossword games. Figure 6 appears if we select a guess game. This game is divided into 3 levels. The higher the level then the harder the game.
Figure 7. Game interface crossword.	Game is divided into 2, the game guess images and crossword games. Figure 7 appears if we choose a crossword puzzle game. This game is divided into 3 levels. The higher the level then the harder the game.
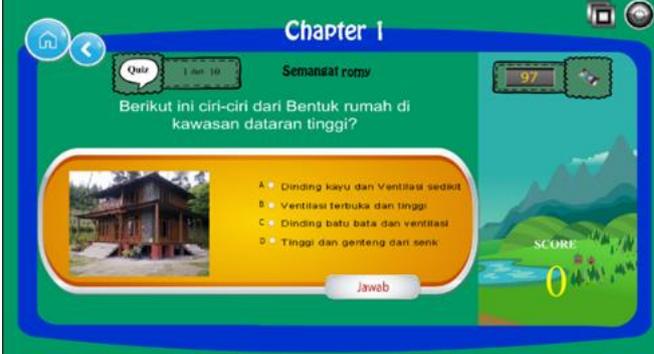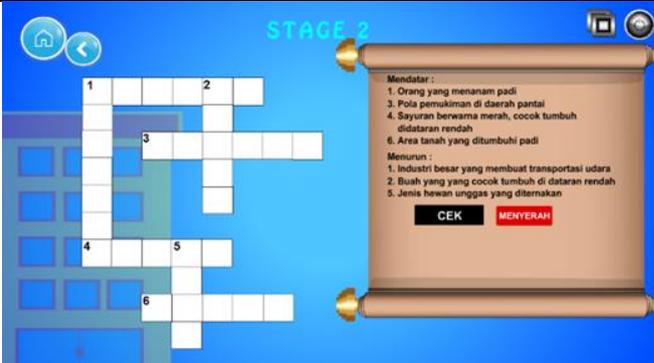
4. Conclusion

Based on the results of analysis and discussion that has been compiled, it can be concluded as follows: With this learning application is expected to be facilitated teacher in explaining and illustrating the material without having to draw or write with enough intensity so that not much time consuming study; The material in IPS learning application is illustrated with animated images and videos so it is expected that the teacher can explain the lesson easily.

References

[1] Nigel C and Jenny C 2002 *Digital Multimedia* (John Wiley & Sons Ltd: England).
[2] Tay V 2011 *Multimedia: Making It Work Eight Edition* (Mc Graw Hill: United States).
[3] El-Hmoudova and Dagmar 2018 *Advanced Science Letters* **24** 2547.
[4] Richard E M 2002 *Psychology of Learning and Motivation* **41** 86.
[5] Chris G 2012 *Flash CS6: The Missing Manual O'Reilly Media Inc* (Sebastopol, CA 95472).