Effectiveness of Adult Literacy Program through Computer Assisted E-Learning

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Abstract — **There are innumerable means, sources and methods of adult learning for adult literacy programs are experimented over the period of time. The evolutionary trends of methods, means and modes of adult education and its teaching methods are notable. There are number of researches shows that the methods of teaching especially adult literacy teaching have made positive impact on the adult learner's performances from time to time since adult literacy is a basis for the development of society. In the recent years, technology has played a key role in promoting literacy among the illiterates in the rural and urban areas. Particularly, the computers are being utilized under this study to assists in teaching basic 3 "R" skills such as reading, writing, and arithmetic. The present article is highlighted the impact and effectiveness of the Adult Literacy Program through Computer Assisted E. Learning Software used in the promoting adult literacy among rural and urban illiterates.**

Index Terms- **E. Learning, Literacy Program**

I. INTRODUCTION

Literacy and Literacy programs provide strength and enable the people to contribute for the societal development. Adult Literacy Programs has influenced the rural and urban poor and illiterates which ultimately led to the overall development of the Society and Nation. Adult literacy programs provide opportunities to adults to learn basic skills, including reading, writing, document use, simple mathematics, and to use simple communication technologies. There are many means and sources of adult learning for adult literacy programs over the period of time. The evolutionary trends of methods, means and modes of adult education and its teaching methods are notable.

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II. OVERVIEW OF USE OF ELECTRONIC MEDIA IN ADULT EDUCATION

The investigator has made an brief attempt to go through number proved facts to have an overview of use of electronic media in adult education and development. The facts on the various studies are indicates that the Computers are being utilized to assist in teaching basic literacy skills, such as reading, writing, and arithmetic. Software and the Internet provide various types of programs designed to teach language to students. Literacy programs offer students of all levels and their instructors the ability to join online discussions and to actively participate in the exchange of communication to development all language skills and promote overall literacy. Using computers can enable a new and effective instructional environment designed for language learning.

Moreover Electronic media, and especially the computer, pervade every aspect of daily life. It is hard to imagine the world of work without the massive use of computers. Electronic media have become increasingly important in education, and, accordingly, in adult education as well. "Adult learning, culture, media and new information technologies" was the seventh point on the agenda of CONFINTEA VI at Belém. Despite limited technical infrastructure, substandard equipment, and unreliable Internet access, the new media are also growing more and more important in the countries of Africa, Asia, and Latin America. In Germany, and other advanced industrial countries, the rate of functional illiteracy is substantially higher than generally assumed. Literacy initiatives are consequently looking to computers to motivate individuals.

The German Adult Education Association has achieved good results with computer-aided literacy courses. One of its projects, a computer game called "Winterfest", was the recipient of the 2011 European E-Learning Award (eureleA) in the category "Best Technology Supported learning" as well as this year's Serious Games Award in the category "Gold". In 2010 it was distinguished with the LARA Education Award.

As demonstrated by the Swiss organizations Avallain and the Biovision Foundation in their work with partners in East

Africa, ICTs can also change the working conditions of fishermen and small farmers if those conditions are adapted to cultural surroundings. Avallain specializes in the development of computer-assisted teaching software, while the Biovision Foundation seeks to support African farmers in the sustainable improvement of their lives and the conservation of their environment.

III. CONTEXTUAL NEED FOR THE PRESENT STUDY

The global overview on impact made by the electronic media, in adult education in various dimensional aspects, motivates the investigator to conduct a comprehensive study on "*The effectiveness of Adult Literacy Programs through Computer assisted E-Learning software".*

State Resource Center (SRC) for Non-Formal and Adult Education has developed an integrated literacy programs through computer assisted e-learning software content in collaboration with Tata Consultancy Services (TCS) to promote adult literacy among rural and urban adult illiterates. A CBL module is designed to allow learners to play with words, script and sound starting with a set of common words. As the word comes up on screen, it is reinforced by audio. The illiterates learn to identify each letter of the works as an image with a sound and memories the letters with the help of flash card.

The CBL is displayed on a computer screen and the facilitators who operating the computer take the learners through lesions and exercises in orderly manners. By browsing on the screen, the learners can go to any of the two parts of his choice and can choose any of the lesions from the content in an orderly manner. There are 20 lessons and 7 exercises based on the curriculum and with relevant norms. The learners are expected to follow and practice writing in their note books. For writing exercises also the learners has to follow the instructions and do them on paper, with feedback on the screen which enable learners to read within 3 to 4 days, the traditional classes take at least a week to achieve the same result.

Hence, Computer based e-learning software is used, as one of the several media being currently used, to facilitates and motive adult to learn which is subjected to conduct the present comprehensive study to find out *the impact of the Computer Assisted E-Learning Software.* A brief attempt is being made to present in this article about its objectives, process, and outcome of the impact of the study.

IV. OBJECTIVE OF THE STUDY

Hence, keeping the above aspects in mind, the following objectives are formulated for the purpose of present study with the main objective to exploring various aspects associated with nature of the study on hand.

The major objective of the study was to find out the comprehensive impact and effectiveness of the Adult Literacy Program conducted through Computer Assisted E. Learning Software for the rural and urban illiterates and the positive benefits they accrued from the literacy programs. The following are specific objective of the programs.

• To evaluate the computer based Adult Education Software content

• To examine the pros and cons of the Computer Based Adult Education Literacy software

• To cull out the effectiveness of the Text Based Features in the E-Contents

• To enquire the opinion of the learners of the Audio –Visual Based Features in the E-Content.

• To recommends the best practices advocated by the study for the further development of the media.

V. PROCEDURES AND PROCESS FOLLOWED FOR THE STUDY

The Descriptive Research Design was selected due to the very nature of the issues, respondents, and type of questions rose, for generating data. Since its describing various impact and effectiveness of the contents used through computer assisted e-learning methods. The nature of data obtained for the present study is quantitative and qualitative in nature. The data/information was collected from 960 adult Learners who are graduated (passed in the literacy program) from computer assisted adult literacy programs.

Since this study attempted to investigate the effectiveness of Computer assisted literacy program, the purposive sampling technique was used for data collection. The sampling selection of the study started with the identification of the respondent by using purpose sampling technique. The logistics of sampling selection was that the purposive sampling is useful as it provides a wide range of non-probability sampling techniques for the researchers to draw on the study. The sample was drawn from the E-learning centers in seven districts which included the learners from the 35 learning centers in seven districts.

A well structured and pretested questionnaires and interview schedule with 31 questionnaires with five point scale were used to elicit correct information from the 690 adult learners. In order to perfect the Structured Interview schedule and get an idea for conducting study, pilot study was conducted with 20 respondents. This pilot study helped the researcher to modified and finalized for the main study. The subject experts also consulted in order to perfect the toot. Finally, the data was collected from 690 respondents with the well structured interview schedule and comprehensive questionnaires with 31 items. The data was collected with the respondents directly with the help of above said tools and methods by experienced data enumerators along with the investigator.

VI. GEOGRAPHICAL DISTRIBUTION OF RESPONDENTS

The following table indicates about the geographical distribution of respondents under the study on hand.

Districts	Panchayat	Municipality	Corporation	Frequency	Percentage
Kancheepuram	38	82	--	120	17.04
Erode	50	--	32	82	11.09
Trichy	79	21	57	157	22.08
Tuticorin	22	81	--	103	14.09
Karur	74	44	--	118	17.01
Thiruvallur	--	61	--	61	8.08
Chennai	--	--	49	49	7.01
Total	289	289	138	690	100

From the above, table it can be deduced that majority (82%) of the respondent are represented from Kacheepuram municipality areas followed by Village Panchayat from Karur district.

VII. DEMOGRAPHIC PROFILE OF THE RESPONDENTS

The core respondents of this study are adult learners who graduated (passed out) from the computer assisted e-learning adult literacy programs in various district of Tamil Nadu. The following table is indicating the demographic profile of the respondents under study.

Demographic Details		Frequency	Percentage
Age	Below -	31	4.05
	16-25	281	40.07
	26-35	303	43.09
	Above 35	75	10.09
Gender	Male	35	5.01
	Female	655	94.09
Community	Backwards Class	478	69.03
	Most Backwards Class	129	18.07
	SC/ST	83	12
Marital Status	Un Married	145	21
	Married	545	79
Occupation	Farmers	62	9
	Farm Laborers	359	52
	Daily Wage Earners	210	30.04
	Others	59	8.06

The cumulative response of the respondent indicated in the above table is highlighting various demographic details of the respondents. The variable such as female, backward classes, married, and farm labours and age group between 26-25 are and predominantly represented in the sample under study.

VIII. MAJOR FINDINGS AND OUTCOME OF THE STUDY

This part of the article, it is presented and discusses about the results, and certain valid conclusion extracted on the basis of the objectively quantified results. The major objective of the study is to find out the effectiveness of the computer assisted e-learning software used in the promotion of adult learning in certain districts of Tamil Nadu. The questionnaire and interview schedule were used and primary data were collected as per the details of the attributes selected. Finally, the critical analyses were also worked out to found out the effectiveness of the computer assisted e-learning software used in the adult education programs.

IX. CONCLUSION AND RECOMMENDATION

The investigator cautiously, keeping the limitations of the study in mind, attempted to bring out some useful findings which would help the Adult Educators, Policy Makers, Educational Planners and Media Promoters to arrive certain lessens in order to adopt some measures in the implementation of the various adult education programs using various medias including computer and e-learning.

By scanning the entire responses and objectively conducted the present study, the following conclusions and recommendation are made for the purpose of the present study. Based on the results of the present study, no doubts that the Computer Assisted Adult Education Programs and its learning process has helped a lot in enhance the learning of the rural and urban learners.

The overall results shows that the Computer Assisted E-learning and formulation of course contents have made positive impact among the learners in the computer assisted learning centers in Tamil Nadu. They find very easy to learn with the content designed, and methods of teaching, practical and exercises used, background sound given in the computer.

The respondents revealed and strongly agreed that the process in which the content designed are quite impressive and simple to read and write and retention through computer assisted learning techniques. But still as per the outcome of the study, the scopes are wide to improve techniques and usages of computer in making adult learning simple. The respondents have also revealed and recommended that the background sound may be used in a maximum extend so that the learner can make learning enjoyable. The computer based adult learning software and content can replaced with instructors and text books which are always consider as costly.

Finally it can be strongly advocated and concluded based on the present study, that the usage of computer assisted e-learning softer, which is very simple and cost effective mode of learning, and its contents is going occupy the greater space for the future generation

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