Efficacy Of E-Learning In Higher Education And Its Challenges In India

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Abstract:

The field of e-learning encompasses a diverse range of applications and processes. The process entails the dissemination of educational materials through various communication protocols. The implementation of e-learning activities holds significant importance for the progress and advancement of a nation. In contemporary times, there is a widespread preoccupation with the pursuit of progress and the advancement of education. Efficient planning leads to desirable outcomes. It is anticipated that e-learning will become the predominant mode of education in the future. Several analyses have indicated that E-learning is a potent instrument for the advancement of the educational sector in India. E-learning refers to the use of electronic technologies for accessing educational curriculum outside of a conventional classroom setting. The primary aim of this paper is to examine the concept of e-learning and gain insight into its various types. The text provides a summary of various perspectives on the comparison between conventional and contemporary methods of education. The contemporary approach to pedagogy and acquisition of knowledge is deemed advantageous for the advancement of the educational domain within the Indian milieu. The present study is centred on the utilisation of e-learning as a primary driver for the advancement of education in India, along with the associated obstacles.

Key words : E-learning, educational development, challenges and higher education.

I) Introduction:

In contemporary times, there is a widespread focus on the pursuit of growth. Effective planning leads to desirable outcomes. E-learning refers to the utilization of electronic media for the purposes of teaching and learning, encompassing a broad range of applications and processes. The utilization of e-learning is increasingly prevalent in higher education, presenting novel prospects for both academic institutions and pupils. E-learning may also confer advantages to individuals in professional settings who are unable to commit to traditional modes of education on a full-time basis. Students have the ability to engage in self-directed and autonomous learning through the utilisation of various educational resources such as videos, graphics, documents, quizzes, and reports. These resources serve as a guide to their coursework and facilitate a comprehensive comprehension of concepts, regardless of location or time.

The utilisation of the web and internet constitutes a fundamental component of Information and Communication Technology (ICT) in the dissemination of knowledge through e-learning. The utilisation of eLearning facilitates increased levels of participation and enhanced opportunities for interaction. This statement challenges the notion that traditional, in-person education is inherently superior to alternative forms of education. In India, education is imparted by both public and private sectors, with regulatory and financial oversight being exercised by three tiers of governance: the Central Government, State Governments, and private entities.

As per the Indian Constitution, children between the ages of 6 and 14 are entitled to receive free and mandatory education as a fundamental right. The formal education system in India has been classified into three distinct levels, namely primary education, secondary education, and higher education, as per the categorization by the Indian Department of Education. The higher education system of India is ranked third globally, following the United States and China. At the tertiary level, the University Grants Commission (UGC) serves as the primary governing body. Its responsibilities include enforcing standards, providing guidance to the government, and facilitating coordination between the central and state entities.

II) Body of the content

2.1) What is E-Learning?

E-learning is a pedagogical approach that employs a range of electronic media and technologies, such as the internet, intranet, extranet, satellite broadcasts, audio/video tape, interactive television, CD-ROM and video-conferencing, to disseminate instructional content and to cultivate, promote and facilitate learning experiences. The utilisation of networked information and communications technology in teaching and learning is commonly known as e-learning. Various terminologies have been employed to characterise electronic learning. The instructional methodologies encompassed within this category consist of Technology Based Teaching (TBT), Computer Aided Learning (CAL), Computer Based Learning (CBL), and Technology Enhanced Learning (TEL). Essentially, all of these pertain to educational procedures that

employ information and communication technology to facilitate both asynchronous and synchronous learning and teaching endeavours. The components of e-learning encompass the subsequent elements.

1) Content delivery methods which have three methods i.e. live broadcasting, video on demand and interactive communications.

2) Authoring tools which are software products to create content and

3) Learning management systems which allows learner to check and assess individual progress and performance.

2.2) Types Of E-Learning Models:

There are basically 3 types of E-Learning i.e.Synchronous, Asynchronous and Blended-Learning.

1. Synchronous means at the same time, so in Synchronous type of E-Learning, there is a interaction between participant and instructor via Web Bases Portal.

2. Asynchronous means not at the same time, so in Asynchronous system of E-Learning the portal allow the participant to complete the syllabus or training without interaction with the trainer or instructor.

3. Blended learning is a combination of E-Learning tool with traditional class roomteaching.In Blended learning students can enjoy classroom experience with interaction with teachers and students via actual classroom. Blended E-Learning has benefits of face to face interaction with social benefits of classroom training and different teaching techniques

Some of The Different E-Learning Portals There are numerous E-Learning portals around the globe. Some of the famous E-Learningportals working in India are as follows:

1. Indiaeducation.net

2. Khan Academy

3. Coursera

4. EDX

5. Byju's

6. Meritnation

7. Ask IITians

8. W3 School

9. Academic Earth

10. Code Academy

11. Open Yale Courses.

12. Investoo

2.3) E-Learning and Higher Education

According to a recent study in a global level online learning program, after the United States, India has been reported to have the second highest number of online course enrolments with more than over 1,55,000 students from the country. Of a total of around 1.2 million students worldwide, 32% are from the U.S while 15% are from India. In higher education, there is a growing demand to create a virtual learning environment (VLE) in which all aspects of a course are handled through a consistent user interface throughout the institution.

Some of these programmes are initiated in our country and students need to attend orientation sessions in colleges, but the course content is delivered online. Several universities do offer online student support services, such as online advice and registration, e-counselling, online textbook purchase and student newspapers. E-learning has the potential to overcome the non-availability of adequately qualified teachers in rural India .

Live online tutoring; streaming videos and virtual classrooms are some of the solutions that e-learning can offer to these problems. While there is no substitute for effective and organized classroom teaching, e-learning's is the best option. School drop outs can be taught through e-learning as they feel insulted to go to school again. Computerized Assessment of students' performance becomes easier to the teacher/professor, for the courses where the number of students is large. Physically disabled students can learn at home through e-learning study material. Though e-learning is audio-visual medium of learning, it is not free from limitations. According to another report, India's online education market size is set to grow to $40 billion by 2017 from the current $20 billion. It has been observed that a group of people who oppose to the concept of e-learning saying that it is informative and does not impart the knowledge of the subject. On the other hand, some people oppose classroom learning saying that self-learning with the help computers and other e-material is always better than classroom learning as it does not motivate for self-learning. This is especially true for countries where technical education is expensive, opportunities are limited and economic disparities exist. India has one of the largest education systems in the world with a network of more than 1 million schools and 18,000 higher education institutions. More than half of the country's 1.2 billion population falls in the target market for education and related services. Even Agriculture industry is required to connect with higher education and E-Learning.

2.4) E-Learning in India

The ongoing transformation in Information and Communication Technologies (ICTs) is having a significant impact on the manner in which universities perform their core activities of teaching, learning, and research. This is especially evident in the generation, distribution, and utilisation of knowledge. The emergence of these advancements presents unparalleled obstacles for higher education establishments in developing nations, specifically in India, which is regarded as the foremost nation on the continent. Universities across the globe, including those in India, are progressively adopting e-learning strategies to improve equity, quality, and the sharing of instructional technology resources. This is being done in order to compete in the global higher education environment and meet the growing demand for tertiary education. The e-learning sector in India is undergoing a rapid transformation, propelled by a variety of economic, technological, and social factors. Undoubtedly, the most significant among these trends is the substantial need for attaining high-quality higher education. E-learning may be regarded as a constituent element of the wider construct of distance education. The origins of open and distance learning in India can be traced back to the 1960s.During the 1980s, a total of 34 universities had established specialised departments for the provision of correspondence education. In 1982, the initial single mode Open University was founded in Andhra Pradesh, succeeded by the establishment of the Indira Gandhi National Open University (IGNOU), and subsequently in Bihar, Rajasthan, Maharashtra, Madhya Pradesh, Gujarat, Karnataka, West Bengal, and Utter Pradesh, which were established throughout the 1980s and 1990s. The e-learning, though reached India late of course, but it is being fastaccepted in a big way. The India perhaps has watched the success of west inadopting e-learning and is trying hard to implement it. Over the past few years, theMinistry of Human Resource Development has been trying to achieve the target ofmaking education accessible to every corner of the country. Still there are many partsof the country, which are in darkness about e-learning (MALIK, 2009).

Due to the growing Indian economy, India has a chance to become heart ofe-learning programs. There are many e-learning classes which are coming to India tobuild and develop e-learning infrastructure.The e-learning does not seem to replace the conventional classrooms withblack boards but it seems to coexist with the already existing system. This systemrather promises to reach too far off rural areas in India where education is still alooming darkness. This objective can be achieved by providing PCs at low cost withbroadband connection. The chances of e-learning to strengthen the educationalsystem in India are very high.The scope of e-learning is much wider in India with many e-learningcompanies stepping forward in providing the service. Though nothing can actuallyoutrun the popularity of traditional classroom teaching, e-learning only gives morevalue to the process, independent of the distance factor. In India, e-learning scenariois still growing and at an experimental stage. The traditional mindsets are changing,with the corporate and business sector leading the way in embracing technology based learning networks.

2.5) Some Major Indian Initiatives

In February 2009, India initiated a National Mission on Education via Information and Communication Technology (ICT) with a significant financial investment of one billion dollars. The proposed system is expected to furnish internet connectivity to approximately 20,000 academic institutions, including colleges and other educational establishments. UNESCO is designed to serve as a prominent global hub for the exchange of ideas and to facilitate the development of societies that are rooted in knowledge. The Indian Institutes of Technologies (IITs) have expressed their intention to provide access to the e-learning materials developed under the national mission of India. This initiative aims to enable individuals who desire to acquire high-quality knowledge to do so without any cost implications (ASVINA, 2009).

In 2006, the Indira Gandhi National Open University initiated the E-Gyankosh project, which serves as a National Digital Repository of educational materials. The aforementioned repository was constructed utilising the Space open source software, which aims to facilitate the storage, indexing, preservation, distribution, and sharing of digital learning resources within open and distance learning (ODL) institutions located within the country. This system facilitates the consolidation and incorporation of diverse educational materials, including self-directed instructional materials, audio-visual programmes, and archives of interactive sessions broadcasted via radio and television.

The Indira Gandhi National Open University's (IGNOU) Library and Documentation Division is currently undertaking initiatives to extend higher education to individuals who have not had access to it previously. This is being achieved through the implementation of various modes of Information and Document Delivery Services. The NODLINET (National Open and Distance Learners' Library and Information Network) is a recent initiative implemented by IGNOU. Its purpose is to establish a platform for libraries and information centres within the open and distance learning system of the country. This platform will enable access to electronic and digital resources from leading publishers and vendors worldwide. The stakeholders of NODLINET will have the ability to access these resources from any location and at any time, utilising advanced technologies. The ultimate goal of this initiative is to enhance the quality of education to be on par with the conventional education system (ARORA, 2007).

The Inter University Consortium for Technology-Enabled Flexible Education and Development (IUC-TEFED) is a recent undertaking by IGNOU that serves as a central hub for various collaborative endeavours pertaining to Open and Distance Learning, innovative knowledge generation, e-learning, and suitable technology, among others. The organisational framework of the Inter University Consortium is modelled after the Pan-African e-Network.

The extant consortia comprising the University Grants Commission (UGC), Association of Indian Universities (AIU), and other such entities. The potential founding members of the institution could include all open universities within the nation, while conventional universities may serve as associate members. Non-Governmental Organisations (NGOs) and other entities engaged in the advancement of Education and

Training, Industry, and related fields may be extended invitations to form alliances and partnerships. According to the report by IGNOU IUC in 2008, it is anticipated that the consortium will enable the amalgamation and dissemination of knowledge by utilising a prudent combination of media and technology.

In December 2006, workshops were conducted in Delhi and Nagpur to raise awareness on Information Literacy. The e-learning platform will encompass several self-directed learning modules, including:

1) Information communication technologies (ICT).
2) Information literacy.
3) Information literacy models and standards.
4) Lifelong learning and development of life skills.
5) Information literacy assessment.
6) Information services for disabled people.
7) Freedom of information/Right to information.
8) Sample Information Literacy Programmes for School library:
a) University library/Academic library.
b) Special library.
c) Public library.
d) Communication information centers.

2.6) Online Education Scope and Growth in India

What exactly constitutes online education? According to the online definition, distance education refers to the provision of credit-bearing courses or educational training that is primarily disseminated through the internet to students situated in remote locations, such as their residences. Online courses may be delivered synchronously or asynchronously. It is possible that an internet-based educational programme may require occasional face-to-face meetings between instructors and learners for the purpose of delivering lectures, conducting laboratory sessions, or administering examinations. However, it is important to note that the duration of such in-person interactions should not surpass 25% of the overall course duration. The realm of online education encompasses a diverse array of academic programmes and courses. Online education offers the opportunity to pursue a multitude of degrees and courses from diverse universities that offer this modality. Despite being in the process of gaining popularity, we have compiled a list of select online degree programmes and universities in India that offer online education. Although online education in India is still in its early stages, it has gained significant popularity abroad. The primary advantage of online education lies in its flexible delivery mode, which utilises the internet as a medium for imparting education. Furthermore, it is noteworthy that individuals have the opportunity to engage in online courses from the convenience of their own residence or any other location of their preference.

2.7) Formal and Informal e-Learning

Some forms of e-learning – online education and online training recreate the formal learning experience online. Online education provides adults with limited literacy skills with a safe and patient place to develop basic skills such as reading and mathematical skills. The only factor that separates online training from education is that the skills and knowledge taught via training are expected to be used immediately. E-learning allows us to explore the potential of informal learning such as Knowledge Management and Electronic Performance Support. Knowledge Management is basically recorded pieces of corporate information such as policies, procedures and product information documents, reports, presentations and proposals expertise, often recorded in the form of documents like lessons learned, stories and case histories and online interaction with colleagues and can also include online chats, discussions and symposia during which participants can exchange information not yet been recorded. Electronic Performance Support (EPS) refers to a work environment on a computer in which performers /learners receive assistance. EPS is used in providing information, training, coaching and monitoring needed for support to learners.

2.8) Opportunities and affordances of e-learning

A growing body of literature on learning and teaching is suggestingthat learning is greatly enhanced when it is anchored or situated inmeaningful and authentic problem solved activities.2. This approach to learning and teaching is founded on theprinciples of learning by doing and experiencing.3.It places or confronts learners with authentic situations andscenarios which are motivating and which require learning to carryout tasks or solve problems and reflect upon their action.4.While such learning designs are suited for any learning and teachingcontext or media, their effectiveness and efficiency can be somewhatconstrained by the fixed time, space and pace limitations of learningand teaching in conventional campus based class room setting

2.9) Challenges to E-Learning

Several obstacles may arise for e-learning initiatives implemented by Institutions of Higher Education Management. One such challenge pertains to the necessity of providing Recognised Degrees to students enrolled in online courses offered by these institutions. The issuance of a certifying endorsement is a source of satisfaction for both students and their prospective employers.One potential consequence of the aforementioned situation is an increase in the proliferation of online educational institutions that provide courses accompanied by dubious certificates lacking in credibility.

The self-paced and self-directed nature of e-learning may result in insufficient attention span of students, thereby hindering their ability to comprehend a given concept.

The length of the course is typically a significant factor in the delivery of lectures through this mode.Finally, the legal ramifications of e-learning must be considered. It is important to bear in mind that e-learning via the internet transcends geographical limitations. This exacerbates the challenge for law enforcement agencies to establish a universal legal structure for online perpetrators.

2.10) Future of E-Learning in India

In contrast to the nearly 80% literacy rate observed in urban regions of India, the corresponding rate in rural areas is a mere 56%. Moreover, according to Choubey's (2009) research, the typical ratio of teachers to students in primary education is 1:58 in rural areas. Enhancing and optimising connectivity in various domains is an additional area of focus. For any e-learning initiative to achieve success, India must enhance its penetration of PCs and communication lines. Reducing the high expenses associated with ownership is imperative, as it presents a significant obstacle. The implementation of the subsequent measures may aid in mitigating the aforementioned issues:

The reduction of tariff levels is necessary for service providers, including the government. As the industry experiences heightened levels of competition, this outcome is inevitable.It is imperative for the government to foster a culture of learning, with e-learning being a crucial policy concern. It is imperative for the government to differentiate the e-learning sector as an autonomous entity, rather than categorising it as a subset of the IT industry or an aspect of IT enabled services (ITeS).The utilisation of opensource software can prove to be a cost-efficient approach while simultaneously catering to the diverse linguistic requirements of India.Moreover, open source software has the potential to be utilised on legacy hardware.

2.11) Advantages of e-learning

The utilisation of e-learning has been shown to provide advantages to various educational settings, corporate environments, and diverse learner populations. This approach is cost-effective, time-efficient, and yields quantifiable outcomes. E-learning has been found to be a more cost-effective alternative to traditional learning due to the reduced expenditure of time and financial resources on transportation. The cost-effectiveness of e-learning is attributed to its geographical flexibility and absence of travel expenses, rendering it a more affordable alternative to traditional institutional learning.

The utilisation of hyperlinks and websites on the World Wide Web in e-learning facilitates students' exploration of information. Learners possess the capability to locate information that pertains to their individual circumstances and areas of interest. The utilisation of e-learning enables students to choose educational resources that are aligned with their current level of knowledge, personal interests, and specific learning objectives, thereby enhancing their ability to perform more efficiently and effectively in a given task. E-learning places greater emphasis on the learner and is perceived as more engaging due to its tailored approach to content delivery, which aligns with the learner's interests and preferences.

Flexible learning can be achieved by scheduling class work around personal and professional obligations. E-learning offers the potential to decrease transportation expenses and commute time associated with attending traditional schools. Additionally, learners have the flexibility to choose educational materials that align with their individual level of knowledge and interests. Furthermore, e-learning enables learners to engage in their studies from any location with access to a computer and internet connectivity. Self-paced

learning modules afford learners the opportunity to proceed through the material at their own individualised pace. The online learning platform provides students with the convenience of participating in threaded discussions on the bulletin board at any time, as well as engaging in remote conversations with peers and instructors through chat rooms. The acquisition of computer and internet skills that can be applied to various aspects of the learner's life.

2.12) Disadvantages of e-learning.

Learners who lack motivation or exhibit inadequate study habits may experience academic setbacks. Similar to traditional classroom courses, e-learning demands a comparable amount of time for attending lectures and fulfilling academic tasks. Consequently, students are required to exhibit a high level of self-motivation and accountability since all academic tasks are completed independently. Students who exhibit low levels of motivation or poor study habits may experience academic setbacks. An additional drawback associated with e-learning pertains to the absence of customary class structures, which can lead to students experiencing disorientation or perplexity regarding course-related tasks and timelines, ultimately resulting in suboptimal academic performance or failure. The absence of a familiar structure and routine may require a period of adjustment. Students may experience a sense of isolation or a lack of social interaction, highlighting the importance of comprehending diverse learning styles and individual learner requirements. The availability of the instructor may not always be guaranteed on demand. The experience of slow or unreliable internet connections can elicit feelings of frustration. The process of managing learning software may entail a period of adjustment and familiarisation. Certain courses, such as those that rely heavily on traditional hands-on instruction, may present challenges in terms of engagement and motivation.

Conclusion

E-learning encompasses various modes of learning such as online learning, virtual learning, distributed learning, as well as network and web-based learning. Essentially, all of these pertain to educational methodologies that employ information and communication technology to facilitate both asynchronous and synchronous learning and teaching endeavours. An e-learning process comprises a set of activities and functions that must be undertaken subsequent to the acquisition of information, training, and skill development, among other things. In order to surmount the constraints of time, distance, and resources, the educational programme will necessitate the utilisation of technological capabilities. According to reviews, the emerging trend of adaptive learning has demonstrated potential benefits for higher education, women, and government. The utilisation of e-learning is contributing to a rise in the proportion of literate individuals within the overall populace of India. E-learning is a crucial component in the advancement of education, serving as a catalyst for growth within the educational sector. Collaborative efforts between India and other developing nations in the realm of e-learning are anticipated to yield favourable outcomes for the advancement of the educational sector. E-learning presents numerous opportunities and enables rapid development.

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