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E-LEARNING: Wheel of Change

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Abstract

The life of knowledge and human skills today is shorter than ever, mounting the pressure to remain up to date with ones education and training throughout a career. In the age of globalization and technological revolution, four-year degrees are just the start of a forty-year continuing education. Life-long learning is quickly becoming an imperative in today's world. Electronic learning (or E-learning or E-learning) is a type of Technology supported education/learning (TSL). E-learning is the online delivery of information, communication, education and training. It is an extended form of classroom teaching where learning is facilitated by the application of information technology. It is the process of education using computer, telecommunication, and network and storage capacity. E-learning is expected to be the future of education in India, but concerns arise due to economic issues and discrimination. Students face challenges in mental and physical health, as well as missing out on a wholesome learning experience. Traditional approaches in Indian pedagogy face challenges in adapting to online education. The Indian educational ecosystem must compete with the global educational technology market, and government policies are crucial for its future.

This paper concentrates on the Issues and Challenges of electronic learning in Indian education scenario and future of Electronic Learning in India. It suggests using E-learning for informal and vocational training, especially in developing countries like India where rural populations have limited formal education

KEYWORDS: E-learning, ICT, Virtual classroom, Web-based training.

Introduction

E-learning is the online delivery of information, communication, education, and training, facilitated by the application of information technology. It encompasses all educational activities carried out online or offline, either synchronously or asynchronously via networked or standalone computers and other electronic devices. E-learning covers various applications such as web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It includes delivery of content in various formats such as internet, internet/extranet, satellite broadcast, interactive television, CDRom, DVD, audio, and video tape. E-learning enhances the classroom experience by augmenting traditional textbook materials with online resources, lectures, and rich multimedia content. It supports inter-classroom collaboration and allows students to cover missed topics.

E-learning is the methodology of teaching or imparting education via the help of electronic use. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning. E-learning can also be termed as a network-enabled transfer of skills and knowledge, and the delivery of education is made to a large number of recipients at the same or different times. (The Economic Times, N.D.)

The term was introduced in 1995 when it was all called "Internet based Training", then "Web-based Training" (to clarify that delivery could be on the Internet or Intranet), then "Online Learning" and finally E-learning. A learning system based on formalized teaching but with the help of electronic resources is known as E-learning. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning. E-learning can also be termed as a network enabled transfer of skills and knowledge, and the delivery of education is made to a large number of recipients at the same or different times. Earlier, it was not accepted wholeheartedly as it was assumed that this system lacked the human element required in learning.

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Advancements in technology and learning systems have led to widespread adoption, with computers and smart phones becoming essential tools in classrooms. Books are being replaced by electronic materials like optical discs or pen drives, and knowledge can be shared via the internet, which is accessible 24/7. Non-electronic teaching is crucial, but technology-based learning is essential for effective learning. The human brain easily remembers and retains visuals, making them memorable and retaining attention for longer periods.

CHARACTERISTICS OF E-LEARNING:

E-learning has several characteristics that differentiate it from traditional classroom-based learning. Here are some of the key characteristics of E-learning:

1. **Remote learner-teacher interaction:** E-learning allows for remote interaction between the learner and the teacher, which means that learners can access education from anywhere in the world and at any time that is convenient for them.
2. **Learner-centered approach:** E-learning is learner-centered, which means that learners have greater control over their own learning experience. They can choose the pace of their learning, the mode of delivery, and the content they want to learn.
3. **Course material:** E-learning courses are often delivered in digital format, which means that learners can access course materials such as text, video, and audio files online.
4. **Multimedia nature:** E-learning uses multimedia to deliver educational content, which means that learners can engage with the material in multiple ways. This can include videos, images, interactive quizzes, and simulations.
5. **E-communication:** E-learning also enables the communication between learners and teachers through digital channels such as email, chat rooms, and discussion forums.
6. **Use of the internet:** E-learning requires an internet connection and access to digital devices such as computers, laptops, or mobile phones.
7. **Anywhere learning:** E-learning allows learners to access education from anywhere in the world, provided they have an internet connection.
8. **Anytime learning:** E-learning allows learners to access education at any time, which means they can fit their studies around work or other commitments.
9. **Just-in-time learning:** E-learning also allows for just-in-time learning, which means that learners can access the information they need as they need it, rather than having to wait for a scheduled class.
10. **Multiple collaborations:** E-learning also encourages collaboration among learners, which can take place through discussion forums, group projects, and online learning communities.
11. **Learner's active participation:** E-learning requires learners to be active participants in their own learning experience, which means that they need to take responsibility for their own learning and engage with the material actively.
12. **Facilities lifelong learning:** Finally, E-learning can facilitate lifelong learning, allowing learners to continue to develop their skills and knowledge throughout their lives.

Types of E-learning:

1) **Computer Managed Learning** (CML): Computer-managed learning, also known as Computer Managed Instruction, manages and evaluates learning processes. This system performs a variety of duties, including preparing tests, evaluating test results, and keeping track of the learner's progress. Furthermore, it operates through information databases. These databases include pieces of knowledge that the learner needs to learn, together with ranking variables that allow the learner to specify preferences for the learning method.
2) Because of the reciprocal connection between the computer and the learner, it is simple to assess whether or not you met the learning target adequately. As a result, repeat the methods until the learning objectives are met.

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3) Also, educational institutes utilize computer-managed learning systems for storing and recovering valuable information for educational management—this information ranges from training materials, curriculum information, lecture information, enrolment information, and grades
4) **Computer Assisted Instruction** (CAI): Computer Assisted Instruction (CAI), also known as computer-assisted learning (CAL), is an E-learning approach that integrates computers with traditional teaching methods. It combines multimedia elements like graphics, text, video, and sound to make learning enjoyable. The primary goal of CAL is interactivity, allowing learners to actively participate. Both traditional and online schools now utilize various forms of CAI to enhance their students' knowledge and skills.
5) **Fixed E-learning**: Fixed E-learning is a traditional online learning method where the instructor/teacher provides the same type of information to all learners, ensuring no subject choice and course content remains consistent after formation, making it suitable for learners with similar skills and schedules.
6) **Synchronous Online Learning**: Synchronous online learning involves a group of learners interacting with their mentors in real-time through chat, video, and audio conferencing. This form of learning allows learners to ask queries, receive instant responses from mentors, and even record sessions for future reference. Virtual classrooms are an example of this online form of classroom interaction.
7) **Asynchronous Online Learning**: Asynchronous online learning allows learners to attend Web-based training at their own convenience without live interaction with a mentor. This flexible approach is more student-focused than synchronous online learning, allowing learners to study at their own pace. Asynchronous learning platforms use computer-based training, Web-based training, CD-Rom modules, ebooks, discussion forums, and articles. This type of E-learning was previously asynchronous before the invention of the PLATO computer system, as computer networking methods were unavailable. Learners prefer this type of E-learning due to its flexible schedules and flexibility.
8) **Adaptive E-learning**: Adaptive E-learning is a type of E-learning that adapts learning materials to each learner's needs, using AI for knowledge management and teaching tools to identify areas for improvement. It uses parameters like abilities, student performance, and goals to create student-driven educational methods. Laboratory-oriented adaptive instructional approaches can also be implemented for mathematical sequencing of learner data. This approach is suitable for flexible learning hours.
9) **Interactive Online Learning**: Interactive online learning is a popular method that allows two-way communication between senders and receivers, enabling teachers and learners to adapt their teaching and learning processes based on the received messages. This approach is more widely known than linear E-learning, as it allows for discussions on discussion boards, instant messaging, or forums.

E-LEARNING TOOLS:

E-learning tools are a crucial part of modern education, as they provide a platform for students and teachers to connect and collaborate in an online environment. There are several E-learning tools available, each with its own unique features and benefits. Some of the most popular E-learning tools include:

- **Course Management Systems (CMS):** CMS is a platform designed to help educators manage and deliver course content to students. These systems can be used to create and distribute course materials, track student progress, and communicate with students.

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- **Massive Open Online Courses (MOOCs):** MOOCs are online courses that are available to anyone with an internet connection. They are usually free or low-cost and are designed to be accessed by a large number of learners simultaneously. MOOCs typically include video lectures, quizzes, and interactive activities, and they are often taught by professors from top universities around the world.
- **Webinars:** A webinar is a live or recorded online seminar that allows learners to participate in real-time or at their own pace. Webinars are often used for training, professional development, and marketing purposes. They typically include a presenter who shares information, slides, or demonstrations, and participants can ask questions or interact with the presenter through chat or video.
- **Podcasts:** A podcast is an audio program that can be downloaded or streamed online. Podcasts are often used for educational purposes, such as language learning, professional development, or sharing research findings. They can be accessed through a variety of platforms, including Apple Podcasts, Spotify, and Google Podcasts.
- **Blogs:** A blog is a web-based journal that can be used to share information, ideas, and opinions with others. Educators can use blogs to share course materials, post assignments, and encourage students to share their thoughts and insights on the course.
- **Wikis:** A wiki is a collaborative website that allows users to create, edit, and share content. Educators can use wikis to create a knowledge base for their students, where they can share information, collaborate on projects, and create multimedia content.
- **Educational Apps:** Educational apps are software applications designed to provide learning content and activities on mobile devices. These apps can be used for a wide range of subjects, from language learning to math and science. They often include interactive features, such as games, quizzes, and simulations, to engage learners and make learning fun.
- **E-mails:** An email is a tool that allows educators to communicate with students one-on-one or in groups. Educators can use email to send course updates, reminders, and feedback to students, as well as answer any questions they may have.
- **Messenger:** Messenger is a real-time chat application that allows educators to communicate with students in real time. Educators can use messenger to provide immediate feedback, answer questions, and facilitate discussions.

Advantages of E-learning

The main advantage of electronic learning is its flexibility and convenience. User can learn at one's own pace by choosing time as per self-convenience. As the sessions are asynchronous, it is not bound by time or place. This makes it open ended, most suitable for distance learning. It is very cost effective. Great adaptability to the needs of the learner, more variety in learning experience, repeatability of the learning environment is some of the other advantages.

Disadvantages of E-learning

The greatest disadvantage is the absence of human touch. Education is not just acquiring knowledge; especially educating the young involves personality development. This aspect would be missing in E-learning. Even though human interactions can readily be achieved through audio or video-based web conferencing programs, threaded discussion boards etc., it will not bring in face to face interaction effect. The chances of distraction are very high in online teaching learning process.

CONCLUSION

The push for online education requires a shift away from traditional learning theories and towards hybrid models combining online and offline methods. However, this requires

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significant investment in the country's digital infrastructure and more imagination in policy-making. The new wave of technology is not a solution to the structural problems in the Indian education system. Technology providers must consider the needs of people with special needs and disabilities when designing education systems. Deregulation of the education sector should not be a complete pullback, as public investment in higher education is a crucial social investment. The government can combine existing resources like SWAYAM and IGNOU to expand their reach. To capitalize on the demographic dividend, radical approaches are needed for comprehensive reform in the education system.

REFERENCES

- Chandra, S. (2014) E-learning prospects and challenges. International Journal of Research in Finance and Marketing, 4(10).
- E-learning, www.nextwavemultimedia. com /html/profile.html
- http://wikieducator.org/Computer Assisted Instruction CAI)
- http://www.sakshat.ac.in/document/nmeict-brochure-30-11-2015.pdf
- Jaiswal, V. (2013) Current Status of e-learning in Indian higher education: A case study of U.P. Retrieved from the Social Science Research Network (SSRN) website: http://ssrn.com/abstract=2231910.
- Laurillard, D. (2006) e-learning in higher education. Changing Higher Education: The Development of Learning and Teaching, 71-84.
- Sharma, R. C., and Mishra, S. (2013) International Handbook on e-Learning, Vol. 2.
- Singh, P. P. and Sharma, S. (2005) E-learning New Trends and Innovations. New Delhi: Deep and Deep Publications Pvt. Ltd.
- www.expresscomputeronline.com
- www.google.co.in
- Zarrin T. Caldwell (2006), OneWorld US, ―Making the Grade: Knowledge for a New Century‖,