



Interactive Learning Media Application About Animal Recognition Using the Computer Assisted Instruction (CAI) Method at PAUD KB Sakinah

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ABSTRACT

Learning Media in general is a tool in the teaching and learning process. The use of computers as a learning medium or known as CAI (Computer Assisted Instruction) is a microprocessor-based learning material delivery system whose lessons are designed and programmed into the system. This can be an innovative learning tool compared to blackboards and chalk. SAKINAH KB PAUD is an early childhood education located in Baru Ibul village. The learning media currently used at PAUD KB SAKINAH for introducing animals is using Origami paper as a visual tool. The aim of this research is to create a more interesting and interactive animal recognition learning media application to make it easier for teachers in the teaching and learning process. The method used in this research is the Waterfall method (sequentially) which consists of six stages, namely requirements (needs analysis), system design (system design), coding (coding), testing (testing) and operation & Mintence (maintenance). This research resulted in an interactive learning media application for animal recognition at PAUD KB SAKINAH.

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1. Introduction

The learning media currently used at PAUD KB SAKINAH for introducing animals is through learning media in the form of origami paper which can be used as a visual tool. Learning media is a means of sending messages using the help of certain media. Various types of learning media continue to be developed to increase students' interest and knowledge. Knowledge of learning media must also be adapted to changes in the environment and characteristics of students to make it more effective and efficient.[1]

There are constraints in the amount of material that can be presented. Apart from that, paper is often used as a medium for identifying animals which is susceptible to damage or loss, so this can hinder the learning process. For this reason, to be more varied and effective, learning tools are needed that are more adequate, interesting and also make it easier for students to be active, creative and have fun in the learning process about introducing special animals to Early Childhood Education. Based on the problems above, the author wants to create an interactive learning media application about animal recognition using the Computer Assisted Instruction (CAI) method at PAUD KB SAKINAH. CAI is the development of integrated information technology that combines interactive, audio, video and images in multimedia form. CAI involves the use of computers that facilitate communication and interaction between students and teachers directly. [2]

With this animal recognition learning media application, it creates a more interesting and interactive learning process and makes it easier for teachers in the teaching and learning process.

Interactive Learning Media Application About Animal Introduction Using the Computer Assisted Teaching (CAI) Method at PAUD KB Sakinah is a professional interactive learning media application that focuses on introducing animals to children using the Computer Assisted Instruction (CAI) method. This application is specifically designed for use in PAUD (Early Childhood Education) KB Sakinah. The main aim of this app is to provide an interesting and interactive learning experience for children, so that they can learn about various animals in a fun and entertaining way. By utilizing the Computer Assisted Teaching (CAI) method, children can actively participate in the learning process and develop important cognitive and motor skills. The main features of this app include: 1. Interactive Animal Presentations: This app provides detailed and interactive presentations of various animals. Kids can explore various animal species, learning their characteristics, habitats and behavior through interactive visuals, sounds and animations. 2. Educational Games and Activities: The application offers a variety of educational games and activities aimed at reinforcing the knowledge gained during the animal presentations. These games are designed to entertain and challenge, improving logical thinking, problem solving, and memory skills. 3. Progress Tracking and Assessment: This app allows parents or teachers to track children's progress and assess their understanding of the material. This feature allows educators to identify areas that require additional support and customize the learning experience according to individual needs. 4. User Friendly Interface: The app is designed with a user friendly interface, ensuring easy navigation for kids. Clear instructions and visual cues are provided to guide children throughout the learning process, making it accessible for both independent and guided learning. 5. Parental Involvement: The application encourages parental involvement by providing parents with access to monitor their child's learning progress, receive reports, and provide feedback to educators. Collaboration between parents and teachers facilitates a holistic approach to a child's education. Overall, the Interactive Learning Media Application about Animal Recognition Using the Computer Assisted Instruction (CAI) Method at PAUD KB Sakinah aims to improve the quality of education provided at PAUD KB Sakinah by utilizing technology to create a dynamic and interesting learning environment. By integrating interactive elements, educational content, and progress tracking, the app seeks to support children's cognitive development and foster a love of learning about animals.

2. Research Method

In conclusion, research methods in making animal recognition applications are a crucial step for the success of the application to be made. Through the application of the Computer Assisted Instruction (CAI) method and interactive learning media applications, it is hoped that PAUD KB Sakinah can provide a more interesting and effective learning experience for children in recognizing animals. With that, we invite PAUD KB Sakinah to participate in developing this application to improve the quality of learning at their institution.

Research methods are systematic steps taken in making animal recognition applications. In developing this application, there are several research methods that can be used to ensure the success of this project.

First, it is important to carry out an in-depth literature study about the animal that will be used as the object of introduction. Literature study will provide an in-depth understanding of the characteristics and distinctive features of each animal. In addition, involving experts in the field of zoology or animal biology can also provide valuable additional insight.

Furthermore, effective data collection methods are also needed in this research. Data about animals that will be used as objects of identification can be obtained in various ways, such as direct observation in nature, case studies, or the use of online data sources. It is important to ensure that the data collected is accurate and includes sufficient variation in the animals' physical and behavioral characteristics.

Once the data is collected, analysis methods are also important to identify distinct patterns and features within each animal. Some analysis methods that can be used include statistical analysis, image processing, or the use of machine learning algorithms. The choice of analysis method will depend on the complexity of the data collected and the goals to be achieved in creating this application.

In addition, it is also important to carry out regular testing and evaluation to ensure the quality and accuracy of animal recognition in the application. Testing can be done using different datasets and involving other people to provide input and feedback. Evaluation is carried out to ensure this application works well and meets its initial objectives.

By using appropriate research methods, the development of animal recognition applications can be more efficient and successful. With a deep understanding of animals and the use of appropriate analytical methods, this application can provide significant benefits in the field of animal science and education.

2.1 Research Flow Diagram

The following are the research stages used in completing this research.

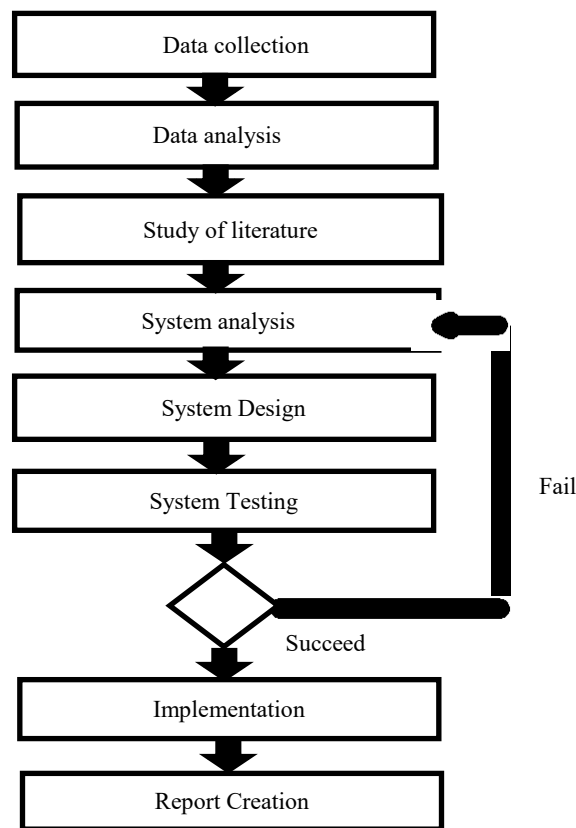


Figure 1. Research Methode

Stage 1: Needs Analysis

At this stage, it is necessary to carry out a needs analysis regarding the introduction of animals in the Sakinah PAUD KB. This step includes identifying learning objectives, the material to be taught, as well as the availability of the necessary hardware and software.

Stage 2: Application Design

After the needs analysis is carried out, the next step is to design a CAD-based animal recognition application. This design includes creating an interface design, selecting relevant content, and developing interactive features that suit user needs.

Stage 3: Application Development

At this stage, a CAD-based animal recognition application will be developed using design and application development software. The development team will use CAD software to create 3D models of animals, organize animations, and integrate interactive features.

Stage 4: Trial and Evaluation

After development is complete, the application will be tested by teachers and students at KB Sakinah PAUD. This trial aims to evaluate the effectiveness of the application in supporting animal recognition learning. The results of this trial will be the basis for making improvements and improvements to the application.

Stage 5: Implementation and Monitoring

Once the application is deemed ready to use, the implementation stage is carried out at KB Sakinah PAUD. The teacher will introduce the application to students and provide usage guidance. Next, the teacher will monitor the use of the application and ensure that the application provides the expected benefits in animal learning.

3. Result and Discussion

Once the application is deemed ready to use, the implementation stage is carried out at KB Sakinah PAUD. The teacher will introduce the application to students and provide usage guidance. Next, the teacher will monitor the use of the application and ensure that the application provides the expected benefits in animal learning.

3.1 Use Case Diagram

Based on the design made, the teacher can choose 2 menus from the main menu, namely the learning menu and the playing menu. As illustrated below:

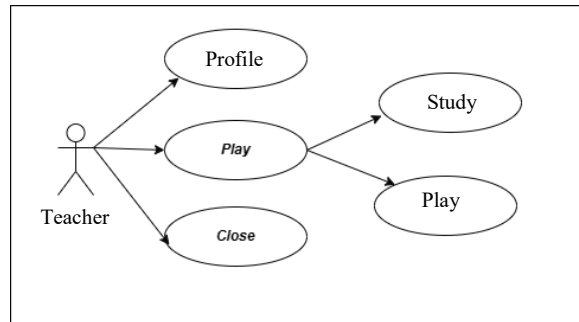


Figure 2. Use Case Diagram

3.2 Sequence Diagram

1. Sequence Diagram Learning Menu

The following is a Sequence Diagram for the Learning Menu in the Learning Media Application for Introduction to Animals at PAUD KB SAKINAH.

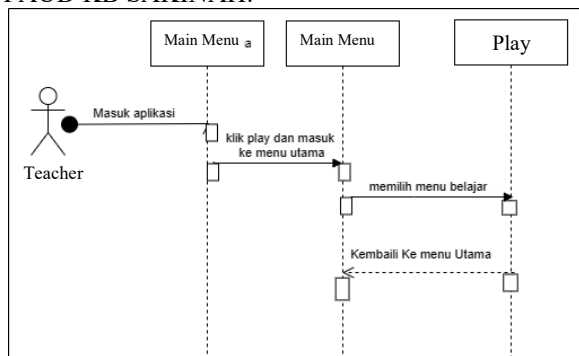


Figure 3. Sequence Diagram Learning Menu

1. Sequence Diagram Play Menu

The following is a Sequence Diagram for Playing in the Animal Introduction Learning Media Application at SAKINAH KB PAUD.

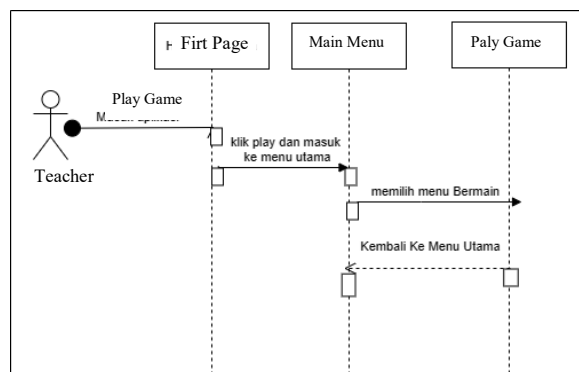


Figure 4. Sequence Diagram Play Menu

3. Sequence Diagram Profile

The following is a Profile Sequence Diagram for the Learning Media Application for Introduction to Animals at PAUD KB SAKINAH.

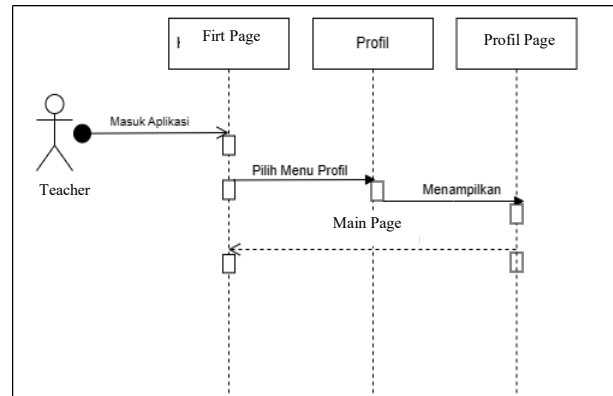


Figure 5 Sequence Diagram Profile Page

1. Application Design

1. Main page display

The following is the main page display for the interactive animal recognition learning media application.



Figure 6. Main page display

2. Main Menu Display

The following is the main menu display for the interactive animal recognition learning media application.

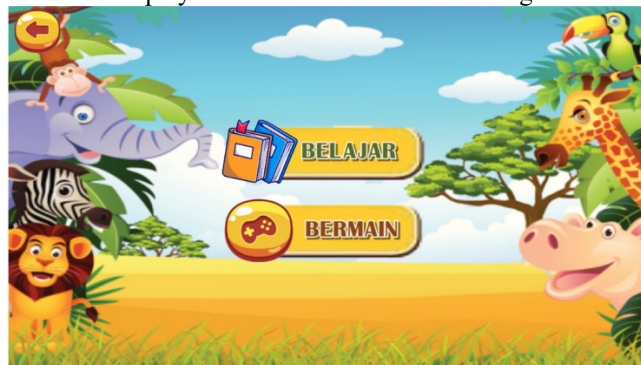


Figure 7. Main Menu Display

3. Display the Learning Menu

The following is a display of the Learning menu in the Interactive Animal Introduction learning media application.



Figure 8. Display of the Learning Menu.

4. Wild Animal View

The following is the appearance of wild animals in the interactive animal recognition learning media application.



Figure 9. Appearance of Wild Animals.

5. Pet View

The following is the appearance of pets in the interactive learning media application Animal Introduction.

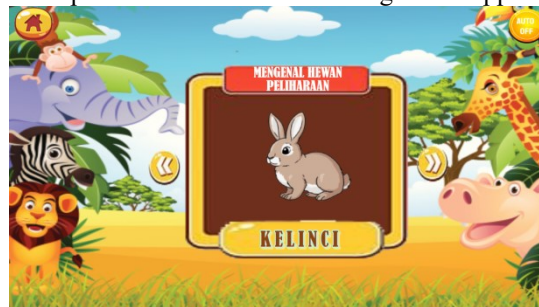


Figure 10. Pet View.

6. Play Menu Display

The following is the Play Menu Display in the Animal Introduction Interactive learning media application.

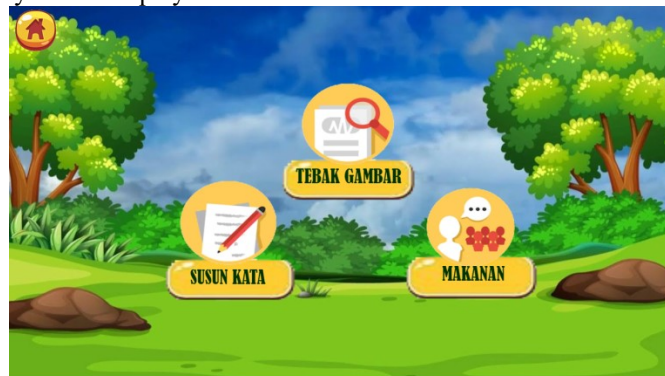


Figure 11 Play Menu Display

7. Display of playing Guess the Picture

The following is the appearance of playing Guess the Picture in the Interactive Animal Recognition learning media application.



Figure 12. Guess image display.

8. Display Playing Arranging Words

The following is the appearance of playing word order in the interactive learning media application Animal Recognition.



Figure 13. Word Arrangement Display

9. Display Playing Arranging Words

The following is a display of Playing with Animal Food in the Interactive Animal Introduction learning media application.



Figure 14. Display of Animal Food

10. Display Researcher Profile

The following is a display of the researcher's profile on the Animal Introduction Interactive learning media application.



Figure 15. Profile page display.

11. Exit Menu Display

The following is a display of the exit menu on the interactive learning media application for introducing animals at PAUD KB SAKINAH.



Figure 16. Exit Menu Display.

4. Conclusion

Based on the description of the previous discussion regarding the design of an interactive learning media application about animal recognition, it can be concluded that the learning media application using the CAI method about animal recognition provides a new experience for preschool students in using technology as a learning medium so that it can make it easier for teachers in the teaching and learning process and help preschool students recognize letters because there are pictures and audio and make preschool students more enthusiastic and active.

The use of CAD in animal learning at KB Sakinah PAUD is an innovative and effective step in improving the quality of learning. CAD-based animal recognition applications can provide a more interesting and interactive learning experience for children. Apart from that, using this application can also simplify the learning process, improve memory, and facilitate bold learning. With proper implementation and good monitoring, CAD-based animal recognition applications can be an effective solution in increasing children's understanding of the animal world.

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