

# The Impact of E-Learning Technology for Future Generation in Educational Sector

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**Abstract** - E-learning is an element of the new dynamic that is defining educational systems in the twenty-first century. In today's world, e-learning is the concept of perpetual change. As the number of internet-savvy consumers grows, e-learning is becoming increasingly popular. Faster bandwidths have greatly aided in the expansion of e-learning students. E-Learning is being used by a growing number of colleges and universities. E-learning also helps to support skills and knowledge, as well as institutions and industry. In addition, interactive classrooms using live and video conferencing for certain topics are being put up. In this paper, secondary data was gathered from a variety of available sources, including a literature survey and referring e-libraries, among others. Review of the literature and other available information from various published and unpublished reports. India is the origin of e-learning. Indira Gandhi National Open University launched the e-Gyankosh project in 2006, which is a National Digital Repository of Learning Resources. Gyan Darshan is a 24-hour E-learning satellite channel launched by IGNOU, the world's largest Open University. E-Learning is big in India Ninety Six billion and the present user support will raise at Forty Four percent CAGR toward nine and six tenths million users by two thousand and twenty-first. In reality, India's e-learning promote business market is the second largest, which is foreseen to raise by fifteen and sixty-four hundredths percent and exceed dollar forty eight billion by Two Thousand Twenty. E-learning is additional than a technological breakthrough. It's part of a larger reassessment of how we teach future learners and students our knowledge understanding, skills, information, moral ethics, and values. This will speculate on how e-learning and the functions it supports may evolve in the future.

**Keywords:** Millennial, Technology, Online, Digital, Education

## I. INTRODUCTION

It nearly goes without saying that online learning and training has become a worldwide phenomenon. E-Learning, often known as online learning or electronic learning, is the process of acquiring knowledge via electronic technology and media. E-learning is defined as learning that is enabled electronically in simple terms. E-learning is normally performed through the internet, with students having access to their learning content at any time and from any place. The most prevalent types of e-learning include online courses, online degrees, and online programmes.

E-learning is the science of learning without the need of printed instructional materials on paper. The use of telecommunication technology to deliver information for education and training is known as e-learning.

E-learning is emerging as the paradigm of modern education as ICT development progresses. Through the asynchronous and synchronous learning network paradigm, E-learning liberates interactions between learners and educators from the constraints of time and geography.

This technique of teaching and learning is also referred to by a variety of different labels. Online learning, virtual learning, distributed learning, network-based learning, and web-based learning are some of them. E-learning encompasses all educational activities conducted online or offline by individuals or organizations.

## II. REVIEW OF LITERATURE

Faith Cagatay Baz (2018), according to the study was to provide information on the current state of e-learning. Although the concept of e-learning become rapid progress and also deal with artificial intelligence, big data, micro credential, virtual, empower reality, blended learning, cloud e-learning, internet of things, and online video. In addition, the innovations provided by learning to e-learning environments are explained.

Rakesh H. M. (2014) found that Information and Communication Technologies (ICTs) have enormous potential in education. However, the development, use, and management of e-learning take place in a specific context.

Kakoty Sangeeta (2014) according to that, in this fastest growing age of e-learning technology, learner needs, demands and preferences are increasing and changing day by day. Learner preferences have now become the most important factor in the development of the entire e-learning scenario. A learner-centric e-learning system that allows learners to make decisions during their learning time. It might be the only way to keep up with learner demand.

### III. OBJECTIVES OF STUDY

The objectives of the research are mentioned as under

1. To investigate the effects of e-learning on diverse stakeholders, internet based mode types and models.
2. To study about the e-Learning benefits of various stakeholders.
3. To study the future of e-learning technology for next generation in India.

### IV. ELECTRONIC LEARNING

In general, e-learning refers to the intended use of system information and communication skills in teaching and learning. Several other terms are useful in describing this mode of teaching and learning. Web-based technology learning and virtual learning are all forms of online learning. Essentially, they all refer to training or teaching processes that use information and communications tools to reconcile teaching activities. The organizations that have traditionally offered distance education programmes are also contributing to the increased awareness in e-learning. They see the convergence of online and traditional learning.

They see the incorporation of online learning into their curriculum as a logical extension of their educational activities. Organizations are interested in e-learning as a means of reducing the costs of in-house staff training. Residential campus-based educational institutions hope to educate students about niche market segments, thereby improving access to them. The growth of e-learning is directly related to the increasing accessibility of information and communication tools, as well as their decreasing cost. Technology is being used by an increasing number of instructors to support their teaching and learning modules. Students, known as the “Next Generation” or “Millennials,” anticipate using information and communication technology in their educational careers.

E-Learning is advancing to meet the training needs of corporations as the Internet’s growth brings online education to people in the workplace. As new e-learning trends are Artificial Intelligence (AI), big data, micro credentials, empowered reality, mobile learning blended learning; cloud e-learning, Internet of Things, and online video. E-Learning is frequently described as having the potential to overcome the location and time constraints of traditional face-to-face teaching methods, and many researchers have cited its usefulness in improving the learning environment.

#### A. Online Learning Education Apps

1. BYJUs
2. Unacademy
3. Vedantu
4. Toppr
5. Doubtnut
6. Khan Academy

#### B. E-Learning Models

E-learning model involves two types of learning styles.

##### 1. Synchronous Learning

Synchronous learning style creates a medium that brings facilitators and participants together in an active and live situation, allowing for extremely interactive communication and removing all barriers to communication and learning. The Internet-based synchronous shared tools create a communication environment that includes voice, multimedia, and interactivity. Using a computer with Web browser-based software, numerous people can communicate Synchronous cooperation across the internet at the same time.

##### 2. Asynchronous Learning

The conversation board is a web application that holds all of the discussions and user-generated content in the asynchronous learning style. Discussions are organized into threads, which contain the main posting and all associated responses. As replies to the initial question, each posting may contain multiple indented threads.

#### C. E-Learning Types: Internet Based Mode

1. *Online Learning:* The learner can access all study material online in the form of word documents, visuals, pictures, and videos with audio in this type of learning.

2. *Video Conferencing:* The learner can communicate face to face with the teacher or instructor who is sitting somewhere else in this type of learning. The instructor can communicate with multiple students via video conferencing. This technology is more expensive than other e-learning technologies.

3. *Webinars or Web Learning:* This type of learning is similar to an online seminar, it is known as a web-seminar/webinar. The instructor in this type of learning uses audio and video to instruct multiple learners online as a seminar. Participants can ask related queries or questions following the presentation. In general, this type of webinar is industry-focused and very beneficial because it saves participants’ time while also lowering the cost of travel and other expenses.

4. *Remote Access:* This method is extremely unusual. In this method, the instructor has access to the learner’s device and performs all activities on that device instead of the learner. For a better understanding of the learner, the instructor can guide them through various tasks on devices.

### V. E-LEARNING TECHNOLOGIES

The latest e-learning technology is undergoing a revolution right now. New devices, novel training tools, and cutting-

edge equipment have enabled us to build new E-Learning experiences that were previously merely a pipe dream. Let's take a look at some of these new technologies and how they're advancing E-Learning.

*A. Virtual Reality*

Virtual Reality (VR) is a computer technology that uses Virtual Reality headsets or multi-projected settings to create realistic sounds, sights, and other sensations that encourage a user's actual presence in an imaginary or virtual environment.

Virtual reality has a lot of potential, and it's projected to go beyond gaming into fields like training and education, as well as VR movies, sports, and music. A corporation requires a competent developer that can work with software like Unity 3D to get started with VR in eLearning. Furthermore, VR headsets are required for the learning populations, which can be prohibitively expensive.

*B. Augmented Reality*

Augmented reality is a technology that overlays a computer-generated image on top of a user's perspective of the real world to create a composite view. Real-world sensory inputs are such as video, images, or music.

*C. Artificial Intelligence*

Machine intelligence, as opposed to natural intelligence demonstrated by humans and animals, is referred to as artificial intelligence. Due of the numerous benefits it provides, it is transforming the entire e-Learning experience. AI can help students focus on areas where they are falling behind and highlight areas where they need to improve.

*D. Big Data*

According to Christopher Pappas, as mentioned in the article Big Data in e-Learning: The Future of the eLearning Industry, Big Data is the data generated by learners while they are completing a training module or an eLearning course. For example, if an employee interacts with training module based on company policies, "big data" refers to their progress, social sharing, assessment results, and other pertinent data collected throughout the eLearning course.

*E. Machine Learning*

Machine learning is a branch of computer science that allows computers to learn without having to be explicitly programmed. Machine Learning can provide a variety of benefits to online learners as well as corporations who invest in LMS platforms. For starters, Machine Learning can provide more customised E-Learning solutions based on a learner's previous performance and learning objectives. Second, it allows for efficient resource allocation since online learners are provided with the exact eLearning resources they need to address knowledge gaps and achieve their learning objectives.

*F. Wearable Devices*

Wearable devices, also known as wearables, are smart electronic devices that can be worn as accessories or implants on the body. Because they can deliver training experiences virtually anywhere, these wearable devices can serve as versatile corporate training tools. Wearable devices have the potential to take scenarios and simulations to the next level, making learning solutions more interesting and understandable.

TABLE I THE PEDAGOGICAL IMPLICATIONS OF E-LEARNING TECHNOLOGIES

<b>E-Learning Technologies</b>	<b>Pedagogical Implications</b>
CD/DVD	<ol style="list-style-type: none"> <li>1. Self-study simulation</li> <li>2. Used with the trainer's presence or remote assistance.</li> </ol>
Web-based technologies	Constant accessibility 24 hours a day, seven days a week, speed, direct communication, links to related topics, and current notes
Video conferencing	<ol style="list-style-type: none"> <li>1. New pedagogical methods are required to stimulate interaction.</li> <li>2. Small groups are required.</li> <li>3. Basic training is required for both trainers and learners.</li> </ol>
Platforms of e-learning	<ol style="list-style-type: none"> <li>1. The course develops adding and removing content as needed</li> <li>2. A template for incorporating course content.</li> <li>3. Support multimedia course content presentation while others are text-based.</li> <li>4. Complex content structuring that allows for multiple links and cross-references.</li> </ol>

Sources: Compiled by Secondary Data

**VI. E-LEARNING BENEFITS**

With the support of e-Learning, enterprises may improve the speed and efficacy of education in today's dynamic world, while mobile workers can receive training when and where it is convenient for them. While also reducing travel

costs and making education more accessible, particularly for busy, mobile workers. Progressive businesses are harnessing the power of e-learning and empowering their staff to self-learn, resulting in increased productivity. The following are some of the advantages of e-learning.

1. *Higher Retention and Faster Learning:* Individuals who take courses have considerably higher retention rates than those who take classroom courses, and they do so in less time. Smaller, more manageable chunks of content are supplied. Individuals can practice content they already know and study material they haven't seen before.
2. *Self-Paced Learning:* At their own pace, students can translate information into knowledge. They are in charge and can choose whether to hurry through or ignore duplicate training.
3. *Less Intimidating than Classroom Courses:* Client Services without worrying about what the rest of the class thinks. They can also do workouts in secret without worrying about failing.
4. *Just-In-Time Learning and Just-in-Case Learning:* Individuals can enroll in e-courses. They can learn about a topic whenever they want, not just when a teacher is available.
5. *Customizable Content:* Courses can be customized. Contents of the company's specific requirements. For better relevancy, provide information such as the organization's policies, procedures, and contact information. Add information to meet industry's special needs.
6. *Uniformity of Course Content:* When taking an e-course, all trainees see and hear the same content.
7. *Anywhere, Anytime Scheduling:* Individuals can take e-courses whenever and wherever they want, as long as they have access to an Internet-connected computer. Employees are not required to be absent for long periods of time.
8. *Reduced Note Taking:* Taking a lot of notes can get in the way of learning. Reference materials are uploaded on the extranet or intranet for online reading, printing, and downloading in an effective E-Learning application. The traditional reference handouts that learners inevitably lose or misplace are easier to refer to when the materials are available online.
9. *Easy Tracking:* Through e-learning systems, a firm can automatically measure its employees' progress. Learning Management Systems often keep track of when a student enrolled in a course, how much time they spent there, and how well they did on any tests.
10. *Significant Cost Savings:* E-learning programmes save training time while also eliminating the need for travel and its associated costs for both instructors and students.
11. *Progress Tracking:* Through e-learning systems, a firm can automatically measure its employees' progress. E-courses' learning management system keeps account of when a student enrolled in a course, how many hours and minutes he or she spent there, and how well he or she did on all tries at the course exam.
12. *Easy Updating:* The textbooks and instructions that students get in typical classroom training quickly

become outdated. Training and reference materials uploaded online in an E-Learning environment can be updated on a regular basis, swiftly and effectively, with no printing or distribution expenditures. Trainees can be alerted of revisions through email, eliminating any time lag or additional reprinting costs.

## VII. CONCLUSION

Online learning or e-learning benefits students, tutors, and the institutions that offer these courses. It makes use of modern technologies to allow students to study whenever and wherever they want. E-learning also aids in training, knowledge delivery, and motivating students to communicate with one another in a timely manner. It facilitates communication and strengthens the bonds that support learning. E-learning is a technological revolution. It is part of a rethinking of how we as a species pass on knowledge, skills, and values to future students. In India, e-learning has a bright future. Students, teachers, faculty, parents, and staff members in today's connected environment must be able to shift effortlessly from a computer browser to a mobile device for flexible, yet unified, experiences. The Indian populace are dispersed both geographically and economically, and the Indian education system has failed to provide educational infrastructure to all corners of the country. E-learning is a powerful instrument that policymakers can use to overcome this restriction. As a result, Indian educational planners should priorities Mobile MOOCs for effective e-learning adoption across the country.

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