

Online Platform for Pre - School Management

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Abstract: This study's primary goal is to examine three potential options for enhancing pre-school learning and instruction. After that, the report will provide a recommendation for the best course of action to take to address the research questions. Information and communications technology (ICT) in pre-schools will be examined as part of this study as well. But it will address the benefits and drawbacks of a web-based electronic learning system in comparison to a conventional educational system for children.

Key Words: Childhood, Education, Web-based, E-learning, Pre-school

1. Introduction

Design and create a web-based application that focuses on utilising real-world items to promote pre-school learning of the English alphabets and number counting and achieves a more precise activity base-learning. The goal of this project is to do literature research on user-centered design as well as the current teaching and learning trend, considering the strengths and shortcomings of each. It is important to create and construct a simple, but advanced, web-based application that is geared toward teaching youngsters rather than causing devastation. To create a system that helps children concentrate and enjoy learning by using real-world elements such as music and pictures that grab their attention. To increase the effectiveness of pre-school teaching and learning while also increasing the rate at which developing children learn. This system should be confined to pre-school activities, but not higher levels of performance, and it should explain the critical areas of children's growth and learning abilities.

A. Problem statement

The following issues will be addressed by this research based on prior studies and investigations of the existing system of education for children: Parents and instructors will have a tough time monitoring their children's growth and performance since most of the current system does not enable kid assessments. Most of these websites are exposed to external connections for advertising reasons to generate additional revenue for some of the website owners that provide these online educational resources for children. This might have an adverse effect on the children if they navigate away to some of the harmful material.

As an example, consider recordings with explicit sexual material or those showing acts of violence. iPads and iPods may not be able to view lessons because of the reliance on SWF file types. It is well-known that the Mac OS X operating system does not presently allow flash material, which means that many children whose parents use Apple computers will not be able to view these classes. There are hazards and challenges linked with inadequate information supply, such as classes that do not align with the curriculum of what students are studying in their schools.

2. Literature Review

Effective education is critical to a nation's social, political, and economic success, according to this view. To assist students, go from one learning level to the next in a more social and interactive setting, teachers must be effective. They must also employ the correct strategy to help students become self-directed learners. Formal education in the US is heavily subsidized by the federal and state governments, according to Edward, Walter, and Stephanie (2012). They begin public education for children at a

young age. Most cities allow children as young as five to begin attending the public school system. Public schools in New York City and Boston, for example, accept children as young as four years old and as young as 22 months old. This illustrates that preschool programs are a high point of many educational and social changes, and that early childhood education is widely becoming the most effective strategy to increase children's scholastic achievement. Sending a child to preschool will help him or her be more prepared for elementary school and other forms of formal education. There are a variety of factors that will impact whether or not a student is more likely to succeed in school and later in life. The need of educating children so that they do not fall behind in today's competitive digital world cannot be overstated. Preschool instruction, according to research, helps youngsters enter kindergarten with more developed learning abilities. A child's learning talents are polished and ready for kindergarten if he or she is read to regularly at home, attends museums, has online learning or training available, and learns how to play a game (Stube & Patrick, 2010). Children's intellectual, physical, artistic, social, and emotional development may all be facilitated via play, according to Johnston et al. (2010). Practitioners may help young children learn while having fun and being challenged by offering well-planned indoor and outdoor experiences based on children's natural play. The concept of playing

appeals to children. Better learning would be achieved in a world full of various play activities. That is why it is a good idea to engage youngsters with activities that are both entertaining and interesting. There will be a lot of language used, and the kids will not know they are learning certain letters, words, and ideas as a result. BBC News (2008) reports that some study has shown that computer systems or web-based preschool systems may be utilized to deliver interactive educational activities to children that will help them to recognize or differentiate shapes while also awarding them a score simultaneously or at the end.

Teachers and instructors may also use web-based or computer systems to get their students to listen to tales by showing them pictures and videos along with the text. The Development of Expressive, Creative, and Aesthetic Skills (ECAD). Children are at the pre- operational stage throughout the preschool years, according to Morrison (2009). For the duration of this period, youngsters will base their judgements mostly on how things seem, believing that everyone else believes the same thing they do. Children are heavily impacted by their views at this pre-operational stage and do not completely grasp the notion of dialogue. Children who struggle with conservation have a hard time grasping the concept that despite physical changes, the amount of something may remain the same. Another example would be showing a youngster two similar cups each filled with the same quantity of rice and having them try to guess which one is which. into two different-sized cups, a youngster will believe that one cup has more rice than the other, even though there is the same amount of rice in each cup.

It is critical to keep in mind things like the child's sensory needs. Placing study resources like charts and drawings in conspicuous settings, for example, may help students learn better via their sense of sight. Other senses, such as touch, smell, and hearing, are also important for appropriate learning and must be taken into account. If the senses are properly treated, learning becomes simpler for such children (Barbarin & Wasik, 2009). Using a web-based approach, researchers have conclusively shown that play is critical to a child's development in a variety of ways, according to Bracken and Nagle (2007). Kids' play has been shown to boost desired cognitive abilities like problem solving, critical thinking, and creativity, as well as spoken and written language. It may even help develop modest managerial skills like organization and planning in young children. As a rule, it leads to a child's achievement in both academics and extracurricular activities. Using web- based programs that develop reading and writing cultures, Deidre Crook (Online, 2007) found that young children can use paint programs with the help of web-based computer systems. They were also showing their peers how to use the programs and helping the development of language and literacy.

A. Preschool education with the use of information and communication technologies (ICTs)

Children learn via play and discovery from the time they are born until they are eight years old. According to recent research, using technology in the classroom enhances student learning in a variety of ways. [source] The following are only a few examples of the impact:

- Young children are motivated to study, and their cognitive and social development is aided by the use of web-based or computer-based resources in the classroom.
- Children's self-concept and learning attitudes are improved when they utilize a web-based or computer based system
- When using a web-based or computer system, children tend to communicate and cooperate more verbally. Web-based or computer-based play also promotes the development of fluency and more complicated speech.
- Kids are more likely to engage in turn-taking while using a web-based system, which means they are more likely to utilize a computer when it is their time. Children learn to explain what they do while drawing and colouring drawings or moving items and characters around the screen using a web- based computer system. To have a beneficial influence on children's learning, web-based computer systems or technology should only be used for 10-20 minutes at a time, since youngsters become bored rapidly and like trying new things.

B. Preschool e-learning has several advantages over conventional children's education.

It is used to make choices regarding children's learning development, as well as to boost children's learning and motivation. Rapidity: Because it is a global phenomenon, the rate at which it spreads is unfathomable. Computer platform independent: It may be completed using a computer, a smart phone, or other electronic device. Learning space: It encompasses a broader variety of learning opportunities with no upper limit. Learning may be conducted at any time of day or night since toddlers can learn and read things even when it is dark outside their classrooms.

- It is used to keep track of how well children are doing.
- It is an excellent chance to save money: it is possible to save money by not hiring a private teacher, which is both cost efficient and saves money.

Because preschoolers do not have to leave their homes to attend the class, it is even more secure.

C. Disadvantages of preschool vs regular children's education

- Internet: It is possible that a continuous supply of internet connection will be required.
- Power: To work properly, it needs a steady supply of electricity.
- Time: Because of the addition of it, it is a time-consuming process.

D. Summary

Even though it is not often accepted, most nations feel that web-based computer systems or technology may be used to supplement traditional ways of educating young learners, but this is not widely acknowledged. When it comes to learning and understanding their surroundings, children may benefit from utilizing a web-based computer system, but it should never be used in lieu of real-world materials and manipulatives in a classroom setting. Students' cognitive, social, and emotional capacities are all improved because of using a web-based preschool system. It is vital for children's future success in the increasingly competitive world of the information age that they have a quality preschool experience. It is possible that information and communication technology (ICT) will aid in the educational development of children by improving the flow of Preschool. When it comes to educational technology, a

web-based preschool system is a welcome addition since it makes use of information technology to assist children in improving their learning skills and academic performance. At the same time, it will alter their way of thinking and expose them to a variety of ideas and cultures. These reforms are being implemented to address problems in children's education as well as present educational structures.

3. Research Design and Methodology

This chapter will outline the research questions and study design that will be used in the investigation. It will also contain information on how data will be obtained, who will be providing the data, and how the data will be assessed. In this study, data will be gathered via the use of qualitative and quantitative research methodologies, as well as the Prototype System Development Model, among other approaches.

A. Research Questions

Members of a focus group or the target audience were asked to participate in surveys, observations, and one-on-one interviews as part of this study, which aimed to fill in any knowledge gaps identified in the existing literature. Specifically, we undertook this study to answer three specific research issues that arose from the review of the literature.

1) To begin, what are the current teaching and learning obstacles that preschool programs are facing, and

what can be done to solve these concerns, are described below.

2) The following are two more questions: "First, is information and communication technology (ICT) the future of early childhood education, and if so, what consequences may it have on the creation of preschool curriculum and programs?"

Finally, what function does information and communication technology (ICT) have in the evaluation and learning process throughout the preschool years is discussed.

B. Research Design

During this phase, the research subjects and difficulties are defined and outlined in depth, including the structure, processes, and strategies that will be used to address them. An in-depth understanding of the major research techniques is shown in Figure 1 below.

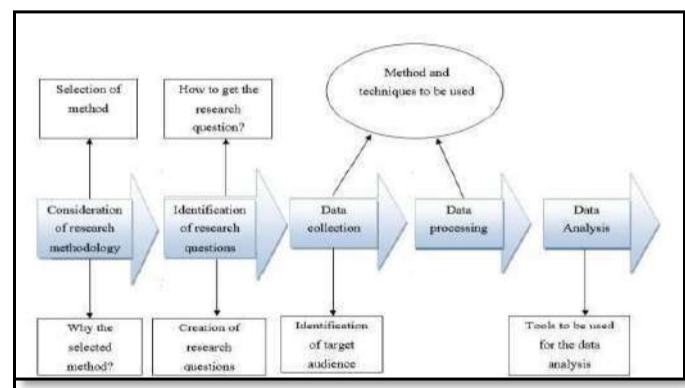


Figure 1 Research techniques

C. Data Collection

The data for this research will be gathered via interviews, observations, and surveys, with each of the three key target groups being interviewed separately.

D. Target Audience

Because this research focuses on preschool and early childhood development, it will be directed towards the following audience, which will give significant data for future analysis. When it comes to addressing the research questions, the depth of information acquired will be beneficial. Specifically, his research is aimed at the following demographic:

- Preschool instructors/trainers, as well as anybody in a position of authority, are encouraged to participate.
- The guardians and parents of preschoolers Children enrolled in preschool or academics

E. Prototyping Model

To construct this system utilizing a prototype, there are three key reasons for doing so. Listed below are their given names:

- 1) With this method, it will be feasible to get user requirements from the beginning of the system development process all the way through to acceptance of the final product.
- 2) It takes longer to build a completed system using this technique since users' requirements change so often, but the result is a better system that users are happier with because the system specification is based on their wants.
- 3) Because a prototype will be provided to users after requirements have been acquired from them at the beginning of the project, this method will help consumers get a better understanding of system development and design.

4. Results and Discussion

The result of the interview based on the findings of the interview

- 1) Examples include the fact that the institute's current kid-learning system is out of date, leading in longer teaching procedures and more paper errors. Furthermore, the institute's methodology is substandard, and it takes an excessive amount of time to finish duties.
- 2) Several data errors and vulnerabilities have been discovered in the institute's outmoded database system, which is responsible for managing the learning process.

A. Questionnaires and Survey

This questionnaire was geared towards two different categories of audience:

- 1) The Parents/Guardians category and,
- 2) Teachers/ Trainers category

B. The Parents/Guardians category

This category targeted parent and guardian of any kid between the ages 3-6. 75 copies of the questionnaires were distributed to the audience both in hard and soft copies. Outcome of the survey

3) The (figures 2) below shows that 77% of the respondents participated in the survey while 23% did not participate due to their ineligibility.

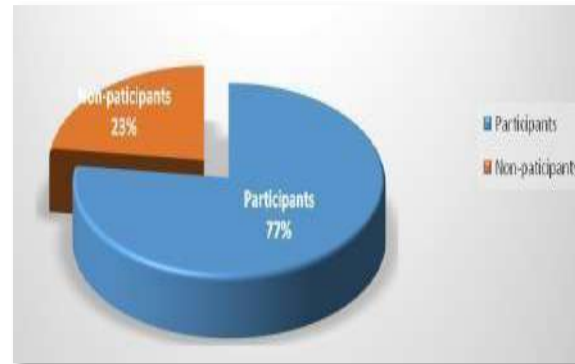


Fig. 2. Outcomes of parents /kids

4) Participants might use a touchscreen or a pointing device to express their thoughts about the learning abilities of their children based on the assertions in the table. Only 4% of participants disagreed with the statement that ICT is the future of early childhood education. Thirteen percent of those polled were adamant that their child could learn more quickly if they used a mobile device. When asked which method they preferred, 4 percent said they firmly agreed that their children could start and end activities using a touch-screen gadget, while 9 percent said they strongly agreed with the latter. Thirty percent of parents strongly agreed that their children prefer activities that incorporate the use of sounds and rhymes, whereas four percent strongly disagreed with this statement. Threequarters of respondents strongly agree or disagree strongly with the statement "their kids prefer touch-screen device to pointer gadget."

C. Teachers/Trainers Category

This category targeted teacher in the preschool and 30 copies of the survey paper were distributed to 20 persons both in hard and soft copies.

Outcome of the survey

70% out of 100% respondents who are preschool teachers participated in the survey, while 30% respondents were not eligible to participate. See figure 3 for details:

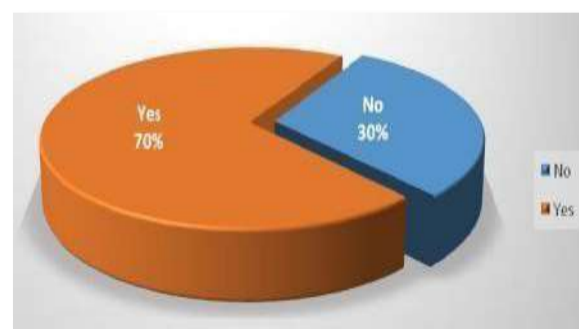


Figure 2 Outcome of Teachers

Observation

The information was gathered at the UCSI-Child Development Center using a procedure that was

specifically designed for preschoolers aged 3-6 years. The following is the investigation's primary goal:

- A greater knowledge of the relationships between students and instructors, as well as the learning environment in which they are placed, is sought.
- They want to improve on the skills they have already learned while also learning new ones.
- To have a comprehensive awareness of their shortcomings on all fronts.

Observation Finding

Information about the evaluation technique that each participant used to evaluate the performance of the students was collected from the participants. During their observations of the students and their participation in the classroom with the teacher, the researchers discovered the following characteristics about them: Many kids despise their school's activities. The kind and way the activity is carried out may have a role in this being the case. Singing and jumping are two common hobbies that draw the attention of children and adolescents. They are always on the lookout for ways to learn via play rather than through lectures. Most individuals prefer activities that entail touching and engaging with an object over activities that require speaking. The vast majority of them have already learned the essentials of social interaction. This is a significant advantage. They are just a tiny proportion of the population who have mastered the most basic cognitive, emotional, and environmental talents.

5. Proposed Solution and Justification

According to the feasibility analysis presented above, answer three (a content-based e-learning management system for children) seems to be the most promising solution to the problems with the existing learning management systems. Considering the alternatives, it is unquestionably the most economically and technically feasible solution. As defined by (Roebuck, 2011), a content management system (CMS) is a piece of software that allows non- web programmers to design and maintain the contents of their websites in a simple and efficient manner. Since of this, choosing the best e-learning solution for kids is not a mistake because it is easy to use and generates exciting learning activities for the users. You may use the local-host server (Apache) whether you are online or offline using this strategy if the server is turned on. Despite this, I feel that the best alternative for the e-learning process has been chosen, and that this is the system for managing the material e- learning for children that has been developed.

6. Conclusion

This research proposes that while developing web based instructional tools for schools, a user-centered approach be taken into consideration. The technique was

discussed by three groups of people: teachers, parents, and students themselves. For the approach to be further refined, it is necessary to conduct continuous design, implementation, and evaluation cycles in a variety of educational contexts. There are re-entry points in the process to allow for continuing growth of the process itself. If developers go back to the design phase, they may be able to make adjustments that will improve the learning experience for students. They may go back to the analysis step if they want to re-examine the use context, influencing factors, or learning goals again. The researchers discovered that doing a thorough user-needs analysis and testing prototypes on a regular basis were important to the success of their project. The pedagogical use of Web-based learning tools in educational environments, as well as the repurposing of existing Web-based learning resources.

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