

Growth of E-Learning in India, with Special Reference to MKCL's ERA

Swapnil V. Mishra¹, Dr. Shamkant N. Kotkar²

¹Lecturer, Department of Computer Science, G.T. Patil College, Nandurbar (MS), India

²Associate Professor, Department of Computer Science, S.S.V.P.S.L.K. Dr.P.R.Ghogrey Science College, Dhule. (MS), India

Abstract: *E-Learning system is not new for the developed countries, it has delivered timeless results over the last few years. In India E-Learning introduced not very far ago it still has a long way to go. Maharashtra Knowledge Corporation Ltd. played an important role by educating more than 10 million people in less than 15 years. MKCL has introduced one of a kind E-Learning framework called ERA which has proven to be a milestone in self-paced interactive education especially in India. This paper focuses on the ERA's status in education sector in India.*

Keywords: E-Learning, MKCL, ERA, Framework, Interactive, CBT

1. Introduction

E-Learning system means an electronic multimedia system for learning skills. E-Learning was first introduced in 1999 but practically it was implemented in year 2001 with the help of internet. Before E-Learning a very similar concept called CBT (Computer Based Training) was already implemented in late 50s. E-Learning however is much more dynamic than CBT in terms of course delivering and management.

2. Evolution of E-Learning

The E-Learning evolution can be described in three phases

1. The Introduction Phase (1999 to 2004)

In November 1999, Elliott Masie proposed the word "eLearning" first time at his TechLearn Conference at Disneyworld.

In this phase the E-Learning was well known as CBT (Computer Based Training), the concept was welcomed by many as it provided the education at home. Although the internet speed was limited due to dial-up connectivity it contributed progress to E-Learning. Most of the contents provided in this phase were in text format where and poorly scanned.

2. The Growth Phase (2005 to 2010)

In this phase the internet started to expand in the world, this was the time when the broadband introduced, more bandwidth provided to users, the world experienced multimedia based E-Learning with audio visual contents. The flash based animation was the most exciting feature of E-Learning.

3. The Modern Phase (2010 to till date)

With the introduction of HTML5 and Tin Can API, E-Learning become a real life experience for the learners and teachers, E-Learning become a Learning Management System providing not only learning but evaluation, assessments and tests. Overall the learning process becomes a self paced process. With fast growing smartphone

technology and wireless internet connectivity made E-Learning possible in variety range of devices like tablet, mobiles, VR devices and laptops anywhere and anytime.

3. E-Learning in India

E-Learning in India is still in growing stage due to many factors such as

- a) Poor internet Connectivity
- b) Lack of technological awareness
- c) Poverty
- d) Lack of digitalization of education system at all levels
- e) Non-recognized status of online degrees

In India the E-Learning is more successful in corporate sectors than the education sector. Few of the distance education universities have started to promote E-Learning but they need encouragement from the government. According to a report published in Aug-2016 by *Ambient InsideIndia* Ranks 5th in worldwide buyers of Self Paced E-Learning system.

4. Review of Literature

- Marc. J. Rosenberg (2000), "E-Learning: Strategies for Delivering Knowledge in the Digital Age", McGraw Hill Professionals. Concluded that E-Learning outlines how to develop an organization-wide learning strategy based on advanced technologies and explains the dramatic organizational, strategic and technology issues involved.
- Sunil Kumar Sharma, (2014), "E-Learning in India", International Journal of Advanced Research in Computer Engineering & Technology, Concluded that India is a very good market for E-Learning, If the country develops good digital infrastructure E-Learning can certainly prove a milestone in India.
- Noesgaard S. S. (2015), "The Effectiveness of E-Learning: An Explorative and Integrative Review of the Definitions, Methodologies and Factors that Promote e-Learning Effectiveness", The Electronic Journal of e-Learning, Concluded that the research methods for analyzing Effectiveness of E-Learning may be qualitative as well as quantitative and comparative.

5. Research Methodology

This research is based on both Primary and secondary data collected by researcher. The primary data is analyzed using t-test on sample mean and graphical method. The scope of the study is to analyze the growth of E-Learning in India. There are various steps involved in the research methodology, such as problem identification, collection of data. The conclusions are based on the collected data from primary and secondary data sources.

6. The MKCL E-Learning System (Era)

Rise of MKCL

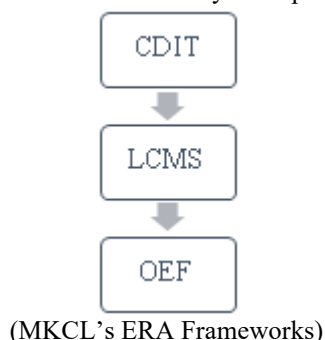
Maharashtra Knowledge Corporation Ltd. is a public limited company promoted by department of higher and technical education, Government of Maharashtra, established in Aug. 2001 with the aim of providing computer education.

The company is headed by the M.D. Mr. Vivek Sawant and has already registered 5000 Authorized Learning Centers (ALCs) across Maharashtra state and started to grow in other states like Rajasthan, Orissa, Haryana, Bihar etc.

MKCL initially provided short term computer literacy courses with manual teaching system, although the admitted students were provided a CD containing course material (CBTs) but the problem was majority of students didn't had a personal computers so the CD was of no use to many students, analyzing this issue MKCL decided to provide E-Learning to students at the learning centers and thus ERA (E-Learning Revolution for All) framework came into existence. Today ERA is deployed on more than 5000 servers all over Maharashtra and everyday more than one lac. Students use the ERA system in Maharashtra alone.

ERA Framework

The ERA Framework serves mainly three purposes



1) CDIT (Content Design and Integration Tool)

The CDIT Mainly serves in designing the course structure and multimedia integration of course contents. CDIT has a web interface.

It offers functions like:

- Designing course structure
- Creating and integrating the multimedia content to be offered to the learners.

The various users of CDIT are

- a) Instructional designers

- b) Content writers
- c) Content creators
- d) Multimedia developers
- e) Quality assessors

The course contents designed using CDIT are delivered through the Learning Management System (LCMS).

2) LCMS (Learning Content Management System)

LCMS is the framework for the learners mainly, using LCMS the user can be registered to the LMS and once authenticated the user is granted access to the course contents. LCMS is a powerful multilingual system which not only provides the course contents to students but also provides facilities to manage the daily learning activity.

LCMS functionality can be further divided into three parts

- Pre-Learning (Student Registration , Validation , Language Selection ,Search Facilities etc)
- While Learning (Course Content access , Bookmarks , Notes , Glossary etc)
- Post-Learning (Self Assessment , Tests , Performance analysis etc)

3) OEFS (Online Evaluation Framework)

The Evolution is the most essential part of any learning system. OEFS is a framework the delivers the evaluation and assessment facilities.

Various components of the online evaluation framework are as follows:

- a) Objective Evaluation System (OES)
- b) Assignment Management System (AMS)
- c) Question Repository Manager
- d) Result Generator
- e) System Controller
- f) OEF Accountant

Analysis of Data

A sample of 30 high school students of same age group was picked up randomly from a private education center in Nandurbar district, out of which 15 students learned an office automation course through manual system and 15 students learned similar course through E-Learning System. The students were asked questions based on the course syllabus and satisfaction level of learning process. The score between the scale of 1 to 5 given based on the answer by the students for each question where 1 being the lowest and 5 being the highest, mean values of all the answers were taken as data. Students under manual teaching were trained by a computer science post graduate teacher, students under E-Learning category were trained using MKCL's ERA.

Limitations of analysis

- 1) The sample is restricted to one district area only.
- 2) The efficiency of the teacher of manual system is not measured.
- 3) The learning process is analyzed for short term course only.

Table1.1

Learning Process	Manual Learner Satisfaction	E-Learner Satisfaction
Theory Concepts	2	4
Practical Concepts	3	3
Tests	2	4
Revision of Topics	3	4
MEAN (\bar{x})	2.5	3.75

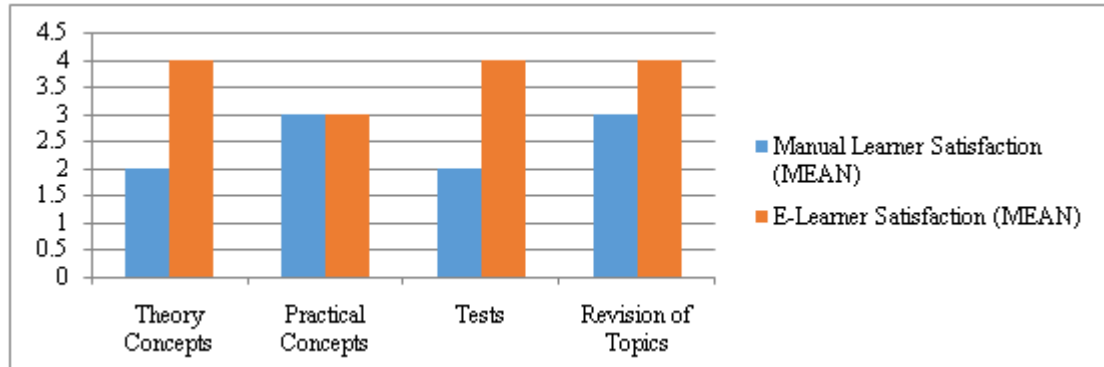
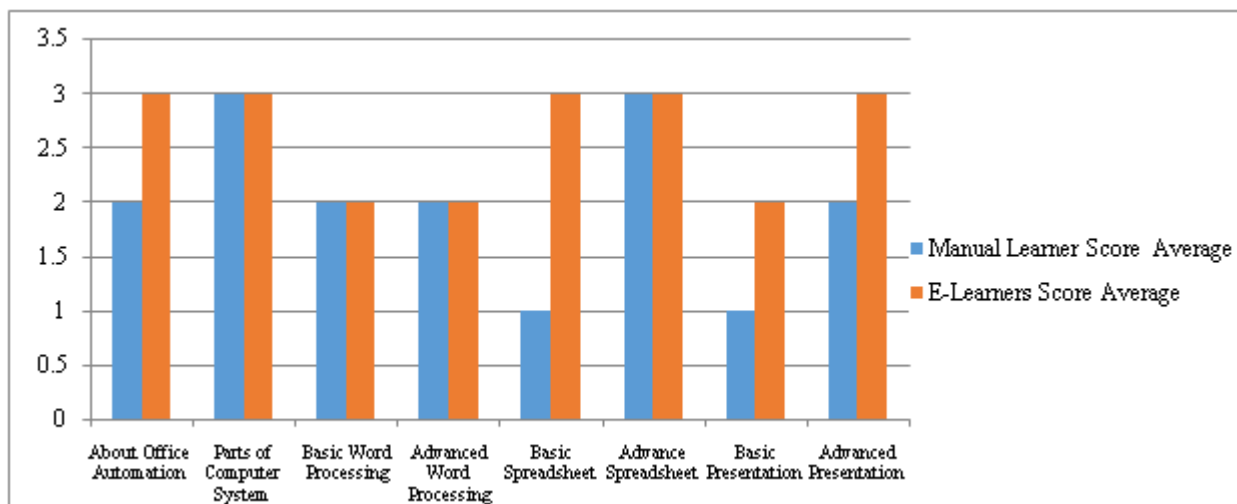


Chart Showing Level of Satisfaction

From table 1.1 it can be seen that the average satisfaction level for E-Learning is higher than that of manual learning system on different parameters.

Table1.2

Test Question topic	Manual Learner Score	E-Learners Score
About Office Automation	2	3
Parts of Computer System	3	3
Basic Word Processing	2	2
Advance Word Processing	2	2
Basic Spreadsheet	1	3
Advance Spreadsheet	3	3
Basic Presentation	1	2
Advance Presentation	2	3
MEAN (\bar{x})	2	2.625



Outcomes of Two Learning Systems

Based on Table 1.2,
 $H_0: \mu \neq 0$ there is no significance difference between outcomes Manual Learning and E-Learning System

t-Test: Paired Two Sample for Means

	<i>E-Learners Score Average</i>	<i>Manual Learner Score Average</i>
Mean	2.625	2
Variance	0.267857143	0.571428571
Observations	8	8
Pearson Correlation	0.365148372	
Hypothesized Mean Difference	0	
df	7	
t Stat	2.375954817	
P(T<=t) one-tail	0.024586857	
t Critical one-tail	1.894578604	
P(T<=t) two-tail	0.049173714	
t Critical two-tail	2.364624251	

t-Stat is 2.375954817 Hence , Null hypothesis is rejected, it can be said that there is a significant difference in both learning processes. We can say that E-Learning produces better results in case of short term courses as compared to traditional manual learning system.

7. Conclusion

E-Learning is an advantageous way of learning. Development of skills of an individual requires efficient learning process and efficient teachers. E-Learning fulfills this requirement in many ways, however there are things such as personal interactions that can't be done using an interactive self paced system so it can be said that learning is a two way process where teacher and learner interact with each other to share experiences and difficulties. The E-Learning system cannot respond to the learner the way a teacher may respond. MKCL has played an important role by developing a powerful yet effective Learning Management System in the form of ERA, it won't be wrong to say that systems like ERA has potentials of becoming future of Indian education system.

References

- [1] "Teaching and Learning with new Technologies ", ATEE Brussels ,Rhys Gwyn, 1986
- [2] "How to Design Effective Blended Learning",brandon-hall.com, Julie Marsh and Paul Drexler, November 2001.
- [3] "The Effectiveness of E-Learning: An Explorative and Integrative Review of the Definitions, Methodologies and Factors that Promote e-Learning Effectiveness",
- [4] Noesgaard S. S.,the Electronic Journal of e- Learning, 2015.
- [5] "The 2016-2021 Worldwide self-paced e-Learning Market", AmbientInsight, Sam S. Adkins, 2016
- [6] "e-learning Opportunities and Challenges in India", Indian journal of applied research,Dr. M. Razaullha Khan,2015
- [7] http://elearning.mkcl.org/eraframeworks_cdit_introduction.htm
- [8] https://en.wikipedia.org/wiki/Educational_technology