

Journal

of the

Oriental Institute

M.S. University of Baroda

ISSN: 0030-5324

E-LEARNING–DEVELOPMENT CHALLENGES IN INDIA

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Abstract:

India is the land of Vedas. Our country is the land of knowledge, education, and learning. Our culture tells us to be a seeker and a learner throughout our life. Learning starts at home and then a person goes to school. In the early times, the student goes to Gurukul for his/her studies. As time evolves, the world evolves and comes to the concept of school. Today as a kid touches the age of 2.5 or 3 years, he/she is being sent to school for learning. There they interact with the teachers, their friends, and other students who are coming from different backgrounds. In this manner, they learn through books and interactions. As time evolves, here comes the concept of e-learning or blended learning. The concept of e-learning is used in schools also as a support system and is called blended learning. In this way of learning along with traditional teaching methods, online content or ready-to-use content is also used for teaching. Today many schools have installed screens in their classes for running online content or ready-to-use material. Many companies are developing content for the same. From the viewpoint of many people blended learning or incorporating e-learning along with traditional teaching methods works wonders. Many schools are adopting this method today. With the Digital India scheme of the government, e-learning is gaining popularity. But every new thing has to pass certain challenges. Does our country have sufficient infrastructure for successful e-learning implementation? There are challenges on part of schools, teachers, students, parents, and the government. There can be infrastructural issues, training issues, sustainability issues, and many more. The research tries to study the challenges faced in the implementation of e-learning systems.

Keywords:

Challenges, e-learning, education, implementation, infrastructure, network, learning, opportunities, pandemic, school, students, teachers

Literature review:

Education is pivotal for the evolution of any country. The growth of a country is seen as the success and advancement of its educational systems. If didactic development is outlined devotedly then lucrative results can be seized. In this research, the researcher intended to study the progression of E-learning at the school level in India.

India is an important educational center in the global education industry. India has more than 1.4 million schools and more than 35,000 higher education institutes. India has one of the largest higher education systems in the world and there is still a lot of potential for further development in the education system.

According to the latest report by IMARC Group, titled "India E-Learning Market: Industry Trends, Share, Size, Growth, Opportunity and Forecast 2022-2027," the India e-learning market is anticipated to exhibit a CAGR of 13.9% during 2022-2027. The demand for e-learning is gradually increasing across India due to easy access to multiple courses in a cost-efficient manner. Additionally, it is extensively used across the corporate sector for providing training to employees to enhance their skills and knowledge.

In the journal, International Journal on Computer Science and Engineering (Vol. 02, No. 02, 2010, Pg no.208-212) Lect. S.K. Nayak and Dr.Kalyankar N.V. revealed how Information Communication

Technology (ICT) can enhance the early childhood learning environment. They said that if ICT is used properly, it holds many inherent benefits for young children. ICT can:

Support children's cognitive and emotional development, and t

- Assist in the emergence of early literacy and mathematical thinking;
- “Level the playing field” for children with special learning needs;
- Enhance and strengthen relationships between children and adults. or give adults new ways to gain insight into children's thinking or their interests, thereby providing opportunities to better support and scaffold children's learning; and
- Facilitate the emergence of “new literacy's” or “multi-literacy” in children.

In the NCERT journal of Indian education, volume xxxxi, number 1, May 2015. Aerum Khan wrote in her article titled “Web 2.0 Tools in Teaching-Learning of Languages in an Inclusive Environment”, that Web 2.0 tools are web base utilities and technology tools provided by social media, which focus on the collaborative, user-driven content creation and applications leading to a more socially connected web. The idea behind creating web 2.0 tools was to get active contributions of people in creating content on the internet, rather than just accessing and consuming the content available on the web as passive users. Web 2.0 tools can be used by educators to involve the students and enhance their essential skills like creativity, communication, language comprehension, literacy of media, technological proficiency, awareness towards global initiatives, etc. A few examples of web 2.0 tools include wikis, blogs, vodcasts, podcasts, webinars, e-mail groups, social bookmarking, web forums, instant messaging, virtual learning environments, e-portfolio, web-based shared calendars, etc. In addition to these, there are specific web tools that are used for language learning like Lingua Subtitle, Babel, Lingro, Typeit, Grammar-multi, etc. Also, there are various audio editing tools freely available that can be used for creating content that can be accessed by the differently-abled audience.

Introduction:

E-learning is the use of technology, equipment, the internet, or other virtual mediums to impart knowledge. For e-learning to be successful, some equipment or machine is required at both ends.

E-learning expedites learning by thriving and integrating physical learning instead of just substituting it. A learning system based on the traditional teaching but with the aid of electronic resources is known as e-learning. E-Learning is attributed to dispensing education and training through some electronic medium or device.

As per Robert and Piper (2009), e-learning is “one that leverages various Internet and web technologies to create, enable, deliver, and/or facilitate lifelong learning”.

E-learning involves imparting education through computers and the internet instead of an accustomed classroom. E-Learning is learning by engaging technology to use educational content outside of the conventional classroom. It projects the process of classroom teaching and learning in electronic form. In a traditional study room, knowledge is imparted by a teacher who manages the content or the portion of the content to be taught and the assessment to be taken and delivers an approved curriculum to a group of students. But in e-learning-supported learning systems or blended learning classrooms, the best of both the teacher and the content is being used. The assignments and assessments are already designed and are used by the teacher.

The sudden outbreak of the COVID-19 pandemic has led to the rising adoption of e-learning solutions by various educational institutions and organizations to complete their curriculum during lockdown scenarios across the nation. An unforeseen shift in education happens with the announcement of the lockdown. Everyone associated with the education industry has to work on a different medium, they have to find out substitutes for executing things. Every organization, teacher, student, and even parent has to flip over to a different mode.

India is the country with the largest education system in the world with more than 1 million schools and 18,000 higher education systems. About half of the country's population falls in the secondary and primary education market and related services. The education sector bestows colossal opportunities for private concurrence.

Along with technology, one of the most important requirements of effective e-learning is proper infrastructure. For the transfer of knowledge in its best way, along with gadgets, one needs proper infrastructure. Infrastructure here includes a proper, uninterrupted internet connection, and a trained and skilled teacher. Along with this technological infrastructure, a socioeconomic infrastructure is a must. Socioeconomic infrastructure means parents, students, or a whole society. Are they ready for the new form of learning?

India and e-learning

India is a country with a large population following different cultures, and beliefs. Acceptance of e-learning by everyone is troublesome. There are people with different mindsets, customs, and backgrounds. Being a geographically diverse country, there are technological challenges too. In a vast country like ours, providing technology is a challenge in itself. Along with being geographically diverse, India is also a demographically diverse nation. Here, in one nation we have different languages, eating habits, cultures, rituals, educational values, etc. All this poses an effect on the learning patterns too.

Various important advancements and developments in education have taken place since the launch of the internet. These days students or learners are well versed in the use of smartphones, text messaging, and using the internet, therefore to be participating in and executing an online course has become a common and simple affair. Message boards, social media, and various other means of online communication allow learners to keep the information handy and discuss course-related matters, at the same time providing a sense of commonality.

The schools are using the traditional face-to-face way of teaching till now. For a few years, many schools have started using blended learning. Blended learning means along with the traditional method of teaching they are using smart boards in the classes and using other kinds of e-learning tools for imparting education. But most schools are following the traditional way of teaching and imparting education. But due to this pandemic, they have to shift forcibly to online education.

India is still an untapped market in e-learning. One of the reasons behind this is India is geographically and demographically very vast. The economic and social factors are also putting an impact on learning patterns. But with time the scenario has been changed. Today the Indian online education market is highly impaired with around 3,500 educational technology start-ups operating in the country. Many foreign players are finding a place in the Indian online education industry. BYJU's, Udemy, DoubtNut, UpGrad, Toppr, Vedantu, etc. are a few prominent players in the industry, furnishing to the requirements of different target audiences.

Online education or e-learning has gone a long way in India. It is not only restricted to secondary, post-secondary and tertiary education. It offers courses and modules for competitive exam preparation, professional skill enrichment, and other non-academic subjects.

Challenges in India

As discussed, in India there are various challenges in the successful implementation of e-learning. Here the article tries to cover some major issues that need to be addressed for the successful exertion of e-learning. The issues are:

1. Demographic challenges-

- High population: Being the 2nd largest populated country in the world, it is difficult to provide all the facilities to every person in the nation. The population is diversely located in such a huge country. There are still certain places in our country that are inaccessible to normal people. Therefore it becomes quite difficult to provide technology to those areas.
- Sex ratio: In different states, India has different sex ratios. Earlier the sex ratio in India was quite poor, which means there are around 940 girls per 1000 boys. But now it has been continually improving. This ratio directly affects the education pattern. It has been observed, that till K-12 education girls have a leap over boys. This directly has an impact on the usage of technology in education and also the availability of technology.
- Income: The income of the people of a country plays a vital role in determining the education criteria and level. Quality education is highly charged. Technology-dependent education is quite

expensive and it requires certain basics to be fulfilled. For example, one needs a proper internet connection along with a suitable device for having an access to technology-driven education.

- **Marriage system:** in today's age also there are certain communities and areas in the country where marriage is everything. Getting married at a certain age is preferred over getting an education. This kind of thought process and cultural preferences also act as a barrier to the development of e-learning systems in our country.

2. **Geographical challenges-**

- **Location:** India is a country with diverse landscapes. In India, there are plains, plateaus, coastal areas, mountains, and deserts. The requirements of every location from each other. The population distribution, of each location, is different. The awareness towards education and also the willingness for it varies from location to location. Thus, location plays a vital role in e-learning facilities.
- **Region:** India is a divergent nation with different regions. Every region has its requirements. Some are deep forests, some are far away from the mainland, and some have lakes and rivers. The needs of every area are different from the others. Therefore it becomes difficult to provide internet services and e-learning facilities.
- **Movement:** The facility of movement of people from one place to another also affects the education preferences of the people. Sometimes the schools are far away from the residence of the student and there are no appropriate means for movement. In such remote areas providing internet services is quite challenging.

3. **Psychological challenges-** The thought process of a person is different from another. Many times one's thinking or psychology differs regarding e-learning. Some people feel that without a physical teacher by their side a student will not be able to learn and understand. According to them, e-learning is a waste of time as a student is only wasting their time on electronic media.

4. **Health challenges-** Health is a major issue for children. Spending too much time on electronic media poses health challenges for them. Among them, the first and foremost is regarding eyes. Spending long hours on screen develops issues related to the eyes. It may cause weak eyesight, irritation in the eyes, redness in the eyes, and many more. Other than eyes, lack of physical activity is another issue. As the kids are spending a lot of time sitting in front of a screen their physical activity has reduced considerably.

5. **Infrastructural challenges-** The availability of proper infrastructure is a big issue. The above-discussed issues and infrastructure facilities are interrelated. Due to geographical obstacles developing infrastructure is arduous. For proper e-learning systems, a competent infrastructure is a first and foremost requirement. It includes proper schools, internet facilities, types of equipment required for e-learning, etc.

6. **Curriculum-** The curriculum for e-learning or blended learning must be carefully designed in a way to keep everyone involved. The curriculum must be interactive and interesting and should be developed according to the course followed by the school. The length of the content must be watched so that the students do not lose interest in it.

7. **The Facilitator or service provider-** The facilitator plays a vital role in e-learning systems as they are the ones who develop the content. They should keep the content short and crisp. It should be in association with the syllabus followed in the school. The course or content must be well-planned and organized.

8. **Challenges regarding trained teachers-**E-learning technology needs proper training to reap its benefits. A trained teacher is a must for utilizing the e-learning capacities. In India, there is a severe shortage of trained and skilled teachers. A teacher can be well-educated but to avail all the benefits of e-learning training in that direction is a must.

9. **Lack of Motivation-** For learning one requires an attitude and motivation to learn. In India, despite all the facilities, there is a lack of motivation among both students and teachers. Even when the government is putting so many efforts for providing quality education for free, the public is not ready to avail.

Overcoming the challenges: With every problem comes a solution. Similarly, for every challenge,

there is an answer. But certain situations are under our control and some are not. For example, one cannot change the geographical situation of the country, one cannot change the mindset of a person. But many of the other challenges can be tackled. To overcome these challenges many steps have been taken up by the government, schools, teachers, parents, etc.

1. **Trained teachers**-The arrangements are being made to provide proper training to the teachers. Various online and offline training is being arranged for the teachers regarding the use of e-learning systems. They are trained regarding the use of study material available online or with any service provider. They are upgraded from time to time for the same.
2. **Content or curriculum**- The content developers try to develop the content in a way to keep the students engaged. The curriculum must be attractive and interesting. The duration of the content should not be too long otherwise the students will lose interest. Proper assignments should be there to ascertain the performance of students. The content must provide reinforcement and feedback to the users.
3. **Parent's counseling**- Counselling of parents is done for explaining the benefits of e-learning systems. Awareness is being spread about the benefits and advantages of e-learning. Parents must be explained about the long-term retention of videos in a child's mind.
4. **Infrastructure development**- Today most schools are equipped with computers and the internet, which is the main essential for e-learning facilities. The schools are developing state of art computer labs and other labs. The schools are offering blended learning systems for pre-primary to primary classes and audio-video-enabled apps for senior classes. Government schools are also developing such facilities. The government is working towards developing roads for remote areas which will facilitate kids to join far-away schools.
5. **Promotion of blended learning**-Concrete steps shall be taken up to promote blended learning or e-learning among both students and parents. Promotion techniques like television advertisements, promotion on social media platforms, awareness through teachers and schools, etc. can be used to make blended learning popular among the public.
6. **Cost-effective**- The schools should not charge an extra fee for online or e-learning classes. The facility for using e-learning resources should be provided for the tuition fee only. Along with it service providers or content providers shall not charge heavy amounts from the schools.

Conclusion

E-learning, blended learning, and online learning are big in India. In fact, India's e-learning market is the second largest after the US. According to the current report, the Indian e-learning market size was USD 247 million, containing 1.6 million learners in 2016. It almost had an 8X growth during 2020 and the recent user base had almost increased to 44 percent CAGR to 9.6 million learners by 2021.

With the increasing adoption of the Internet and the rise in awareness about e-learning, the online education industry is expected to witness promising growth during the forecast period.

Today the online education or e-learning market is not restricted to schools only but it also includes test preparation, reskilling and certification, higher education language, and casual learning. The online primary and secondary supplemental education segment was valued at INR 11.99 Bn in 2018 and is expected to reach INR 123.65 Bn by 2024, expanding at a CAGR of ~46.48% during the 2019-2024 period. The change in consumer behavior toward detailed learning and the surge in demand from tier II and tier III cities are driving the growth of this segment. Ease of learning, flexibility, and a wide range of study materials have influenced the overall growth of the industry. The online test preparation market is expected to reach INR 94.75 Bn by 2024, expanding at a CAGR of ~50.84% during the 2019-2024 period. This segment is expected to be the fastest-growing segment in the online education market, owing to growth in the career-focused population, enhanced Internet infrastructure, and increased penetration of digital payment methods.

The online reskilling and certification market is expected to reach INR 93.81 Bn by 2024, expanding at a CAGR of ~36.95% during the 2019-2024 period. The growing business landscape has inflated the skill gap among employees, which is why the demand for reskilling courses is getting popularity. The online higher education market was valued at INR 5.01 Bn in 2018 and is expected to reach INR 40.63 Bn by 2024, expanding at a CAGR of ~40.74% during the 2019-2024 period.

The traditional education system is insufficient for the growing population, and therefore students are swapping to online higher education courses. (source: <https://www.prnewswire.com/news-releases/indian-online-education-market-outlook-to-2024-online-primary--secondary-supplemental-education-test-preparation-reskilling--certification-higher-education-and-language--casual-learning-301041959.html>)

In the end, it can be concluded that India is spreading its feathers now. During the research, the researcher found that the number of internet connections and mobile users has increased in India in the past two years, which is a positive sign for the growth of the e-learning market in India. The cost of online learning sources has come down significantly. In comparison to regular courses, the expenditure on e-learning resources is quite low. The ruling government has announced considerable policies under the initiatives such as 'Digital India' and 'Skill India' to promote digital literacy, develop a knowledge-based society in India, and apply three principles 'access, equity, and quality' of the Education Policy. Some digital-friendly government portals are-

- e-Basta
- e-Education
- [Nand Ghars](#)
- [SWAYAM](#)
- India Skills Online

In order to form digital infrastructure, the government has also launched National Optical Fibre Network (NOFN) which focuses to expand broadband connectivity and faster network.

Despite various works done in the field of e-learning in India, the market is not fully utilized. E-learning has started getting popularity in India. Today mostly everyone knows about smart boards, online materials available, online worksheets, etc. Online education in India has witnessed an enhanced acceptance over a few years. It is becoming an elemental part of schools, colleges, and even offices across India. One of the advantages of online education is that this kind of education model is easily expandable.

The Indian market is full of embryonic possibilities. This is good both for the learning of the education sector and the job sector. With new entries in the market, new job opportunities are always created. In all, it is beneficial for the overall growth of our country. While fighting with all the listed and unlisted challenges, India is offering a great market for e-learning and with time India will be the largest player and market in the world.

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