

# A survey on E-learning Approaches

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## ABSTRACT

E-learning is an electronic learning which means using a computer to deliver part. It plays a vital role in a persons' life. The objective of this study is to find various analysis phases of e-learning, its comparison among various other techniques of learning and how it can be implemented in schools, colleges. This paper is divided into eight sections. Section-I : This paper attempts to talk about basic information of E-learning.

Section-II : Types of E-learning.

Section-III : Benefits of E-learning.

Section-IV : Measuring effectiveness of E-learning.

Section-V : Need Analysis for E-learning methods.

Section-VI : Traditional learning v/s E-learning.

Section-VII : Implementation of E-learning.

Section-VIII : Contains conclusion and references from which this proposed survey has been completed.

## Keywords:

Internet, E-learning, synchronous training, asynchronous training, effectiveness, analysis.

## 1. INTRODUCTION

Learning is basically the act of acquiring new, or modifying and reinforcing existing knowledge, skills etc. Here the E-learning involves the use of computers or you can say any electronic device which provide some kind of training i.e., it can be any educational or other curricular activities. For this, the Internet was adopted and developed which acts as a means of communication by educational institutions in the 1970s, academics sessions of all institutions are aware of its plausible as a learning tool.

In the 'Digital India' where the need for 'knowledge workers' increases as the need for manual workers decreases, 'longlasting' is seen as key to the continued success of modern society. 'E-learning' is considered as the only viable solution to the problem of delivering the resources required to facilitate lifelong learning.

E-learning is an electronic learning which means using a computer to deliver part, or all of a course whether it is in a school, or a part in your mandatory business training or a full

distance learning course. It involves using either the Internet or an Intranet [3]. In this, we can also use CD-ROM and DVD as a means of communication.

Basically the distance education provides the basics for E-learning's development [3].

In beginning it received as a bad impact, as many people thought that bringing computers will remove the human work fully. But as time has progressed, the technology also developed, by which we are now using smart phones, laptops, tablets in the classrooms and offices, as well as using it as a wide variety of interactive designs which makes learning easier not only for educated people but also for common people.

## 2. Types of E-learning

There are basically two types of E-learning which are considered as follows:-

- Synchronous training
- Asynchronous training

**Synchronous (same as supervised learning in Neural Networks)**, means "at the same time", which involves interaction of participants with an instructor via the Web in real time i.e., a supervisor is always needed as a guide or you can say an instructor or mentator. For example-VCRs which stands for Virtual class rooms that act as real classrooms but online. Participants interact with each other and through instructors by quickly messaging each other, chats, audio and video conferencing etc which is mainly used in business meetings world wide. Although we can record these sessions and whenever required played back . Its benefits are:-

- It has the aptitude to keep track of learning activities.
- It can be completed observed and altered anytime whenever required.
- Possibilities of global connectivity and collaboration opportunities among learners.
- It has the ability to personalize the training for each learner.

**Asynchronous (same as unsupervised learning in**

**Neural Networks**), means “not at the same time”, which allows the participants to complete the WBT (Web-based training) at their own place, without live interaction with the instructor. Basically, it is information that is accessible on a self-help basis, and available 24/7. The advantage of asynchronous learning is that it offers the learners the information they need whenever they need it. It does not need a supervisor. It also include interaction among various participants through charts, bulletin boards and discussion forums, posters etc. It includes computer based training, (CBTs) modules on CD-Rom’s, Web based training accessed through intranet (WBTs). Its benefits are:

- It is available ‘just in time’ for learning quickly.
- Flexibility of access from anywhere at anytime.
- It has aptitude of unlimited number of employees.
- Uniformity of content and one time cost of production.

### 3. What are the benefits of E-learning?

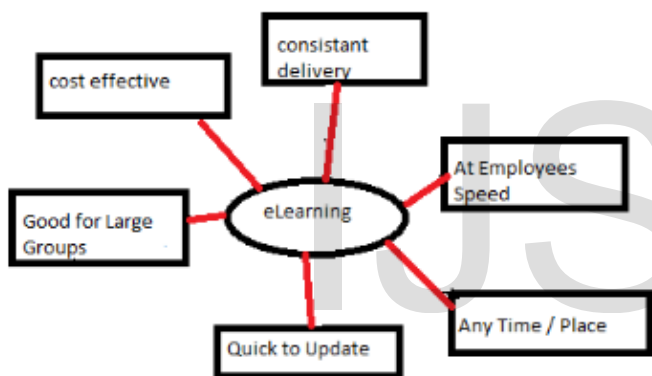


Figure 1: Benefits of E-learning

- **It is cost effective and saves time:**  
By reducing the time taken from the office, removing the travelling costs and cost of getting printed materials, online learning helps you to save money and vice-versa increases workplace productivity.
- **Any Time / Place Learning:**  
It means that you do not need to travel to particular training centers to acquire knowledge and by this you can learn it, it anywhere 24/7.
- **Quick to Update:**  
Learning Management System (LMS) makes it easy to track and compile the progress. This can be essential for our most popular courses where proof of mandatory training is required.
- **Consistent Delivery:**  
E-learning allows each any every individual to handle the subject at their own place with interactive tasks holding in it

to ensure their capability of tackling the problems thorough understanding of each module.

### 4. Measuring Effectiveness of E-learning

The 3 ways of measuring effectiveness of E-learning are as follows:-

- a) **Assessing the Learners background:** It is usually done before the commencement of learning and should ideally be conducted before preparing the curriculum as well [1].
- b) **Tests within the Course Content:** Here tests are classified into two types mainly Objective type test and Subjective type test [1]. Objective type test include Multiple-choice questions, True-False or Correct Matching exercises whereas Subjective type test include exercises like Fill in Words or Phrases, Complete Sentences, Passage writing, Report writing and so on.
- c) **Feedback as part of Assessment:** Instructors should be efficient in providing the feedback to learners- whether in classroom tests or e-tests [1].

### 5. Need Analysis for E-learning method

There are many types of Need Analysis [4] from starting to ending as shown in the below figure:-

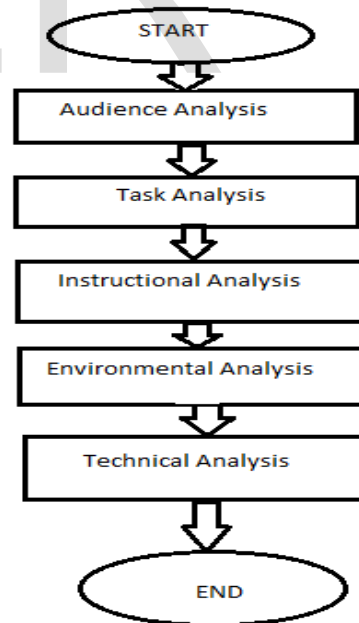


Figure 2: Types of Need Analysis for E-learning

#### Audience Analysis:

Its goal is to help the developers to understand their audience and also identifies their audience group which are going to engage in training and describe their characteristics.

Things which need to identify are:-

- Their Gender
- Their Educational level
- Their Work characteristics
- Their Social characteristics

**Task Analysis:**

Its goal is to break down the tasks which are a part of a job such as task descriptions, length of tasks, work environment , conditions in which task is performed, etc.

**Instructional Analysis:**

This analysis breaks down the learning tasks of each instructional goal which provides the steps required to reach a goal. It eliminates the material which is not in use.

**Environmental Analysis:**

This analysis examines the environment in which a learning course occurs. It can vary from employees to employees which are executing their tasks in a different mechanisms.

**Technical Analysis:**

This analysis defines the two aspects of the device on which a course is going to be executed i.e., hardware and a software which includes operating systems, media accesses (audio, video, graphics), authoring tools and learning management system. Hardware is considered as an autonomous machine while Software is considered as a whole system.

**6. Traditional Learning v/s E-learning**

**Traditional Learning:** A Traditional Learning is a classroom where classes takes place. In this a teacher is present whose role is to educate the students on various subjects and life skills.

**E-learning:** E-learning is a new form of educating students through the use of computers as an instructional medium.

The difference between Traditional Learning and E-learning are as follows:-

	<b>Traditional Learning</b>	<b>E-learning</b>
<b>Classroom Discussions</b>	In this the teacher talks more than the student.	In this the student talks at least as much as or more than the teacher.
<b>Learning Process</b>	The learning is conducted with the whole class.	The learning process takes place in groups or by the individual student.

<b>Subject Matter</b>	The teacher conducts the lesson according to the program mentioned in the existing curriculum.	The student participates in determining the subject matter.
<b>Learning significance</b>	The students learn “what” and not “how”.	The student learn “how” and less “what”.
<b>Learning Desire</b>	Low desire of the students and the far away subject matter.	High desire of the students due to the involvement in matters that are closer to them and to the use of technology.
<b>Teacher’s Role</b>	The teacher is the authority.	The teacher directs the student according to the related information of that topic.
<b>Location of Learning</b>	The learning takes place within the classroom and the school.	The learning takes place with no fixed location.
<b>Lesson Structure</b>	The teacher gives overview of the lesson and the division of time.	The structure of the lesson is affected by the group dynamics

**7. Implementation of E-learning?**

The E-learning can be implemented by considering these 7 steps in mind as described below:

- 1) **Clarify Your Goals:** For starting anything new you should first define the goals of E-learning program.
- 2) **Define Scope:** The next step is to define the scope of the project.
- 3) **Recruit Talent:** The next step is to recruit the talented people for the implementing the program.
- 4) **Consider Partners:** The next step is to find partners internally or externally for developing content.
- 5) **Pick a Platform:** This includes what platform you are going to deliver your content and what tools you use for creating your E-learning program.
- 6) **Define a Budget:** This defines the budget to estimate the overall cost of creating an E-learning program.

7) **Mind Quality Assurance:** This includes all technical and structural factors for maintaining high standards.

## 8. Conclusion

This paper concludes that e-Learning is not a change of technology. It can be considered a new version of learning where we can redefine our ideas, knowledge in a better enhanced way.

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