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E-Learning: Issues and Challenges in the Indian Context

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Abstract

The existing development of technology and people's need for flexible learning models have made e-learning a relevant educational model today. E-learning platforms have become the norm in most educational institutions worldwide in the recent past because of Covid-19. Whereas in India, this potential of e-learning for providing education to many people is quite apparent, there are many barriers too. These barriers include technological inefficiencies, infrastructure deficits societal and economic inequalities, and pedagogical and learner participation. This paper seeks to examine the key issues and challenges in e-learning about India, stating the possibilities and hindrances of effective e-learning regimes. In addition, the paper offers some possible solutions to these problems to enhance the effectiveness of e-learning interventions in India.

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INTRODUCTION

There are various sectors which have completely changed over the years, and one of them is the education sector. The reach of e-learning, which is the distance education using electronic means, has increased exponentially most recently. E-learning is an appealing proposition due to its various benefits especially in countries like India which has a vast population and where quality education has a limited scope in many areas within the regions.

Moreover, the adoption of e-learning systems was also notable during the global COVID-19 outbreak when schools and universities were closed. On the other hand, there are limits to this e-migration, particularly in developing countries like India where the education system is undergoing an online revolution. There is also an increasing divide in the Indian context, because the education system which has a lot of diversity in the availability of resources, infrastructure and socio-economic class, it has its own limitations in completely adopting e-learning.

In this research, the authors have analysed the basic problems and obstacles faced in implementation of e-learning in India such as technology, pedagogy, infrastructure and socio-cultural factors. The aim of this study is to recommend ways in which these obstacles can be addressed for better implementation of e-learning in the educational systems within India and countries with similar cultures.

This paper, therefore, intends to explore and discuss the key issues and challenges in e-learning inclusive of the Indian context. In addition to this, Technological and infrastructural factors, socio-economic aspects, and pedagogical practices that limit the success of e-learning implementation are also discussed. The study also explores the facets of this problem so that such strategies as digital education will be of utmost benefit in India without compromising on equity of all socio-economic classes of citizens, to school access.

Technological and infrastructural barriers

The overwhelming majority of learning resources, including textbooks, are only available online and often require facing it for prolonged periods.

- **Mobile and Desktop Usage of Learners**

  While e-learning, it is a common knowledge that since the introduction of mobile phones and other handheld devices into the learning systems, the time that an e-learner is successfully using the integrated mobile and web communication applications in mobile-based learning. The Smartphones that provide easy accessibility to the mobile network are also built with various other functions that allow the user to connect to the internet and surf different websites.

  This revolution has, however, been accompanied by several challenges, as the students have also turned to the mobile phones provided for their use as an aid to their studies in a manner that results in diversion from the original aim of learning. Such challenges may be in the form of 'difficult to access course materials and often savage distractions in social media and other fun based interactive sites that end up being a big vice and medicine for the students when studying. The exploitation of computers and learning resources in most institutions of higher learning is guided by the availability of the course contents in the websites. Thus, students will rely on 'in house materials' which will consist of a lot of printouts which will make the process of studying cumbersome and arduous.

Besides, countries in the world today have various cities with populations that depend heavily on the internet services. The use of the internet to learn very detailed disciplines such as e employing the use of live video sessions proves to be a challenge due to these reasons and causes despair among the learners and the tutors as well. Research showed that 42% of Indian students encountered problems with internet connectivity which affected their online classes during the pandemic.

- **Lack of Access to Digital Devices**

  Among the different moratoriums, technological integration in education, limited access to digital devices, which include laptops, tablets, and smart phones, is a common one. Several students come from financially challenged families and therefore cannot afford personal devices that are necessary for e-learning. Even though smartphones have been the most produced and sold devices, most of them are not smart enough to assist in meaningful learning, especially reading a lot of materials, writing long essays or researching. Again, most families with many children own only one device which makes it difficult for all of them to engage in focused learning at the same time.

  The lack of sufficient digital devices is one of many technologies which make e-learning in India a challenge. E-learning sites are typically desktop or laptop oriented yet the most of the Indian population especially the ones who are socially and economically backward use mobile devices for education. Even though mobile phones make online learning convenient in some way, most of them are not fit for activities such as typing, multi-window use, and interacting with a lot of in-depth materials. The constringency imposed by the limited use of these devices due to small screens also create problems for students who wish to be active participants in educational processes, mainly in the upper courts.

  In addition to these, in a large number of Indian households, device sharing is a common practice and it is indefeasible that siblings and other such members of the family may have to share a single device to appear in online classes. The problem of sharing devices has become more serious especially where there has been home learning for prolonged periods as a result of forced school closures and has to do with the problem of access to resources.

- **Inadequate Power Supply**
  Formal training on the effective use of technology in teaching. Some of them find themselves being forced to employ the new technology without proper orientation which obstructs their ability to effectively teach their students.
  Teachers teaching children in rural schools also have to adjust their teaching styles since most of their teaching is done online. In addition, due to the unavailability of relevant guidelines or even training, a large number of teachers, especially those within the rural or under-resourced schools are faced with the problem of little to no formal orientation on functional integration of teaching and training with technology.
  Most parts of the country, therefore, have an ordinary performance of education via the internet system due to the unavailability of good internet connection and electricity supply. Such infrastructural inadequacy not only limits the possibilities of learning but also the extent of learning availed to the learners: some teachers themselves are subjected with these limitations in terms of content delivery via Internet.

Socio-Economic and Cultural Challenges

India is also facing several obstacles that are social, economic as well as cultural that hamper the successful practice of e-learning. The Educational system of India incorporates academics as well as society which impacts students and how they perform in schools as even the classroom layout is a contributing factor to a child's growth. Online classes were introduced and adopted amidst the pandemic; however, the shift has revealed the gap in the socio-economic strata in the country.

- **The Digital Divide**
  The digital divide is one of the most critical issues in the context of e-learning in India. Urban students with better technological accessibility are able to adjust better to e-learning and its approaches but such is not the case for rural and low socio-economic classes. The concept of a digital divide does not only show how many people have access to technology but it also shows how deep the inequalities in the country are.
- **Gender Disparities**
  Gender inequalities are a key factor affecting the demand for education and technologies in several mother-tongue speaking deep rural areas of India. Usually, the male students are considered enough privileged when it comes to utilizing family-based digital gadgets for example; smartphones or a computer, on the other hand, cultural factors in some regions may prevent girls from using technology and this creates this educational dissension further on.

Pedagogical Challenges

E-learning requires a sophisticated approach to teaching which is not the case in traditional education. Arguably, the process of teaching children using the internet is very much determined by the content and the technological process that is brought on board to assist that process. However, Indian context of e-learning has various pedagogical shortfalls.

- **Teacher Preparedness**
  The primary issue in this regard remains the untrained teachers and their inability to hold online classes. A largest section of teachers across India, especially those in the villages, are largely unexposed to e-learning methodology and therefore lack the skills to work with these. This unpreparedness cuts across all aspects of the course structure as most online classes become dry and fail to motivate or promote any serious learning from the students.
- **Student Engagement and Motivation**
  Another major challenge would be ensuring students take part in the activity when it is delivered in a virtual mode. Teachers may tame and involve students in a face-to-face interaction even in the classroom but e-learning modes, in most cases, entail reclining and reading. Quite a large number of students going through the lessons, even very instructional ones, bother to explain that they have very little to no connection with their co-learners or with a lecturer, which discourages them from participating in those lessons. This is especially true owing to the incomprehensive interactions in real physical classrooms, plus the fact that the learners are usually at home, where there are many inducements of distraction.
- **Content Appropriateness**
  Another issue worthy of bearing a mention is that of the content that is contextually appropriate. The content of the majority of e-learning and education delivery systems developed and deployed is usually devoid of the channel context.

Assessment and Evaluation Challenges

Ways of evaluation such as exams and quizzes, which are mostly completed in supervised conditions, cannot be relied on sufficiently for e-learning. It is common understanding that there is still a high degree of academic dishonesty when there is little or no supervision. Furthermore, numerous e-learning sites have insufficient features for gauging the level of students' engagement apart from the use of multiple-choice questions (MCQs).

- **Impediments to Technology**
  The course of evaluation of e-learners course presents special emphasis on another aspect, which is the technological infrastructure for effective and efficient evaluation. In India, especially among the women and rural students, it is a common practice to experience erratic access to the internet and also ownership of devices is

grossly limited. With regards to such assessment, submission of assignments and projects, such assessments are more practical, however, they lack the immediacy that verged assessments such midterm or final examinations offer. Moreover, the implementation of online assessments tends to be problematic because the appropriate technology has to be used, resulting in more technical problems instead, like hp not responding, low bandwidth and high latency which may lead to the submission of wrong papers or no submission at all.

In addition, e-learning systems may not provide for the flexibility required by various categories of learners. The absence of certain accessibility features on the learning platforms, such as screen readers and text readers for the students with disabilities, make these students almost impossible to take those assessments. This trammels justice and equity during online assessment processes.

- **Academic Integrity and Cheating**
  In the backdrop of online assessments, students' cheating is an issue of huge concern. In physical classrooms, student exam invigilation was enough to deter students from exam cheating. However, in an online examination it is difficult to observe students in all aspects whether it be cheating or any other academic activities.
- **Limited Formative Feedback**
  Another issue related to the e-learning system is the absence of formative feedback that is both timely and contingent. In a physical classroom, for instance, teachers are able to offer cues and guidance in real time whenever participants engage in discussions, do oral quizzes, or complete short in-class exercises, enhancing active learning. In contrast, most e-learning systems engage students and their teachers asynchronously, resulting in feedback lag. Many of such systems also have all-inclusive study features that include assessments in forms of quizzes and standard tests. Although they are efficient, they do not give the qualitative feedback that is required for proper growth.

Given also that in India, for example, public universities are usually faced with the challenge of large student-teacher proportions which makes individual assessments in the online mode difficult. After all, any teacher may be simply overwhelmed by the need to grade the multitude of online assignments and feed back to each learner.

- **Difficulty in Soft Skills and Practical Knowledge Evaluation**
  E-learning systems evaluate theoretical concepts rather efficiently as compared to interpersonal skills, that is, group communication, group work and critical analysis. In conventional formats, it's the educators who carry into effect such tools as group discussion, laboratory or fieldwork or projects in order to gauge such abilities. Yet, it is hard to reproduce such scenarios over the internet. Under example, training modules for engineering, medical and natural sciences contain elements which need physical interaction with tangible psycho-physical instruments/materials which are hard to achieve in cyberspace.

Although various technologies offer created courses or otherwise known virtual laboratories, most of them will be too expensive for use in the environment.

Strategies for Overcoming E-Learning Challenges

To address the issues outlined above, several strategies can be adopted to enhance the effectiveness of e-learning in India.

- **Improving the Digital Infrastructure**
  It is both essential and advantageous that the government and private bodies invest in the development of digital landscapes, more particularly in the rural areas. One making the internet accessible to all, including those who cannot afford internet-ready devices appropriate for educational purposes, would greatly help address the digital divide. Capital projects may be partnered by government to private agencies expanding of the internet coverage and other digital services in specific geographies.
- **Teacher's Training and Support**
  There is a need to train teachers substantially so as to equip them with the necessary digital skills for teaching students over the Internet. These teachers need to evaluate own competencies in the area of interference as it relates to the users of information and communication technologies. The issue of preparing pedagogues for teaching through digital channels is another side of the coin, which is worth attention. The success of e-learning presupposes not only the technical competence of the teachers but their ability to breathe life into the material – keep the focus and interaction going all through the learning process. This, however, is the precise reason why most teachers in India are at a loss because most of them have never been given proper courses on digital teaching and in most cases have never been taught at all. Cuts across boundaries National Education Policy intends and promotes continuous formal education for teachers in and outside of e-learning environments and application of most education technology tools to teaching and learning processes (MHRD, 2020) but still the level of achievement is quite low.

Strategies for E-Learning Promotion and Inclusiveness in its Execution

It is the task of the policy experts to absorb the e-learning learning systems e.g. educational Andro aspiring educational system management, economist and technology more so incorporating the philosophy of e-learning in all levels of education in such a way that it translates into realisation in practice.

Available evidence indicates that inspirational teaching and learning activities are insufficient to stimulate students' engagement.

Hybrid Assessment Models

To counter technological and inclusivity challenges, hybrid assessment approaches that blend both the online and face-to-face techniques are recommended. For example, a candidate may be required to sit for written examinations in designated centres while completing assignments and taking quizzes online. In this manner, the inconveniences incurred due to poor internet access and unapproachability of devices is dealt with while still upholding the advantages of the online assessments.

Enhanced Remote Proctoring and Integrity Solutions

The use of sophisticated remote proctoring processes with the capability of AI monitoring can drive a greater level of control over cheating in online examinations. These systems are capable of monitoring the direction of an examinee's gaze, observing if the candidate is acting in a way that is outside the normal behaviour and even reporting possible cheating or suspicion of foul play. In addition, enhancement of existing plagiarism detectors should be extended even further to include assessing programming tasks, graphical designs, and even other forms of submissions not based on written text.

Interactive and Adaptive Assessment Platforms

It is possible that such interactive assessment platforms competent of providing assessment and feedback simultaneously and having ability to provide application of learning in a recommended manner may assist in closing the gap in formative feedback. Even more, effectively, such platforms engender the use of the already mentioned adaptive assessments that seek to change the level and nature of the questions asked to a student in relation to their previous successes and failures.

Virtual Simulations for Practical Skills

For example, in courses where an evaluation of practical skills is necessary, such hands-on experiences can be simulated with the use of virtual simulations or augmented reality (AR) software. Even though the expenditure for creating such systems is always on the higher end, investments from the educational institutions, EdTech corporations and the government, collaboration will ease the financial constraints and help avail these resources to students.

CONCLUSION

The potential impact that e-learning can offer in transforming the educational framework in India is enormous since it provides easier and more adaptable ways to learn. However, the question of whether e-learning will be successful in India is closely tied with various issues including technology adoption, socio-economic status, pedagogy and evaluation. E-learning can be put to proper use in India and made advantageous to students above all social classes by constructing digital frameworks, reskilling teachers and devising enabling strategies.

REFERENCES

1. Kundu A, Bej T. COVID-19 response: An analysis of teachers' perception on pedagogical successes and challenges of digital teaching practice during new normal. Education and Information Technologies. 2021;26:6879. https://doi.org/10.1007/s10639-021-10503-5
2. Sharma A, Banerjee A. Socio-economic determinants of digital divide in India. Demography India. 2022;51(1):78-92. ISSN 0970-454X.
3. Goswami MP, Thanvi J, Padhi SR. Impact of online learning in India: A survey of university students during the COVID-19 crisis. Asian Journal for Public Opinion Research. 2021;9(4):331-351. https://doi.org/10.15206/ajpor.2021.9.4.331
4. Internet and Mobile Association of India (IAMAI). Digital in India: A decade of growth. 2021.
5. Starkey L. A review of research exploring teacher preparation for the digital age. Cambridge Journal of Education. 2020;50(1):37-56. https://doi.org/10.1080/0305764X.2019.1625867
6. Allam M. Online teaching-learning: An analysis of preparedness of Indian education in the context of digital infrastructure. Science, Technology and Development. 2020;9(10). ISSN 0950-0707.
7. Hussain N, Phulpoto S. Digital literacy: Empowering individuals in the digital age. Assyfa Learning Journal. 2024;2(2). https://doi.org/10.61650/alj.v2i2.231
8. Gothwal P, Sharma BD, Chaube N, Luqman N. Impact of COVID-19: A particular focus on Indian education system. Cyber-Physical Systems. 2022:207-218. https://doi.org/10.1016/B978-0-12-824557-6.00002-9
9. Bali S, Liu MC. Students' perceptions toward online learning and face-to-face learning courses. Journal of Physics: Conference Series. 2018;1108:012094. https://doi.org/10.1088/1742-6596/1108/1/012094
10. Naskar S, Das P. Trends and issues of e-learning in higher education: A study on Indian perspectives. International Journal of Research and Analytical Reviews. 2017;Special Issue I (September). http://ijrar.com/

11. Sahni S, Verma S, Kaurav RPS. Understanding digital transformation challenges for online learning and teaching in higher education institutions: A review and research framework.
Benchmarking: An International Journal. 2024. https://doi.org/10.1108/BIJ-04-2022-0245
12. Telecom Regulatory Authority of India (TRAI). Annual report on internet access in India. 2021.

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