A CASE STUDY

An alternative of traditional learning : E-learning

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ABSTRACT

The present article is going to aware of people who stop their learning and don't want to continue their study due to some circumstances and for those who facilitated with modern technology like computer with faster internet connections. E-learning emerge as a strong alternative of traditional learning. Various public and private educational institutes offering various courses which are very effective to gain competitive skills for working in changing world. People can join these courses and full fill the requirement of professional skills.

Key Words : Learning, E-learning, Distance learning

The rapid growth of the information technology in various countries like India provide the various means of communication and the various sources for collecting and disseminating the information among various users. Various sectors like marketing, entertainment and so many others using the power of network. The use of information technology and networking power in education not too old. The term E-learning generally define as "the use of information communication technology in the process of learning". The term E-learning came in to existing during 1999-2000. In our country (India) several private and government educational institutes engage in providing opportunity to design, deliver, select and continuing their learning. Several mode and techniques have been developed to strengthen the online learning process like micro learning, video learning, gamification etc.

History and development :

The term "E-learning" has only been in existence since 1999. In 1924 the first testing machine was invented which used by students for self evaluation. In 1954 Professor Skinner invented device that enable to schools to administer programmed instruction to their students. The first computer based training programme was developed (PLATO) Programmed Logic for Automated Teaching Operations. In early 90s several schools had been started the online delivery of courses. In our country IGNOU and other open schools offering the online delivery of courses through eGyankosh, sakshat, Gyandarshan etc. To promote technology based delivery of education, government launched a dedicated satellite

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EDUSAT on September 20, 2014 with the aim to increase and improve the quantitative and qualitative growth in education and help in E-learning.

Definition of E-learning .

"The use of technology to design, deliver, select, administer, support and extend learning".

"E-learning is commonly referred to the intentional use of networked information and communications technology in teaching and learning".

A number of other terms are also used to describe this type of learning. They include online learning, virtual learning, distributed learning, network and web based learning.

Distance learning vs online learning :

Generally people think distance learning and online learning are the same process of learning but both types of learning have their own techniques and delivery mode. In general we can define the distance learning as "the effort of providing access to learning for those who are geographically distant or live in areas where the conventional methods of learning not fulfill the requirements of learners. And online learning generally defines as facilitates the learning process through the use of some technology.

Why –E- Learning ?

In the current scenario we can see the incredible growth of educational institutes and various national and international universities, apart from that online learning standing alone in the educational world. The question will arise why we need this type of learning? Following are the some constraints of traditional education system that provoke the need of need of E-learning.

Teacher shortage:

In many developing countries like India suffering from the availability of the qualified teachers and the quality of the existing educational staff is another problem. And the teaching job preference is decreasing day by day and another concern is the teachers are performing other non educational assignment so they do not contribute their best in teaching.

A3 (any time, any place, any pace) learning :

The mode of E-learning fulfill the bunch of requirements of the learners like there is no fix time schedule for learners to attend the class, learners can modified there learning time, there is no restriction for learners to attend the class in conventional classroom environment and no need to any identified place, learners can complete their learning on part time basis especially for adult learners. The speed of learning can also maintain by the learners. .

Enhanced learning experience :

In the process of E-learning content various technological tools which boost the learning experiences of learners like various instructional methods, powerful simulation environment, multimedia combination and high-end visualization support. Online learning provides the opportunity of self-assessment that enables the learners to improve their learning. These factors are responsible for enhanced the learning experience of the learners which is generally avoids in conventional teaching and learning.

Content creation :

In our country, we rarely want to share our work with the world which results the poor contribution in the online content creation. Through the perfect use of online learning enables us to increase the contribution of online content creation and make the contact with other world of education.

Enhancing the quality of teaching :

The development of course material with the use of power of networking and various online instructional methods create a power full teaching package for the learners. And also create the ideal learning environment for learners to enhance their learning experiences. Teachers can improve their teaching style and collect more feedback from his/her students. Online assessment, online assignments and online judgment provide the effective way for improvement in teaching.

E-learning components :

As we know online learning or E-learning process is the bunch of various technology and tools which provides the effective teaching and learning environment to the learners. The following important components are given below:
– E-learning content;
– E-tutoring, e-coaching, e-mentoring;
– Collaborative learning and

–Virtual classroom.
– E-learning content.

E-learning content can include :

–Simple learning resources,
–Interactive e-lessons,
–Electronic simulations and
–Job aids.

Simple learning resources :

Simple learning resources are non-interactive in nature such as documents, PowerPoint presentations, videos or audio files. That learner can only read or watch content without performing any other action. These resources can be quickly developed and when they match defined learning objectives and are designed in a structured way, they can be a valuable learning resource even though they don't provide any interactivity.

Interactive e-lessons :

The most common approach for self-paced E-learning is Web-based training consisting of a set of interactive e-lessons. An e-lesson is a linear sequence of screens which can include text, graphics, animations, audio, video and interactivity in the form of questions and feedback. E-lessons can also include recommended reading and links to online resources, as well as additional information on specific topics.

Electronic simulations :

Simulations are highly interactive forms of E-learning. The term "simulation" basically means creating a learning environment that "simulates" the real world, allowing the learner to learn by doing. Simulations are a specific form of Web-based training that immerse the learner in a real world situation and respond in a dynamic way to his/her behaviour.

Job aids :

Job aids provide just-in-time knowledge. They can take several forms and be delivered on different platforms (e.g. computer, printed document, mobile phone). They usually provide immediate answers to specific questions, thus helping users accomplish job tasks. Technical glossaries and checklists are a few examples of simple job aids, but sophisticated expert systems can also be developed to assist workers in complex decision-making.

E-tutoring, e-coaching, e-mentoring :

Services which provide human and social dimensions can be offered to learners to support them through the learning experience.

E-tutoring, e-coaching and e-mentoring provide individual support and feedback to learners through online tools and facilitation techniques.

Collaborative learning :

Collaborative activities range from discussions and knowledge-sharing to working together on a common project. Social software, such as chats, discussion forums and blogs, are used for online collaboration among learners. Online discussions Synchronous and asynchronous online discussions are designed to facilitate communication and knowledge-sharing among learners. Learners can comment and exchange ideas about course activities or contribute to group learning by sharing their knowledge.

Virtual classroom :

A virtual classroom is the instructional method most similar to traditional classroom training, as it is led completely by an instructor. A virtual classroom is an e-learning event where an instructor teaches remotely and in real time to a group of learners using a combination of materials (e.g. PowerPoint slides, audio or video materials). It is also called synchronous learning. This method requires the least amount of effort to convert materials (but instructors still have to prepare them). Appropriate technology must be in place for both the learners and providers (e.g. software for the virtual classroom and good connectivity).

The approaches for development of e-content :

The National Mission on Education through ICT (NME-ICT) develop four quadrant approach for developing effective and efficient e-content.

First quadrant :

First quadrant defines the structure of course along with textual content. It comprises of basic description of a module, prerequisites (in terms of knowledge background of a user before taking-up a module), introduction, objectives, keywords, summary, textual content (details of textual content on the topic, subtopics with examples and applications from day-today life, illustrations and chunk text).

Second quadrant :

The second quadrant comprises of multimedia enrichment of content that may include audio or video clips, animation, simulations, virtual labs, etc.

Third quadrant :

The third quadrant provides links for external resources available on the Web as well as supporting material. For example: Did You Know? Points to Ponder, Glossary, FAQs, link to Wikipedia, other websites, blogs, dis-cussion forum, etc.

Fourth quadrant :

Fourth quadrant includes the self-assessment material. Assessment and evaluation questions may be in different format like multiple choice questions, true and false statements, sequencing, match the columns, problems, quizzes etc.

E-learning approaches :

There are two types of approaches used in E-learning, and they are :
– Self-paced and facilitated
– Instructor-led.

Self-paced E-learning :

In online learning the various online or E-learning course materials are offered to learners, which have supplemental resource and assessments. Course material is usually contain by a Web server and learners can assess it from various online learning platform and also available in CD-ROM. Learners are free to learn it and the pace of learning can be managed by the learners self and learners decide the their own path for learning process which based on their own need and interest. The E-learning providers do not have their own time table for deliver the learning material and control the pace of learning. E-learning content and online course material is developed according to set of learning objective and the content is delivered by using combination of multimedia combinations. (Through explanations, text, graphics, examples, interactivity, feedback, glossaries etc.).

Instructor-led and facilitated E-learning :

Instructor- led and facilitated E-learning is another approach of used in E-learning, in this approach a linear curriculum is developed that involve the integration of various online content and various activities into a chronological course or syllabus. The online course is scheduled and led by an instructor or facilitator through using online platforms. Learning content designed for individual study can be integrated with instructor's lectures, individual assignments and collaborative activities among learners. The e-mail, discussion forums, chats, polls, whiteboards, and application sharing and audio and video conferencing are various communication tools that are used by the instructors, learners and facilitators in this approach.

Trends in E-learning :
Blended learning :

Blended learning is also known as the "Hybrid" online learning because this is the combination of offline (face-to-face, traditional learning) and online mode of content delivery mode and the combination lead to complimentary reaction to each other which facilitates the learners to enjoy the both world. The Blended learning uses the various forms of the online content delivery modes. Students would only have to physically attend class once in a week and would be free to maintain their pace of learning.

Social and collaborative learning :

Collaborative learning is an E-learning approach where students are able to socially interact with other students, as well as instructors. In essence, learners work together in order to expand their knowledge of a particular subject or skill. In E-learning environments, this is typically done through live chats, message boards, or instant messaging. Collaborative learning is based upon the principle that students can enrich their learning experiences by interacting with others and benefiting from one another's strengths. In collaborative learning situations, students are responsible for one another's actions and tasks which encourage teamwork as well.

Gamification :

Gamification means the use of game-based technology like mechanics, aesthetic and game thinking to increase the attention of learners and make more compatible in problem solving. In general we can say that it is the use of game based technology in learning process. Games play a vital role in active participation of learners in the process of learning. Simply the games are the various kinds of instructional methods which not

only deliver the online content but also create the situation like real game.

Micro-learning :

The another important trends in E-learning is micro-learning which includes the learning in small fractions, the process of learning completed in smaller steps and goes hand in hand with traditional learning setting. The smaller steps involve the short term lesson, projects or coursework that is designed to provide the information in step by step or in nut cell. For instance rather than trying to teach a broad course all at once, the different unit or syllabus will be broken down in to smaller unit or lesson.

Video learning :

The rapid growth of information and communication technology and increasing the numbers of mobile and tablet users facilitates the learning through the use of video. Several online content providers have a large numbers of tutorial videos of the different process. For example if you want to watch a video of how to make the an electronic machine for drying the paint, you only need to visit the You Tube and there is hundreds of videos available, showing you to step by step processes you need to follow the instructions to make the machine. The video of any course material provides the real world like environment to the students for improving the learning process. The video of learning content is easy to understand and they also available in various language.

Rapid E-learning :

The rapid E-learning involve the faster process of the development of the online courses and content compare then the other mode of E-learning. This mode of E-learning allows the students to learn fast and content developers developed the content very fast rather spending more time and they used the PowerPoint and specified videos for this purpose. The developed courses are delivered by using e-mail, LMS (Learning management system) and sites.

Personalization and E-learning :

Personalization learning means the development of the online content for fulfill the needs of individual learner or designing the pedagogy according to the individual need and requirements. The personalization E-learning provides learners broad choice of content like what to learn, how to learn and when it is learn.

Continuous learning :

Continuous learning on individual level means the constant increases the knowledge and skills by providing the effective learning environment. The needs of individual learner change according to the stage of life on personal and professional level. The continuous learning involve the adoption of new skills and knowledge for maintain professionalism with the changing environment.

Ten principles for successful E-learning :

Following are the ten important principles of successful E-learning.

Principle 1: *Match to the curriculum* :
The principle is match to the curriculum, the design of pedagogy should be based on the learning objectives, and the objectives should be clear and the perfect assessment should be the part of the curriculum, the all learning objectives and goals of learning should be clearly stated that describe which type of skills learner learned after the completion of the learning. And the curriculum should be flexible for making future change.

Principle 2: *Inclusion* :
The pedagogy designed in online learning should be flexible for incorporating the inclusive practices which are seen in term of achievements. The physical disabilities should be supported by the l-learning content of pedagogy and facilitates the students to work towards their own goal of E-learning.

Principle 3: *Learner engagement* :
The pedagogy should be design in this way that learner can motivate and full time engage. The learning provides the means to deliver high quality digital learning applications fully integrated into any course.

Principle 4: *Innovative approaches* :
The E-learning pedagogy should be based on new approaches and the technology used in learning should be new and more effective. E-learning provides the technology, tools and professional development of the learners that make learners to be professional for accepting the challenges and provides the more problem solving techniques. Learners should be able to work

together, share, use more creativity and effectively present their ideas and thinking.

Principle 5: *Effective learning* :

According to this principle of E-learning the content or the pedagogy should be consist a variety of E-learning platform that will allows the learners to select one that fulfill his/her requirements of learning. The pedagogy should design in this way that the effective learning environment available for learners that involves learner agency, learner autonomy, and encouraging collaboration. Every student has own style of learning and needs. The online learning support the student by offering an individual learning plan for every student and by providing supportive material. The assessment part should be incorporate in each learning plan.

Principle 6: *Formative assessment* :

The pedagogy designed in E-learning should include the formative assessment. This type of assessment involves projects, discussions and other formats that provide immediate feedback on performance of learner. Formative assessment helps in making the future corrections in teaching and learning style in E-learning.

Principle 7 : *Summative assessment* :

The pedagogy designed in E-learning should provide the summative assessment of the learner. The summative assessment must be valid and reliable. The summative assessment comprehensive in nature that is easily compare by teacher, understand by students and parents.

Principle 8: *Coherence, consistency and transparency* :

The pedagogy must be internally coherent and consistent in the way the objectives, content, student activity and assessment match to each other. It must be open and accessible in its design. Its learning is known for its intuitive user interface. In its learning technology never stands in the way of learning. The course planner helps teachers' organize courses for maximum impact, and easily structures the learning activities for the period in question and connects resources, tasks, progress, work hours and learning objectives in a single overview for the student. The result is a sophisticated yet easy to use course.

Principle 9: *Ease of use* :

The E-learning content is transparent in nature

because most of teachers and students are using E-learning content with proper training. Content should be easily available on the various sources that student and teacher can use without facing difficulties. The maximum online learners are newly admitted students that do not have any previous experience of online learning.

Principle 10 : *Cost-effectiveness* :

The cost of technological solutions available in online content must be affordable to every learner. The cost of administrating and instructional support must be avoided in online learning. The cost of online learning must be sustainable for all learners.

Categories of E-learning :

The type of learning used in online learning is generally divided into two categories first is synchronous learning and another is asynchronous learning. Both learning category have own method of delivering the online content.

What is synchronous learning?

Synchronous learning means an online content delivery mode used where all the participants are present at the same time. It resembles traditional classroom teaching methods despite the participants being located remotely. This mode of E-learning requires a timetable to be organized. Web conferencing, video conferencing, internet radio and live streaming are the tools that are used in this mode of E-learning.

What is asynchronous learning?

Asynchronous learning is another mode of delivery used in online learning where participants access course material on their own schedule and so is more flexible. Students are not required to be together at the same time and place. The mail correspondence, web, and messages posted on community forum are the various tools that used in this mode for delivery of online content.

Obstacles in E-learning :
Access :

One disadvantage of E-learning is that learners need to have access to a computer as well as the Internet. They also need to have computer skills with programmes such as word processing, Internet browsers and e-mail. Without these skills and software it is not possible for the learner to succeed in E-learning. E-learners need to

be very comfortable using a computer. Slow Internet connections or older computers may make accessing course materials difficult. This may cause the learners to get frustrated and give up.

Software and files :

Another disadvantage of E-learning is managing computer files, software comfort ability and learning new software, including E-learning. For learners with beginner-level computer skills it can sometimes seem complex to keep their computer files organized. The lesson points you to download a file which the learner does and later cannot find the file. The file is downloaded to the folder the computer automatically opens to rather than a folder chosen by the learner. This file may be lost or misplaced to the learner without good computer organizational skills.

High motivation :

E-learning also requires time to complete especially those with assignments and interactive collaborations. This means that farmers have to be highly motivated and responsible because all the work they do is on their own. Learners with low motivation may not complete modules.

Isolation :

Another disadvantage of E-learning is that farmers may feel isolated and unsupported while learning. Instructions are not always available to help the learner so learners need to have discipline to work independently without assistance. E-learners may also become bored with no interaction.

Conclusion :

E-learning is found to be highly emerging knowledge tool today. It has wide scope in developed as well as in developing countries. The areas which are undeveloped and not so educated get attraction of E-learning. E-learning provides a method of delivering knowledgeable contents through CD, DVD, multimedia and other tools. The main constraint in this process is availability of proper bandwidth, willingness of e-learners and some sort of skill set to deliver the material to learners. E-learning is beneficial for knowledge, better job opportunities and promotions and to learn new developing technologies in the market. Although some negative consequences are also found in flourishing E-learning because of lack of awareness, unwillingness, illiteracy and lack of proper infrastructure, yet it has a broad scope in near future.

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