Interactive Courseware for Preschoolers

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Abstract - The creation of a computer-aided instruction for the Preschoolers of Liceo de Cagayan University specifically called Interactive Courseware for Preschoolers is the substance of this paper. It enhances the traditional way of teacher’s instructional strategies to encourage the pupils’ interests in learning with the computer environment that is creative enough to please them. This software serves as an alternative way in learning. The Interactive Courseware for Preschoolers is a type of computer-based instruction with its text and animations in a graphical form for the preschoolers to learn interactively with the lessons that are presented with facts and able to have a recap on what they have just learned by taking the interactive quizzes. This can provide the pupils with a more flexible, creative and entertaining environment for their learning experiences with the implementation of a Visual basic format and Macromedia Flash.

Keywords - computer-aided instruction, interactive courseware, preschoolers, visual basic format
INTRODUCTION

Despite the revolutionary advances in the field of computer-based education, technology remains simply a tool. Potentially powerful and stimulating, the computer is only an inert object that can never be a substitute for the personal touch of the classroom teacher (Marshall 1999). Without proper integration of computers into the curriculum, the benefits of technology to foster children’s learning cannot be fully achieved, regardless of the creative potential of any software used (de Vera Lim 2000). Responsibilities of the teacher in the computer-enriched classroom begin before the computer is introduced to the students (McPherson and Nunes 2004). In providing a rich, challenging, and appropriate learning environment, teachers must take an active role in selecting the software that will truly enhance children’s learning and development.

Research studies (Marshall 1989) indicate clearly that computer instruction is effective for a wide variety of reading skill and concept areas. A fact that computers have won a permanent place in most classrooms, the most common concerns of educators now have to do with the effectiveness of computer-based education and with the appropriateness of the many possible roles computers can play various instructions (Muda 2006).

OBJECTIVES OF THE STUDY

This study aimed at developing and implementing an interactive courseware for preschoolers. The courseware is designed to rate the pupils’ assessment based on what have been learned; provide the preschoolers with content and learning experiences structured around texts, graphics, and audio; and enhance the preschoolers’ knowledge through computer use with an allowable time to finish their activity.

SIGNIFICANCE OF THE STUDY

The courseware will be beneficial to the following:

The University. The courseware can be an aid to an overall learning strategy which is a conglomeration of other methods of instruction such as the lecture, tutorial sheets, and textbooks. It also helps in the record keeping and tracking of pupils’ files as regards to their activities on the interactive media.
**The Pupils.** Through the interactive courseware, the pupils will be able to log in the system and learn the lessons interactively, making learning a fun.

**The Teachers.** The courseware will reduce the time in creating texts, graphics, and audio for their class activity.

**Courseware Developers.** The courseware will serve as a prototype subject to enhancement for a more effective system.

**SCOPE OF THE STUDY**

This study sought to design an interactive courseware for preschooler. The software design covered the functions for the pupils, administrator and teachers. For the pupil, a login system was designed to give the pupil access to the lessons provided by the system. The system provides for an intermediate quiz for the pupils to take. On the administrators side, the functions of the system was limited to addition, updating, deleting, searching and printing of teachers’ and pupils’ master file. The function for the teachers was focused on the addition, deletion, updating, searching for students, and printing of the pupils’ ratings and master file. The system also allows the teacher to update the quiz based on the lesson contained in the system.

**Context Diagram**

The figure below shows the context level data flow of the system.

![Context Diagram of Interactive Courseware for Preschooler](image)
The Administrator must input the personal information of the teachers so that an account will be created for the teachers for them to access the Teachers Page in which they will create an account for the pupils. The pupils can access the Pupils Page with the use of the account created by their teachers. The system is expected to give an output of the pupil's progress for assessments.

Research Design

![Software development life cycle model](image)

Figure 2. Software development life cycle model

The researchers used the Software Development Life Cycle model, is to minimize the cost of the software over its lifespan. System features must be identified as early as possible in the life-cycle. The further into the life-cycle you go, before identifying a feature change, the more expensive that change is to make, both in terms of time and financial impact.

Research Setting / Locale

This system proposal centered on the interactive courseware for preschoolers of Liceo de Cagayan University, RN Pelaez Boulevard, Carmen, Cagayan de Oro City.

Research Instruments

The requirements of the proposed system were analysed using the Unified Modeling Language (UML). The model of the data and data relationships was
presented using the Entity Relationship Diagram (ERD).

The system was developed in Microsoft Visual Basic 6.0 for the front-end, Microsoft Access for the back-end, and Macromedia Flash MX for animation.

Data Gathering Procedure

The researchers visited the Liceo de Cagayan University preschool department specifically the Kinder 1 pupils age 3-4 yrs old of and conducted an interview with the chair and adviser of two kindergarten sections. Review of related studies and literature published in the Internet was also done.

RESULTS AND DISCUSSION

This chapter presents the system design modeled on Unified Modeling Language. The Use Case Description Tables depict the functions of each diagram.

Use Case Diagram. It describes the system from the user’s point of view. It also describes the various functionalities expected from the system to be developed and how the user is going to interact with those features.

![Use case diagram for admin](image-url)

Figure 3. Use case diagram for admin
Figure 4. Use case diagram for teachers

Figure 5. Use case diagram for pupils
Figure 6. Entity relationship diagram
Figure 7. Form for splash

Figure 8. Form for menu
Figure 9. Form for administrator’s login

Figure 10. Form for administrator’s master file
Figure 11. Form for master file

Figure 12. Form for master list
Figure 13. Form for teacher’s login

Figure 14. Form for teacher’s master file
Figure 15. Form for teacher’s master file:
INFORMATION

Figure 16. Form for teacher’s master file:
PERFORMANCE
Figure 17. Form for teacher’s master file: LESSON SELECTION

Figure 18. Form for teacher’s master file: ACTIVATE
Figure 19. Form for student login

Figure 20. Form for students’ choices
Figure 21. Form for lessons and quiz

Figure 22. Form for ABC learning
Figure 23. Form for animals

Figure 24. Form for rhymes
Figure 25. Form for counting numbers

Figure 26. Form for quiz
CONCLUSIONS

The interactive courseware has been tested successfully. As found, the system increases work productivity; that the teacher saves time and effort in evaluating pupils.

Also, it provides a great advantage for the application of the common tasks that a teacher performs inside the classroom, specifically in reinforcing the lessons through the software.

The interactive courseware helps the preschool department in learning effectively among the pupils. Using the courseware the pupils are kept abreast with the latest information technology. Hence, they cope with the advancement of learning in today’s generation.

A. LITERATURE CITED

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