

Analysis of Various E-Learning Techniques and Review of Its Benefits and Challenges of E-Learning

Sabine Koertig

Professor,
University of the Philippines

Abstract: - E-learning is the method of teaching in a formalised manner using technology like internet and electronic sources like computers and systems. The main components of any e-learning model is internet and computer system. It is trending these days and helps the students and employees to gain knowledge and attend their classes as per their convenience. With the help of e-learning, a large number of students can be taught at the same time as it is broadcasted over a network which has the capacity of handling many students at a time. This technology has also saved the need for space to have physical classrooms and number of teachers required. The students can attend their classes from their home, office etc with a good network connection and a computer system. In previous days, this method of teaching was not encouraged the way it is encouraged these days. The skills required for this method of teaching is that the teachers or the mentor should have sound knowledge of computer system and also know how to use internet. With the advance development of technology, this method is now accepted by large number of people across the world. The paper will discuss about a number of e-learning techniques available and will also discuss about its advantages and challenges.

Keywords: - Introduction to E-learning, Importance of E-learning, E-learning methods and techniques, Advantages of E-learning, Challenges of E-learning.

Introduction: - [1]

E-learning is the method of transferring education and knowledge using electronic resources and technology like internet. It targets a large number of masses at the same time. The type of delivery methods used in this type of education also give it name as online learning or electronic learning. It is in trend these days. It has proved to a boon to school children during pandemic like Covid-19. All the students could continue their studies using computer and internet at home. The requirement for the e-learning technique is a good internet connection along with the computer system. E-learning is not only beneficial for students but also for providing training to the corporate employees. Even in big companies, the employees are required to complete few certifications and training module to move to the next level in their career. Instead of extending working hours to provide training, with the help of e-learning methods, training and necessary lessons can be accessed using one of the methods of e-learning. Few e-learning techniques are live where with the help of an application, all the students can login and attend their classes which is conducted online by their teachers. Also, in some methods of e-learning, training sessions and lesson plan are uploaded on the channel which can be accessed by students at anytime from anywhere. The advantage of live e-learning session is that the doubts can be cleared by the students during the live session itself, whereas, in other methods students can write their doubts and can ask the teachers later. The difference between e-learning and distance learning is that, distance learning is the education where the teacher and the students are at different places whereas in e-learning, the teacher and the students can be at a same place but uses latest technology to understand the concept in easy way to enhance the knowledge and it takes less time to explain the concept using latest presentation of the lessons. The e-learning has more advantage than traditional learning methods, as human brain is capable of easily learning the concepts through pictures and presentations of the concept.

Importance of E-learning: - [2]

Following are some points which makes it clear that why e-learning is as important as traditional methods of learning and education: -



Figure 1. Importance of E-learning.

1. Accommodating nature: -
The biggest importance of e-learning is that it can accommodate any student from anyplace. The students can learn and attend their classes irrespective of their location. They only need good internet connection, a system and knowledge of how to use and attend the classes. The result of digital revolution is that it has given rise to the ways as how we access the material available online for learning.
2. Easy to Access: -
The online learning lessons are available to the students always and in order to use it again and again they just need the login credentials to the application where the lessons are uploaded. This way, the students can login to the lessons any number of times they want. It is especially useful to them during exams to clear their doubts.
3. Quick Delivery: -
This is one more added advantage of the e-learning techniques that the lessons are conducted and knowledge is delivered very quickly which saves a lot of time and cost which is not present while using traditional teaching methods.
4. Scalability: -
One of the major advantages of e-learning is that it helps and contributes to improve the knowledge of students as well as teachers and increase their advance knowledge. It also encourages the students and teachers to give creative and innovative ideas to improve the e-learning techniques.
5. Latest content: -
E-learning methods will make sure that all the teachers and students have access to the updated and latest technical knowledge as it will always provide the most recent and updated content to the audience.

Types of E-learning Delivery Methods: - [3]

A variety of E-learning delivery methods are available which depends upon the requirements and preferences of the users. The commonly used Delivery methods of online learning are as following: -

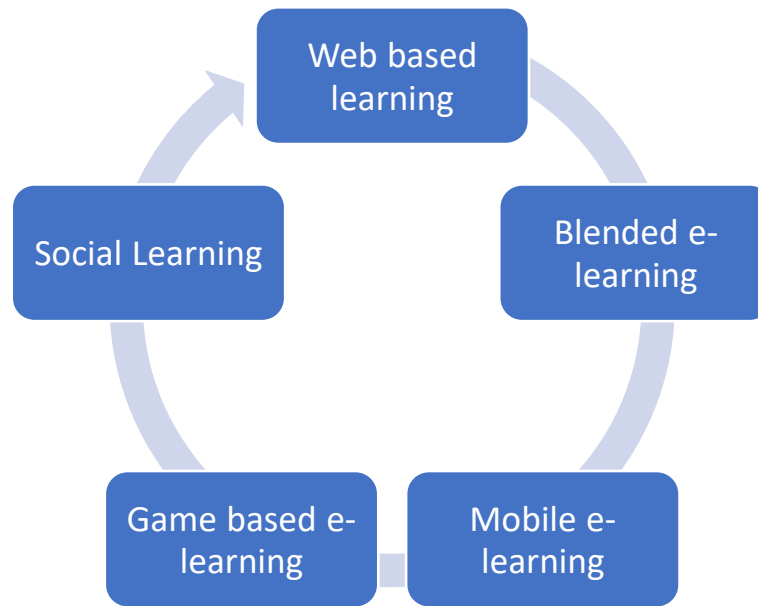


Figure 2. Types of E-learning delivery methods.

1. Web-based learning: -
 - In web-based learning, internet is used as the platform to transfer the knowledge to the students.
 - In this type of learning, the teachers are not present and the students will have to learn on their own.
 - This type of learning is beneficial for those adults who want to improve their knowledge and skills.
2. Computer based learning: -
 - In this type of learning, the knowledge and lessons are shared using a CD/DVD. It generally runs on student's system.
 - In this technique also the teacher is not present and the learners learn at their own pace and at their own time to increase their knowledge.
 - This type of technique is important and has advantages for corporate people.
3. Blended E-learning: -
 - This is the mix of e-learning and the traditional learning methods. This means that the instructor is also present during the class and latest technology is used to present the concepts of the lessons.
 - This method uses a teacher and a software application which has the lesson plans as well as the general questionnaires to clear the doubts of the students.
 - This method helps to integrate various parts of learning space and provides flexibility as per the schedule of the learners.
4. Mobile E-learning: -
 - With the development of the wireless technology and advanced mobile technology, the learning material can also be accessed by the mobile applications in small handheld devices called mobile phones.
 - However, the simple accessibility and moderateness of cell phones can make e-learning more open, cell phones' plate space, screen size, and Web availability highlights should be adopted into thought with this strategy.

5. Social E-learning: -

- This is also in trend these days, where on social platforms people shares their knowledge on particular topic by using social media platforms. It is also useful for sharing thoughts on a particular issue and providing innovative methods to solve the problem.
- It happens when the behaviour of other individual is observed and its consequences are observed.
- Using social media platforms, interaction among learners is made possible using video conferencing etc.
- Group discussions and Q&A sessions are also part of social media e-learning.

6. Games E-learning: -

- The utilization of a PC games-based way to deal with convey, backing, and improve educating, learning, evaluation, and assessment."
- Games utilized for e-learning are planned around unambiguous learning goals and are profoundly intuitive to support total drenching and commitment.
- While gamification utilizes game mechanics and components to make picking up convincing, game-based e-learning courses utilize undeniable games to assist students with accomplishing their targets.

Thus, one of the above-mentioned e-learning method can be used which is based upon the requirements and preferences of the learners.

Advantages of E-learning technology: - [3]

Following are few advantages of using E-learning methods over traditional teaching methods: -

1. Personalised learning method: -

E-learning provides the way of learning as per the learner's pace and time. The learner can learn new skills and take their own time to master them. They have access to it and can use the lectures any number of time and anytime of the day.

2. Save time and money: -

E-learning helps to reduce the cost as the learner is not supposed to travel anywhere to attend the classes as the lessons can be accessed from home which in turn saves the cost of transportation. Also, a lot of time can be saved to learn a new concept using online learning.

3. Retention rate is high: -

The content about topics are provided in an interactive way due to which the learners remembers a lot of concepts taught online. It also provides the ability to share the thoughts and opinions with others on the same topic.

4. Environment Friendly: -

E-learning is environment friendly concept as the use of paper is reduced during the online training sessions.

5. Cost-effective: -

E-learning is beneficial both for students as well as the educational institutes. The need for physical classrooms is reduced which saves a lot of cost for setting up physical classes.

Challenges of E-learning: -

Besides various number of advantages, there are few challenges faced by e-learning institutes and technology: -

1. Cheating cannot be avoided: -

The evaluation concept is also present in e-learning. Exams are also conducted online but we cannot guarantee that cheating will be avoided as there will be no instructor to watch students writing exams.

2. Need for Self-discipline: -

It is self-motivation concept where the students need to encourage themselves to attend the lectures online on their own, to take notes, to study hard. It is also required that the students manage their time to take out time to attend the classes along with managing other daily activities.

3. Not accessible to all: -

The people who do not have computer systems and internet cannot take advantage of e-learning. Underprivileged students and people also cannot attend these classes due to lack of availability of sources for them.

4. No social interaction: -

During traditional methods of teaching there is one-one interaction and social interaction with the whole class. But in e-learning social interaction is missing always.

5. Focus on theory part: -

E-learning also lacks the practical experiments of the theoretical part of the training.

Conclusion: -

E-learning is the strategy for showing in a formalized way utilizing innovation like web and electronic sources like PCs and frameworks. The primary parts of any e-learning model is web and PC framework. It is moving nowadays and helps the understudies and representatives to acquire information and go to their classes according to their accommodation. With the assistance of e-learning, countless understudies can be shown simultaneously as it is communicated over an organization which has the limit of taking care of numerous understudies all at once. This innovation has likewise saved the requirement for space to have actual study halls and number of educators required. The understudies can go to their classes from their home, office and so on with a decent organization association and a PC framework. In earlier days, this technique for educating was not empowered how it is energized nowadays. The abilities expected for this technique for instructing is that the educators or the guide ought to have sound information on PC framework and furthermore know how to utilize web. With the development improvement of innovation, this strategy is currently acknowledged by huge number of individuals across the world.

References: -

- [1]. <https://research.com/education/what-is-elearning>
- [2]. <https://leadschool.in/blog/growing-importance-of-e-learning-in-the-21st-century/>
- [3]. <https://www.thetechedvocate.org/5-advantages-and-5-disadvantages-of-e-learning/>