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Lect. 9

E-learning:

Definition :- is a very board term which generally covers a wide range of teaching and learning activity via electronic media such as computers or web based platforms. E-learning is not necessarily distance learning and may also occur in the face -to- face classes .

The term E-learning usually refers to the use of different kind of information communication technologies (ICT) and electronic devices in education . E-learning is a change from the traditional education or training system to a more ICT- based personalized and flexible education systems.

The evolution of e-learning :-

The growth of e-learning is more of a dynamic process as it is affected by many factors such as subject matters , the knowledge level of the audience and the environment around the audience. The users also play an important role in how they want to learn as all users do not have approach to learn. A major factor that affects the e-learning process is the amount of information that the user wants to receive .

E-learning may also be referred to as distance learning , virtual education , digital education , web based training (wbt) , internet based training (ibt) , computer based training (cbt) or trchnologically enhanced learning depending on the emphasis of the delivery method or the components . The delivered learning materials may be in the form of text .images animations video tutorials or even a computer programme .

Types of e-learning :-

E-learning can be of different kinds

- Purely online : no face - to - face meetings
- Blended learning : distance learning or a combination of online and face - to - face
- Synchronous : instructor led online courses.
- Asynchronous : self-placed learning methods placed on the internet , network or storage device .
- Instructor -led group : distance learning where students may be from different geographical locations and learn from a single teacher .
- Self-study with subject matter expert : learning by regularly visiting some experts blogs or up- to - date sites .
- Web based : learning purely by looking up on the internet with the use of search engines or social media groups such as facebook .
- Computer based : learning by accessing study materials from different storage devices like CD ROM or USB in the computer .
- Video/audio tape : learning by accessing multimedia files through YouTube or any other video/audio sharing websites .

Types of e-learning based on their interactive capabilities :-

Type 1	type2	type3
E-learning systems with low interactive capabilities ,which mainly consist of texts or multimedia materials.	E-learning systems with moderate interactive capabilities.	E-learning systems with high interactive capabilities either with student to student or student to teacher or even both.
The examples of this type of systems mainly consist of power point presentations , learning from watching videos or audio podcasts .	The examples of this type of systems mainly consist of quizzes with feedback ,interactive resources , re-flective learning , and learning by using simulators or demonstrations.	The examples of this type of system mainly consists or modern blended e-learning systems such as virtual classrooms , video conferencing , streaming medias ,different online group games , online blogs, Wikipedia or social media groups.

The advantages and disadvantages of e-learning systems :-

Advantages	disadvantages
It reduced the need to travel longer distances or away from home to get the desired education .	It lacks face-to-face interactions that students in the normal classroom would get.
It is a convenient way of learning things as it can be accessed any time anywhere and on self-demand .	Lack of strict guidelines may demotivate students and lead to dropouts form the learning process prematurely .
It is a self- placed private learning system and is mostly flexible for learners .	It is sometimes difficult to measure the reliability of the placed learning systems.
It uses the media resources , thus making it easy for learners to understand .	Slow internet connections or server problems may make the learning process frustrating.
It is repeatable as the content is stored in storing devices and each time the learner accesses it , the same content can be repeated.	It may take some learning time just to understand the learning systems.

The advantages and disadvantages of e-learning systems :-

Advantages	disadvantages
It is easier to track the progress of learners in the e-learning system .	Students may feel isolated due to lack of social interaction .
The content of learning materials is consistent for all users regardless of the location or time of accessing .	Real-time interactions may not be available at the time of need for students, which can be frustrating .

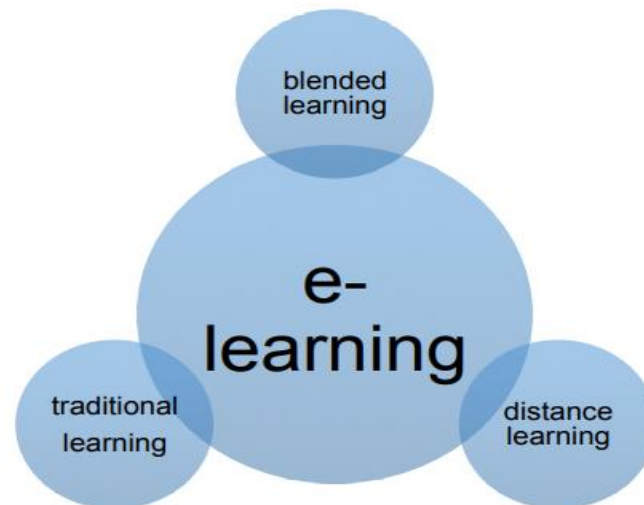
E-learning systems:-

Architecture of e-learning systems :

the main requirement of the developers while developing any e-learning system is that it should be easy to use and safe . Students should be able to choose their course , find the resources easily ,track their progress and reach their final goal on time .in the learning system students should be able to communicate and help each other , in other words it should be social and engaging .

While developing the learning system the designer should focus on creating a perfect mix of traditional and virtual learning methods to help the students engage more and reach their goals .

Fig. (1) :Learning Models



A perfect e-learning system is a mix of all the learning systems shown in fig.1 . The perfect e-learning system will allow students to learn from their home while having some real-time support and interaction with other students who are taking the same courses however .

The architecture of an e-learning system might be difficult to understand in technical term but it usually consists of three parts:

- User Interface
- Platform
- Database

A **database** is the place where the digital learning materials are stored and a learning **platform** is the media from which the students access the learning materials. A **user interface** is what the student sees while accessing the platforms.

The communication process between these three parts is very important for the whole system to work perfectly . For example ,we can use MySQL to store the digital materials , use edX platform to access the materials and students can visit the edX platform using their web browser.

the connection between the three parts of the e-learning system is shown in fig.2 following in next slide



Fig.2 connection between parts of learning system

As we can see from the fig.2 the **user interface** is what the student sees while accessing the platform , which will have the access to the database.

The user interface is the means by which the student interacts with the system , including the input devices and the software . It allows user to input their command through input devices such as a mouse or touch screen and shows the effects of the user input.

Applications and web browsers are some examples of the user interfaces . **A database** is a structured set of information or data organised so that it can be accessed , managed and updated whenever necessary . In order to store , modify ,extract and administer the database a management system , database management system (DBMS) is required . there are many database management Systems available in the market like Oracle , Microsoft SQL Server, and MySQL .

The e-learning platform : is the system that provides the access to the databases of e-learning materials or the online courses . The platforms are generally web-based . It enables the user to access the study materials , take tests and track their progress whenever or wherever they want . There are many such platforms available in the market. Companies can either use such platforms or develop their own.

Developing such platforms may be expensive , so companies generally use already available platforms. The platforms can be free(open source) or commercial . The commercial platforms will let the companies to modify them to fit the needs of the users .

While choosing the platform it is necessary for the companies to understand what they want. It depends on a number of factors such as needs of students and technical skills of instructors .

table 1: Open source e-learning platforms with their web addresses

Platforms	Web address
Efront learning	www.efrontlearning.net
Moodle	www.moodle.org
Ilias	www.ilias.uni-freiburg.de/en
Dokeos	www.dokeos.com
Sakai	www.sakaiproject.org
Claroline	www.claroline.net
Atutor	www.atutor.ca
OLAT	www.olat.org
Colloquia	www.colloquia.net
edX	www.edX.org

As we can see from above table 1 there are many e-learning platforms available in the market that can be used to learn courses online for free.

Commercial e-learning platforms :

Table 2 : commercial e-learning system with their web addresses

Commercial e-learning platform	Web address
Blackboard	www.blackboard.com
Angel	www.angellearning.com
WebCT	www.webct.com
Desire2Learn	www.ocdsb.desire2learn.com/index.asp
KnowledgePlanet	www.knowledgeplanet.com
SumTotalSystem	www.sumotalsystem.com

Some companies who cannot trust the open source platforms usually use the commercial platforms . And as we seen from the table above there are many of options for such companies to choose from .

Questions:

Q1: discuss e-learning phrase .

Q2: is Database important in e-learning ? How?

Q3: define platforms .

Q4: give 3 advantages for e-learning .

Q5: give 4 disadvantages for e-learning.