



EduPad - A Tablet Based Educational System for Improving Adult Literacy in Rural India

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Abstract:

The rate of Literacy is an important indicator of a society's overall human development. The population of India, as in most other developing countries is concentrated in the rural areas. However, the rural areas of India are often at a disadvantage within the Indian Education System. An educational system called EduPad, to reduce the rural adult illiteracy using advancements in technology is proposed here. Such a system can be used to make up for lack of qualified personnel and adequate infrastructure in rural India. The device proposed here is an interactive Tablet, which is capable of teaching multiple languages. We propose to develop interactive educational software which can run on the tablet. The software helps the user to learn to write as well as spell the alphabets. Initially the software teaches alphabets and then moves onto words and sentences and numbers.

I. INTRODUCTION

1.1 Project Description

Internet safety is a growing concern for parents and educators. As children's lives become increasingly digital, so do the threats to their privacy, emotional well-being, and financial reputation. The Center for Identity uses technology in creative ways to educate children about identity and give them the tools they need to combat current and future identity threats. Our goal is to build a generation of children educated in best practices for identity management, protection, and security. To help children understand identity threats, the Center for Identity developed Beat the Thief, an online game that helps children understand the value of managing personal information in a technological age. Beat the Thief draws on Center research and education principles to help children understand the value of their identity assets. In the game, children learn how to manage privacy settings, determine when it is safe to click a link or visit a website, know what personal information is not safe to share online, and understand the intended and unintended effects of communicating online. The Center has also developed a 3-day classroom curriculum to support and enhance the e-learning objectives of Beat the Thief. Both the game and corresponding curriculum are designed for use in 3rd and 4th grade classrooms. They are designed for children who have some experience with computers and online activity, but have not yet begun exploring social media. In addition to the skills learned by playing the game, the curriculum emphasizes—through class discussion and follow-up assignments—that students at this age should engage a responsible adult when using the Internet and sharing personal information. Assignments and in-class exercises engage students in both writing and math exercises, and engage family members to extend social awareness about online safety. EduPad, also known as home education, is the education of children inside the home. Home education is usually conducted by a parent or tutor.[1] Many families that start out with a formal school structure at home often switch to less formal ways of imparting

education outside of school.[2] "EduPad" is the term commonly used in North America, whereas "home education" is more commonly used in the United Kingdom,[3] elsewhere in Europe, and in many Commonwealth countries. Before the introduction of compulsory school attendance laws, most childhood education was impacted by the family or community.[4] In several countries EduPad, in the modern sense, is considered to be an alternative to attending public or private schools and is a legal option for parents. In other nations, EduPad is considered illegal or restricted to specific conditions, as noted in the EduPad international status and statistics. According to the US National Household Education Surveys, about three percent of all children in the US were homeschooled in the 2011 and 2012 school year. And as of 2016, there are about 2.3 million home-schooled students in the United States (Brian, 2016).[5] The studies found that of these children, 83 percent were White, 5 percent were Black, 7 percent were Hispanic, and 2 percent were Asian or Pacific Islander. Parents cite two main motivations for EduPad their children: dissatisfaction with the local schools and the interest in increased involvement with their children's e-learning and development. Parents' dissatisfaction with available schools includes concerns about the school environment, the quality of academic instruction, the curriculum, and bullying as well as lack of faith in the school's ability to cater to their child's special needs. Some parents homeschool in order to have greater control over what and how their children are taught, to better cater for children's individual aptitudes and abilities adequately, to provide a specific religious or moral instruction, and to take advantage of the efficiency of one-to-one instruction, which allows the child to spend more time on childhood activities, socializing, and non-academic e-learning. Many parents are also influenced by alternative educational philosophies espoused by the likes of Susan Sutherland Isaacs, Charlotte Mason, John Holt, and Sir Kenneth Robinson, among others. EduPad may also be a factor in the choice of parenting style. EduPad can be an option for families living in isolated rural locations, for those temporarily abroad, and for

those who travel frequently. Many young athletes, actors, and musicians are taught at home to better accommodate their training and practice schedules. EduPad can be about mentorship and apprenticeship, in which a tutor or teacher is with the child for many years and gets to know the child very well. Recently, EduPad has increased in popularity in the United States, and the percentage of children ages 5 through 17 who are homeschooled increased from 1.7% in 1999 to 3% in 2011/12.[17] EduPad can be used as a form of supplemental education and as a way of helping children learn under specific circumstances. The term may also refer to instruction in the home under the supervision of correspondence schools or umbrella schools. In some places, an approved curriculum is legally required if children are homeschooled.[18] A curriculum-free philosophy of EduPad is sometimes called unschooling, a term coined in 1977 by American educator and author John Holt in his magazine, *Growing Without Schooling*. The term emphasizes the more spontaneous, less structured e-learning environment where a child's interests drive their pursuit of knowledge.[19] In some cases, a liberal arts education is provided using the trivium and quadrivium as the main models. As a parent or tutor, EduPad could take a tremendous amount of time and energy to prepare for the lessons. Also, if one is EduPad more than one child, the preparation time is doubled or tripled.[30] Some believe that the stress that preparation and mastery will place on any family is a strong argument against EduPad. Some believe that the amount of time spent schooling and the preparation time are some of the main disadvantages to EduPad. Another disadvantage could be the lack of science labs and materials, because at home, one may have limited resources.[30] Not only does the parent or tutor teach lessons in several subjects, but they also need to research each topic enough to feel comfortable answering questions the child may have. This can be done with the child as a lesson in how to learn. Some believe that homeschooled children could be isolated from the outside world, eventually making them socially and educationally handicapped, however, little data suggests this is the case. Some feel that signing them up for a home school group (or any other group/sport/civic organization/church/club involving human interaction) will help them to make friends.[31] Mayberry et al., (1995)[32] found that 92% of public school educators surveyed believed homeschooled children do not receive adequate socialisation. Unless children are exposed to the social life found in public or private schools on a daily basis, they could lack the skills needed to successfully adapt to real-life situations when they are older.

Objectives

- ✓ The goal of this project is Android Application framework enabling reuse and replacement of components.
- ✓ It provides better understanding about language to literate and unknown users.
- ✓ The developed programming has ability to implement in pc, tablets, and mobiles.

EXISTING SYSTEM:

For language learning process users have book materials, video clips, Audio system. For using the book material user need some basic knowledge to read . In the case of video clips and Audio

system user need proper platform and the existing system is also not it should not be an portable.

DISADVANTAGES OF EXISTING SYSTEM:

- User need proper hardware device for learning purposes.
- It should be difficult to use by illiterate people.

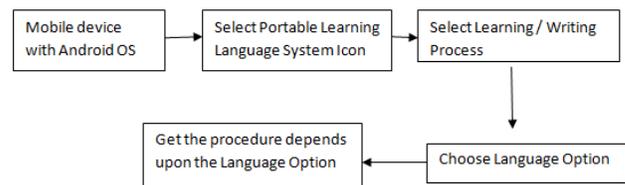
PROPOSED SYSTEM:

In proposed system we implement the learning process in mobile environment, it provide portable facilitate to the user. Android is an mobile operating system it helps the developer to simulate learning process to our Android based mobile. The Android SDK provides the tools and APIs for developing applications on the Android platform using the Java programming language. Developers write programs in the Java language using Eclipse IDE. Dalvik virtual machine is an interpreter for eclipse IDE it optimized for use on low power consumption, rich libraries, non-fragmented application programming interfaces, low memory devices like phones.

ADVANTAGES OF PROPOSED SYSTEM:

- ✓ Android Application framework enabling reuse and replacement of components.
- ✓ It provides better understanding about language to literate and unknown users.
- ✓ The developing proposed system not only works online but also works in offline
- ✓ The developed programming has ability to implement in pc, tablets, and mobiles

ARCHITECTURE:



MODULES DESCRIPTION:

- ▶ Learning Alphabet Module
- ▶ Words Example Module
- ▶ Sentence Example Module
- ▶ Numbers Module
- ▶ Whiteboard Module
- ▶ Testing Module

Module Description:

❖ **Alphabet Example Module**

Example for the alphabet is shown to the user with the Object name and its picture, to easily understandable by the user by seeing the object in the screen, and name displayed. And the user has the controls to go to next and previous as in the e-learning module. When the user presses the play button, the sentence is read out to the user. User can easily understand the alphabet and its

usage by listening the example sentence produced as sound.

❖ **Words Example Module**

Example for the alphabet is shown to the user with the Object name and its picture, to easily understandable by the user by seeing the object in the screen, and name displayed. And the user has the controls to go to next and previous as in the e-learning module. When the user presses the play button, the sentence is read out to the user. User can easily understand the alphabet and its usage by listening the example sentence produced as sound.

❖ **Whiteboard Module**

In this module the step by step writing animation for each alphabet is shown to the user. User can try to write the alphabets and words in the screen itself, by following the animation shown in the screen. User has the option to navigate to the next and previous alphabet, word and can learn to write all English alphabets, and words.

❖ **Sentence Example Module** Example for the Simple Sentence is shown to the user with the audios. User has the controls to go to next and When the user click the play button. User can easily understand the sentence and its usage by listening the example produced as sound.

❖ **Numbers Module** Example for the numbers is shown to the user with the Object name and its picture and pronunciation too. User has the controls to go to next and When the user click the play button.

❖ **Test Module**

In this module the test taken by randomly according to user interest on Alphabets and Words. In this Test design module the test high score and users name should be stored in the database.

II. SYSTEM REQUIREMENTS

Hardware Requirements

CPU	: Intel 2.1 GHZ
Memory	: 2GB
Disk	: 40 GB

Software Requirements

Platform	: JDK 8.0, Android 4.0.1
Server	: Apache Tomcat 7.0
Development Tool	: Eclipse IDE, Android SDK
Frontend	: JAVA, JSP, Struts2.x
Backend Data base	: SQLite
Operating System	: Windows 7

III. CONCLUSION

India is a country where the problem of adult literacy still prevails. We believe that the EduPad based educational system will help the illiterate people of rural India to become literate through an interactive and enjoyable method without affecting their day to day life. Most of the illiterate people of rural India rely on manual labor for their living and are unable to attend regular study classes. So, the EduPad can be a convenient method for the of rural India to become literate.

IV. FUTURE ENHANCEMENTS

In order to make edupad affordable for people in rural India the software will be preloaded with multiple advanced features and hardware customization will also be implemented.

V. REFERENCE

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