PEMBANGUNAN MEDIA PEMBELAJARAN INTERAKTIF DAN SIMUULASI MATEMATIKA UNTUK ANAK SEKOLAH DASAR KELAS 1 PADA SD ANDIR KIDUL BANDUNG

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ABSTRACT

SDN Andir Kidul still use media books and a praga simple in the learning process. By using such methods in the learning process of teachers feel the difficulties and also requires extra power for delivering the teachings to the students verbally. Teachers feel hard-pressed to deliver the material to students because of lack of props, and the concept of learning results in children are bored, and the difficulty of following the instruction.
Research used is alalisis structured, structured research
The stage of data collection by way of literature study, observation, and wawamcara then the stages of making the software uses the concept of sutopo consisting of concept, design, materials, Assembly, Testiing collecting, and Distribution.
Pupils research results agree with the existence of this math and pembelajran media interested in using such an application, make pupils feel happy with learning to use media interactive learning math, and teachers feel helped by the existence of these learning media, in terms of learning, teachers need not bother to bring props to demonstrate an example of a matter that should be practiced or are Abstract, because according to teacher students tend to still find it difficult to imagine or symbolise anything.

Keywords: Media Learning Math, Learning Math, A Thematic Applications.

PENDAHULUAN

1.1 Latar Belakang Masalah

SD Negeri Andir Kidul is a primary school (elementary school) located in the eastern part of the city of Bandung Subdistrict in Cinambo (earlier Distric Ujungberung) which is part of the SD Program Impres. SD Negeri Andir was founded in 1975 on the ground Kodam III Siliwangi.
Based on interviews with the Mother Goddess Fatima one of the first-class teachers stated that the majority of primary school teachers (elementary school) in SDN Andir Kidul still use media books and a praga simple in the learning process. By using such methods in the learning process of teachers feel the difficulties and also requires extra power for delivering the teachings to the students verbally.
Plus the lack of props to support learning, recall will cost a large classified if it should use the props and the limitations of the room if must use props. as a result of the teachers are still using conventional learning methods in teaching students, it makes students feel bored and fall of understanding student learning because students are required to be able to remember and understand the material described by teachers with a model Thematic Guide book.
Thematic learning itself is the implementation of the curriculum unit level education (KTSP). The basic consideration of the implementation of learning which refers to three runways: Runway, psychological, philosophical and juridical, where in one guide book contains some basic competency, the incorporation of indicators as well as the content of the subjects. This thematic method has the disadvantage that occurs if done by a single teacher for example, a classroom teacher less mastered the in-depth elaboration of the themes so in thematic study will find it difficult to associate the theme with the subject matter of each subjects. In addition, if the scenario
learning not to use innovative methods then the achievement of basic competencies and competency standards will not be achieved because it will become a narrative that is dry without meaning.

1.2 Outline Of The Problem

Based on the problems examined then the intent of the research is to build learning and Mathematical simulation media for older elementary school class I in SD Negeri Bandung Kidul Andir..

1.3 Purpose and Objectives

build media learning and Mathematical simulation for elementary school children grade I in SD Negeri Andir Kidul, Bandung.
As for the goal to be achieved from the results of this research are:

1. Can facilitate teachers in delivering learning material that is less understood by students especially on lessons math.
2. Help the pupils understand mathematical lesson is abstract

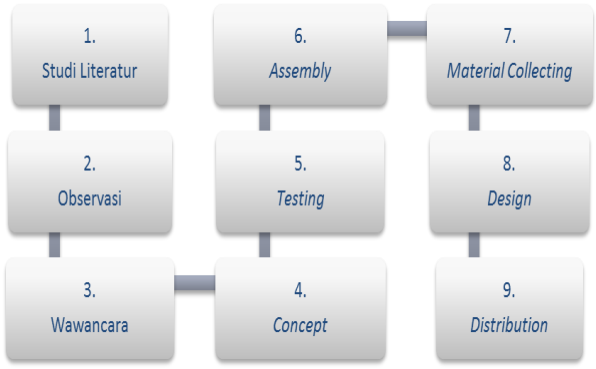
1.4 Limit Problem

Limitations of the problem done so that focusing the research so that research conducted with targeted advertising. The limitations problem in project management information system in PT Putra Perdana Dalima, is as follows:

1. limitation of the problem in this research are as follows:
2. Applications which are applied for grade I SD Negeri Andir Kidul, Bandung.
4. On the media this learning the material covered is the Mathematical Thematic subjects.
5. The subjects covered are Mathematical material corresponds to the standards of competence and basic competence SD Negeri Bandung Kidul Andir
6. application of learning and this tutorial is built using Adobe Flash CS 6 and actionscript 2.0 programming.
7. This application based dekstop and packaged in display 2D (two dimensional).

1.5 Metodologi Penelitian

Research methods in General can be interpreted as a technique or a way of doing research activities include collection, data processing and penganalisaan. The methodology used in the writing of this final project is a descriptive research. Descriptive research that is one of the types of research methods that attempt to describe and interpret the objects according to what it is. This method is divided into two methods, i.e., methods of data collection and method development



Picture 1.1 Flow Research

1. Study of literature
   Study of literature is a data collection method berkaintan
   with the research and development system, through books, the internet, and the papper application relating to the Development of mathematical Simulation and Learning Media For Older elementary school class I.
2. Observations
   This stage of observation in the place the author does a case study at Andir, Bandung Kidul SDN to know the characteristics of users and supporters in the media design learning.
3. Interview
   In this stage the author held a question and answer directly to the Mother Goddess Fatimah as master class 1 at Andir, Bandung Kidul SDN about the problems faced in the process of learning and mathematical subjects in class1 .

1.6 Systematics of Writing

Systematics of writing is organized to provide a general overview of writing a final assignment against will be done. As for the writing of the final report of Systematics as follows:

Chapter 1 INTRODUCTION

Chapter 1 outlines the background, formulation of the problem, the search for solutions to the problems that exist, the mengedintifikasi the problem, determine goals and purpose, the boundary problems, research methods, and Systematics of the writing.

Chapter 2 LITERATURE REVIEW

This chapter discusses the various basic concepts and theories related to the topic of the research done and the things that are useful in the process of analysis of the problem.

Chapter 3 ANALYSIS and DESIGN

This chapter outlines the results of the analysis of the object of the study to find out what problems will emerge and try to solve the problem with applying and modeling tools are used.

Chapter 4 IMPLEMENTATION and TESTING

This chapter discusses implementation, comprising the implementation of hardware, software implementation, application, implementation and testing.

Chapter 5 CONCLUSIONS and SUGGESTIONS

This chapter outlines the conclusions from the results of research as well as suggestions for future development...

1. ISI PENELITIAN

2.1 Theory

2.1.1 Understanding Learning

According to the great Indonesian Language Dictionary (KBBI), learning is trying to obtain intelligence or science; practice; changing behavior or response caused by the experience. Learning can also be defined as the activity of collecting a certain amount of knowledge. The knowledge gained from someone who know better or who now is known for its teachers. A lot of people his knowledge identified as people who are a lot to learn, while others are a bit of his knowledge didentifikasi as little learning, and people who are not knowledgeable are seen as people who don't learn.

According to Sardiman (2010:20) mendefenisikan learning as a mastery of material science that is part of activities towards the formation of the personality of the whole person. Next Slameto (2010:2) stated in his book that learning is a process of individual work done in order to obtain a change in overall behavior,

as a result of the experience of the individual itself in interaction with the environment. In addition Sardiman (2010:20) States that learning is a change in behavior or appearance, with a series of activities such as reading, watching, listening, imitating and others..

2.1.2 Kelebihan Pembelajaran Berbantuan Komputer

According to Wiharjo (2007:54), the advantages of the computer as a medium of instruction are:

1. Increased attention and concentration of students.
2. Increase the motivation of students.
3. Adjust the material with the ability of students.
4. Reduction of the use of the delivery time of the material.
5. Can accommodate many students and run its functions with minimal errors.
6. Can use storage facilities to find out students ' learning progress.
7. Are responsive and friendly so that students learn without psychological pressure.
8. The material can be designed more attractive.
9. The level of ability and speed of learning can be controlled by the students so that students can learn and perform in accordance with its ability.
10. Can encourage teachers to improve their knowledge and ability concerning the computer.

2.1.3 *Jenis-jenis Multimedia*

According to Sigit, et al. (2008:1) multimedia is divided into two types, namely:

1. Linear Multimedia

Linear is a multimedia multimedia not equipped by any instrument controller can be operated by the user. Multimedia is a sequential (sequence), for example: TV and film.

2. Interactive Multimedia

Interactive multimedia is equipped by the controller can be operated by the user, so the user can select what is desired for the next process. For example: video games, interactive learning, and others.

2.1.4 Flash

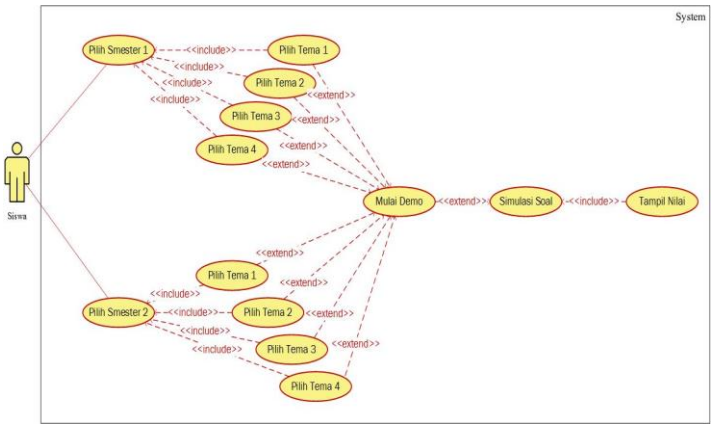
Flash is a graphics program produced by Macromedia Corp., a software vendor engaged in web animation. Macromedia Flash was first produced in 1996. Macromedia Flash has been produced in several versions. The last version of Macromedia Flash is a Macromedia Flash 8. And now Flash vendors have moved into the Adobe. Adobe is the vendor of the software that is bought from vendors earlier Flash Macromedia. Since then, Macromedia Flash was renamed Adobe Flash. The latest version of Adobe Flash is currently the Adobe Flash CS6. And making this animation authors using Adobe Flash CS6 as its application.

According to Daishz (2009:270) Flash is one of the software the computer which is the flagship product of Adobe systems. Adobe Flash is used to create vector images or animated images. The files resulting from the software have file extension .swf.

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2.1.5 *Use Case Diagram*

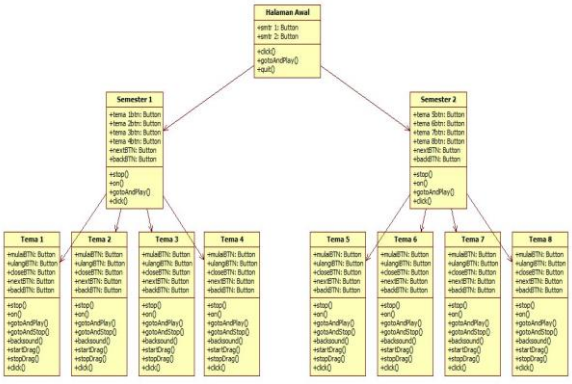
Use case diagram is a diagram that shows the functionality of a system or class and how the system interacts with the outside world and explains the system is functionally a sighted user.



Picture 2.1 *Use Case Diagram* Diagram of the Application of mathematical Simulation and Learning Media

2.1.6 *Activity* Diagram

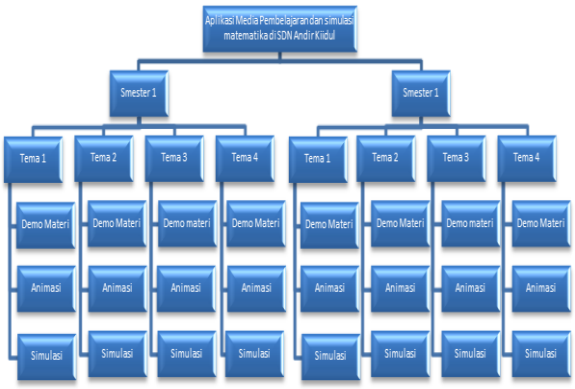
Describes the system structure ClassDiagram in terms of defining the classes that will be created to build the application. Here is a picture of classdiagram application made..



Picture 2.2 Class Diagram

2.1.7 The design Menu structure

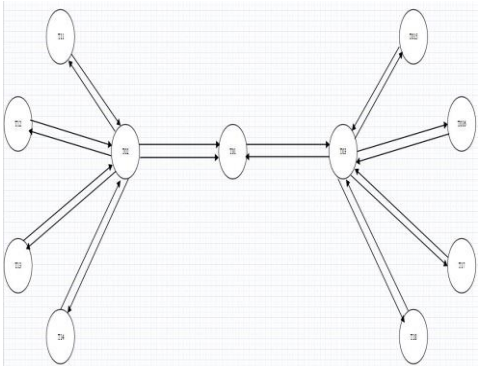
In designing an application required menu structure that contains the menu and submenus that serves to facilitate users in using the application. The following described on menu structure in these learning media.



Picture 2.3 The Design Of The Menu Structure

2.1.8 Semantic Design

Semantic network is a picture depicting a relationship interface with each other.



Gambar 2.4 Semantic Network

3. CLOSING

3.1 Conclusions

Based on the results of implementation and testing, then the conclusion of the final project entitled "development of mathematical Simulation and Learning Media For Older elementary school Class I in SD Negeri Bandung Kidul Andir" that is as follows:

1. Based on the results of testing conducted through a questionnaire and interviews to State primary school teachers Andir, Bandung Kidul, the media can facilitate this learning teachers in delivering lessons for mathematics in SD Negeri Andir Kidul, Bandung.
2. Based on the results of the testing that was done through a detailed questionnaire in SD Negeri Andir, Bandung Kidul, the media can facilitate this learning of pupils in understanding mathematics is abstract.

3.2 Advice

Application of mathematical Simulation and Learning Media For Older elementary school Class I in SD Negeri Bandung Kidul Andir is still far from perfect and a lot of shortcomings. Therefore, the need for further development and refinement in order to meet the needs of users who are increasingly growing. As for the advice against this learning media development for the future are as follows:

1. Addition of new learning Media such as in IPA, religion, Indonesian Language and sebagainnya.
2. Animation and simulation can be developed into a 3 dimensional shape to make it look more real and exciting.
3. Expected to kedepanya media learning can be developed into mobile-based Defender so it can be used anytime and anywhere

GRATITUTION

Praise the author panjatkan the presence of God Almighty, because thanks to his gift of grace and the author can complete the drafting of the thesis. Along with greetings, send best wishes always devote to the Prophet Muhammad, to his family, his companions, and to his people until the end of time, Amen.

The writing of this thesis submitted to fulfill one of the conditions obtained a Bachelor in Computer Engineering and computer Science Engineering Course University of Indonesia Computer Informatics. The headline Writers ask is "interactive learning Media Development and simulation of Mathematics For elementary school children Grade I in SD Negeri Andir, Bandung Kidul".

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The authors are aware of this final task is still far from perfect, with all the disadvantages. The author expects criticisms and suggestions from all parties for the sake of building perfection this final task. This thesis may be useful for authors in particular and to readers in General.a.

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