OPPORTUNITIES AND CHALLENGES WITH ONLINE LEARNING EDUCATION SYSTEM

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Abstract
Online learning is an educational medium that allows students to participate in courses via the internet. They don't need to visit classrooms and can choose to learn the latest available education contents from the comfort place of choice. The present article is based on secondary sources such as research journals, publications and web resources. This study reviews literature and analyzes the opportunities and challenges of e-learning. Attempts have been made in this article to describe the significance and challenges of e-learning and various educational policy initiatives and reforms in Education.
Keywords: Online Learning, Digital Learning, MOOCs, Blended Learning.

Introduction
In the Higher Education Institutions, the issue of utilizing modern information and communication technologies for teaching and learning is very important. Online or digital learning offers the biggest advantage of all time learning of learners' location.

Online Learning or E-Learning
Online learning or e-learning means learning that is enabled electronically or it is a method of learning which involves technology and digital devices. This is a new and broad technical scope which shall help any student attain knowledge and gain information from any corner across the country. So, we can say that Digital Education in India is the future of education and learning. It results in availability of learning opportunity to every learner without any discrimination and every community can march ahead for knowledge driven growth. Also, the different learners with different learning capability can access the learning resources as per their capability and limitations.

Online learning is necessary for this 21st century learners, without online teaching is unbelievable success in this recent education sector. Internet and education are inseparable terms. Teaching can become more successful and students can be benefitted in all fields only through internet knowledge. [12]

The Ministry of Education (previously it was known as the Ministry of Human Resource Development) has launched numerous e-learning projects and initiatives that serve as valuable resources for both students and educators.

Online and Digital Education: Way Forward for Accessibility and Affordability
- Suitable teachers' training to prepare teachers as effective online educators
- Pedagogical transformation for online or digital education
- Online assessment and examinations in versatile approach
- Blended approach with online and experiential learning

- Platforms for creating virtual labs
- Multilingual educational content availability
- Optimize and expand existing digital platforms and ICT based initiatives
- E-Content creation digital repository and tools
- To provide assistive tools for monitoring progress of diverse group of learners
- To provide two way audio and video interface for holding online classes
- Pilot studies on online education
- Blended models of learning
- Availability of affordable computing devices to enhance digital divide
- To invest on creation of digital infrastructure such as SWAYAM, MOOCs

Accessibility of Online or Digital Education

A. Direct to Device

Digitalization in India led to the development of technologies such as 'Direct to Device' which are empowering students to study through any device at any time.

B. E-Contents

Generally, online training platforms deliver e-contents which feature a combination of text, demonstrative videos, and presentations. Students who enroll in these trainings have their own dashboard which allows them to access the training content and monitor their own progress whenever they want. Students have continuous access to the latest textbooks, videos, etc. from around the world.

C. Query/Doubt Solving Box

All the doubts are cleared through a query/doubt solving box, avoiding students' dependence on teachers. Its accessibility has helped education reach even in the remote corners of the country, where teachers hesitate to enter because of less remuneration.

D. Flexible Curriculum and Learning Durations due to Working Professionals

Not only students but even working professionals are benefiting from online training as they can upgrade skills and explore new skills along with their existing job and other responsibilities.

E. Data Repository for Future References

Online lectures can be recorded, archived, and shared for future reference. This allows students to access the learning material at a time of their comfort. Thus, online learning offers students the accessibility of time and place in education.

Affordability of Online or Digital Education

A. Socio-Economical

Digital learning is quite affordable as the major cost is usually incurred in the initial phase of setting up a digital learning platform and populating it with learning resources while the recurring cost of providing access, its maintenance and upgradation are not that large with the prevalent technological solutions. This less price for a good quality learning resource with a lot of ease makes digital learning very socio-economical.

B. Societal Compensation Cost

Online education is far more affordable as compared to physical learning. This is because online learning eliminates the cost points of students such as transportation cost, cost of textbooks or study material, etc.

C. Creating a Paperless Learning Environment

All the courses or study materials are available online, thus creating a paperless learning environment which is more affordable, while also being beneficial to the environment.

D. Simplified

Containing various modules and interactive forms of audio-visual teaching, online training has simplified the overall learning journey.

E. Barrier Free the Students to Learn

While being affordable and accessible, e-learning allows students to save more hours, instills a feeling of self-belief, and encourages them to learn with the purpose of acquiring job-specific skills.

Significance of E-Learning

E-Learning plays a significant role in the modern education sector. The significance of E-Learning as:

- **Combination of Contents and Instructional Methods**

E-learning is a combination of contents and instructional methods delivered by media elements such as words or graphics on a computer intended to build knowledge and skills linked to individual learning goals and organizational performance. Technology has the ability to transform education.

- **Time Management and Flexibility**

E-learning also gives options to students to learn the latest available education contents that they want from the comfort of their place of choice. Students can attend virtual classes anywhere and anytime. It offers flexibility to students so that they manage easily even on a busy schedule.

- **Collaborative Learning and Accessible**

E-learning also contributes to collaborative learning. It makes learning accessible easily.

- **Audio Recordings**

E-learning is a method that helps listen to audio recordings of your course while doing travel, workout etc.

- **Courses on Every Subject**

In the platform of E-learning people offer courses on every subject so students can learn about anything based on their interests.

- **Mode of Interaction**

In the platform of E-learning, there is interaction between students and teachers through video recordings, chats, e-mails, webinars, etc. Teachers deliver lectures by using teaching tools such as videos, presentations, etc.

- **Distance and Travel Cost**

By E-learning, it is easy to learn anywhere, like from around the world and it reduces the travel cost.

- **Makes the Classroom more Interesting**

E-learning makes the classroom more interesting by using various teaching styles so that students pay more attention in learning.

Challenges of E-Learning

E-Learning recently attracts more users' day by day. Along with the significance of E-Learning, users face many issues. The challenges of E-Learning are as:

- **Internet Connectivity**

  Many users face technical problems by using E-learning platforms like lack of availability of internet, lack of alignment between technology, curriculum and instruction, lack of clarity about audio-video lectures, etc.

- **Bandwidth Computer System**

  Many users face the problem of affordability of e-learning due to the bandwidth computer system. Because data can be uploaded or downloaded on the computer by the internet.

- **Time Management**

  During E-Learning extra care must be taken by students to schedule and attend lectures on a regular basis because it indicates that bad time management could lead to failure.

- **Lack to motivate due to online attraction**

  By E-Learning, the interaction between students and teachers falls on the subject matters.

- **Screen Stress**

  Due to long hours spent during online classes, leaving before the computer screen will affect the eyes of learners. So, parents of some students feel that their children spent so many hours watching the screen. So, it develops bad posture, will affect the eyes and lead to other health issues.

- **Medium of Instruction Flexible**

  Many students feel difficulties to understand concepts during online classes because the medium of instruction of online courses like MOOCs are uni-level.

- **Technological Readiness**

  Most of the teachers are educated from backward areas, so they are not savvy enough to operate systems such as platforms for their learning.

Educational Policy Initiatives and Reforms in Education

In today's digital era, every institute is willing to take various initiatives in promoting digital education and many initiatives have been already taken.

Although the Government of India had already taken multiple initiatives for digitalization of education since 2016, it has accelerated its pace of taking and implementing new ICT initiatives for integration of technology in education, such as online educational portals, content in digital form for different levels of education, virtual classrooms, online admission and examinations as well as digitalization of administration and management activities. In 2016, it launched 28 new initiatives and programmes at different levels of education, but due to lack of awareness and encouragement, these initiatives were not reaching their end-users. But because of this pandemic of Covid-19, both teachers and students are forced to learn and explore these new digital ways of learning and with the passing of time; they are becoming more sincere, confident and techno-savvy with the use of these ICT initiatives and programs. [3]

The main concern of Ministry of Education to fulfill the cardinal principles of education i.e., access and equity and as today's world is world of technology so to fulfill these purposes the use of technology becomes compulsory due to these factors:

- Affordable
- Uses Internet
- Employability
- High Quality
- To cover up gender bias and rural-urban issues
- Skilling the unskilled - The Skill India Mission

Some of the educational policy initiatives and reforms in education undertaken in the last decade are as:

A.   SWAYAM

SWAYAM (Study Webs of Active Learning for Young Aspiring Minds) is an Indian Massive Open Online Platform (MOOC) initiated by the Ministry of Education (previously it was known as MHRD), Government of India with the purpose of providing the best quality education that can be accessed by anyone, anywhere and anytime. The main principles of SWAYAM are Access, Equity and Quality. Means providing the best education to even those students who can't be able to get proper education due to any situation and seeks to bridge the digital divide for the economically disadvantaged students. [24]

B.   SWAYAM PRABHA

It is a group of 34 DTH channels devoted to telecasting of high-quality educational programmes on 24*7 basis using GSAT-15 satellite. The contents are provided by the NPTEL, IITs, UGC, CEC, IGNOU. The INFLIBNET Centre maintains the web portal. [31]

C.   GYAN DARSHAN (GD)

Gyan Darshan (GD) channel is a major milestone in the field of Educational Television in India. Launched in the year 2000, GD is a 24-hour educational channel which offers the best of educational programmes covering a variety of subjects which include subjects of pre-school, primary, secondary and higher secondary students, college/university students, youth seeking career opportunities, homemakers and working professionals. GD conducts two hours of live interaction sessions every day to build interactivity in the Open and Distance Learning (ODL) system. [13]

D.   GYAN VANI (GV)

Gyan Vani (GV) FM Radio was conceived in 2001 as a network of educational FM Radio Channels operating from various cities in the country. The aim was to enhance and supplement the teaching-learning process. Gyan Vani serves as an ideal medium for audiences addressing the local educational, developmental and socio-cultural requirements of the people. [28]

E.   SARVA SHIKSHA ABHIYAN (SSA)

Sarva Shiksha Abhiyan (SSA) is implemented as a Centrally Sponsored Scheme in partnership with State Governments for universalizing elementary education across the country. SSA provides for a variety of interventions, including inter alia, the opening of new schools, construction of schools and additional classrooms, toilets and drinking water, provisioning for

teachers, periodic teacher training and academic resource support, textbooks and support for learning achievement. [16]

F.   National Digital Library (NDL)

The National Digital library of India (NDLI) is a project under the Ministry_of_Education, Government of India. It is initiated under the National Mission on Education through Information and Communication Technology (NMEICT) as a pilot project to develop a virtual repository of learning resources with a single-window search facility. NDL is being developed to help students to prepare for entrance and competitive examinations, to enable people to learn and prepare from best practices from all over the world and to facilitate researchers to perform inter-linked exploration from multiple sources. It is being developed at Indian Institute of Technology Kharagpur. It has already brought together more than 10 million digital books and journals and more than 3 million learners are using this facility. It supports all academic levels including researchers and life-long learners, all disciplines, all popular forms of access devices and differently abled learners. [14]

G.   Unnat Bharat Abhiyan (UBA)

The Unnat Bharat Abhiyan program was formally launched by the Ministry of Human Resource Development (MHRD) in presence of the President of India on 11th November 2014. It aims to link the Higher Education Institutions with a set of at least (5) villages, so that these institutions can contribute to the economic and social betterment of these village communities using their knowledge base. [25]

H.   Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)

The Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) is designed to address issues related to teachers and teaching. Such issues would include the supply of qualified teachers, attracting talented professionals for teaching and improving teaching quality in schools and colleges. It was launched on Teachers & Teaching on 25th December, 2014 with an outlay of Rs. 900 crore. [20]

I.   Impacting Research Innovation and Technology (IMPRINT)

IMPRINT is a joint initiative of IIT and IISc supported by the Ministry of Human Resource Development (now it is known as Ministry of Education) to address the major challenges in science and engineering that the country needs to address for becoming self-reliant. This national programme is aimed at developing new engineering policy to create a road map for pursuing challenges in engineering innovation and intervention. [18]

J.   The Uchchtar Avishkar Yojana (UAY)

The Uchchtar Avishkar Yojana (UAY) scheme is launched with a view to promoting innovation of a higher order that directly impacts the needs of the Industry/industries and thereby improves the competitive edge of the Indian manufacturing, the scheme would foster industry-specific need-based research so as to keep up the competitiveness of Indian industry in the global market. [29]

K.   Prime Minister Research Fellows (PMRF)

The Prime Minister Research Fellows (PMRF) scheme is launched in order to improve the quality of research in various higher educational institutions in the country. Through this scheme

attractive fellowships are offered to the research fellows in order to attract best talent into research. The fellowship carries a lot of social recognition and it ranges from Rs 70,000 to 80,000 per month for a five year period. [23]

L.   Rashtriya Uchchatar Shiksha Abhiyan (RUSA)

Rashtriya Uchchattar Shiksha Abhiyan is a holistic scheme of development for higher education in India initiated in 2013 by the Ministry of Human Resource Development (now it is known as Ministry of Education), Government of India. The centrally sponsored scheme aims at providing strategic funding to higher education institutions throughout the country. [26]

M.   National Scholarship Portal (NSP)

The National Scholarship Portal (NSP) is an online portal by the Government of India for applying, processing, verifying and sanctioning Government scholarships to students. It aims to reduce discrepancies and provide a common, effective and transparent way to disburse scholarships to students. It aims to be a "one stop" portal for Indian students applying for scholarships by bringing together hundreds of scholarships run by both states and the central government. [15]

N.   National Mission on Education through Information and Communication Technology (NMEICT)

The National Mission on Education through Information and Communication Technology (NMEICT) has been envisaged as a Centrally Sponsored Scheme to leverage the potential of ICT, in teaching and learning process for the benefit of all the learners in Higher Education Institutions in any time anywhere mode. This was expected to be a major intervention in enhancing the Gross Enrolment Ratio (GER) in Higher Education by 5 percentage points during the XI Five Year Plan period. The three cardinal principles of Education Policy viz., access, equity and quality could be served well by providing connectivity to all colleges and universities, providing low cost and affordable access-cum-computing devices to students and teachers and providing high quality e-content free of cost to all learners in the country. [30]

O.   E-Shodh Sindhu

The Ministry of Human Resource Development (now it is known as Ministry of Education) has formed e-Shodh Sindhu merging three consortium initiatives, namely UGC-INFONET Digital Library Consortium, NLIST and INDEST-AICTE Consortium. More than 15,000 crore and peer-reviewed journals and a number of bibliographic, citation and factual databases in different disciplines from a large number of publishers and aggregators to its member institutions including centrally-funded technical institutions, universities and colleges that are covered under 12(B) and 2(f) Sections of the UGC Act is provided by E-shodhsindhu. [17]

P.   National Academic Depository (NAD)

The vision of National Academic Depository (NAD) is an initiative to provide an online store house of all academic awards. It is a 24X7 online store house of all academic awards viz. certificates, diplomas, degrees, mark-sheets etc. duly digitized and lodged by academic institutions/boards/eligibility assessment bodies. NAD not only ensures easy access to and retrieval of an academic award but also validates and guarantees its authenticity and safe storage. [19]

Q.   Digital Infrastructure for Knowledge Sharing (DIKSHA)

DIKSHA was formally launched on 5th September, 2017. This portal is an advanced platform that is available for the android and iOS users also. National Digital Infrastructure for teachers and students can be accessed after scanning the QR code provided in their NCERT books, after scanning the QR code, the portal will come up with suggestions and topics that learners want to study. The portal would first ask to choose sub-location means in which locality learners reside, accordingly it will show the courses that are going on in that region from which learners can choose the desired course as per learners' skill set. This portal also requires a user to choose the class whose study material has to be accessed. [22]

R.   PM e-Vidya

The Present Union Finance Minister, in her national address on 17th May, 2020 announced that the PM e-VIDYA programme for multi-mode access to digital education will be launched immediately and that 100 universities will be permitted to start online courses by May 30. This programme will consist of 'DIKSHA' involving e-content and QR coded energized textbooks for all grades and will be called 'one nation, one digital platform'. [27]

A comprehensive initiative called PM e-Vidya is launched which unifies all efforts related to digital/online/on-air education to enable multi-mode access to education. This will benefit nearly 25 crore school going children across the country. [21]

Review of Studies

Arasi & Vinitha (2022) This study highlighted the advantages and disadvantages of the process of online teaching and learning as well as focused on making people aware of it. The study revealed that students needed gadgets like mobile phones, laptops, etc. with network connection but all students are not capable of buying it, so it is a serious drawback for students of economically backward classes. The study recommended that the class should be effective because it contributes to further developments. [1]

Bhardwaj & Tanwar (2022) The present study aimed to study the detailed concept of Education system, the role of AI in pedagogy and also to study the pedagogy practices in India. In this study authors used descriptive research design. This study is based on secondary data such as published journals, government reports, newspapers, websites, etc. The study found that several e-learning platforms, apps and portals have been established by the govt. to help students continue their learning throughout the pandemic. The use of digital learning has increased dramatically with one billion people using mobile phones and over 200 million mobile phones connected to the internet. But there are some issues like the quality standard of education, inadequate teaching styles and knowledge of teachers, high distraction of students during e-class and lack of tech-savvy teachers. The study suggested that the Indian government must prepare post-pandemic education and research programmes to assure student learning outcomes and educational quality, need more funds for more transparency, improved network infrastructure and provide e-education training for both teachers and students. [4]

Kaur (2022) The present study highlighted changing education imperative and traditional education vs. online education. This study also defined advantages of online learning such as flexibility and comfort, mobility, easy accessibility, community and online support, progress report etc. as well as defined disadvantages and challenges of online learning. The study concluded that the country is likely to drive the shift from a traditional education approach

towards digital and create more opportunities in the digital education sector globally and to achieve the same, the Indian institutes taking their operations and learning procedure online; the e-learning sector is getting a major boost. It is not expected that online education will replace the in-classroom setting, but it is expected that online education continues to grow on a larger scale and will be beneficial to society. [6]

Manna et al. (2022) This study aimed to address the issues faced by teachers in the adoption of digital tools into their teaching and their students' learning. It addressed the issues confronting educators in the integration of digital technologies into their teaching and their students' learning such as a skepticism of the added value of technology to educational learning outcomes, the perception of the requirement to keep up with the fast pace of technological innovation, a lack of knowledge of affordable educational digital tools, and a lack of understanding of pedagogical strategies to embrace digital technologies in their teaching. It presented theoretical perspectives of learning and teaching today's digital students with technology and proposes a pragmatic and sustainable framework for teachers' professional learning to embed digital technologies into their repertoire of teaching strategies in a systematic, coherent, and comfortable manner so that technology integration becomes an almost effortless pedagogy in their day-to-day teaching. [7]

Selvi (2022) The objective of this study was to explain the function of a teacher and the importance of e-learning in the current environment. It focused on the difficulties Indian instructors have using e-learners and tried to offer a variety of solutions to their knowledge, adoption and comfort with regard to e-learning solutions in their teaching-learning processes. The study revealed that in a worldwide world, wise use of ICT would facilitate the transition to a knowledge society and improve society's teaching and learning environments. [10]

Sneha & Amutha (2022) This study focused on highlighting online teaching and learning. In this study authors defined online teaching or learning - a new paradigm, merits of online teaching and learning and major differences between traditional and online teaching methods. The study revealed that online classrooms require new teaching strategies and instructional techniques so teachers and students should adapt themselves to this new technique for the further development of themselves and the nation. [11]

Sridevi (2022) The purpose of this study was to summarize the use of online learning in the classroom for the academic period. It deals with academic challenges associated with online learning and teaching. In this study, the author defined the necessity of online, Online learning, ICT tools for teaching and Online learning effectiveness and challenges. This study concluded with how the online classroom makes the learning process effective in teaching and learning. [12]

Sawant & Sankpal (2021) The present study is based on NEP 2020 and focused on Higher Education. In this study, authors intended to background and emergence, to highlight vision, focus thrust areas and principle guidelines as well as to bring out features, impact areas and opportunities to stakeholders. The study revealed that the success of NEP 2020 and the pace of its implementation depend to a large extent on how successfully the government, universities and schools can tide over the practical challenges facing and all Indians must overcome substantial execution challenges in a sustained manner for years and decades to come. [8]

Dhoot (2020) The present study attempted to study the impact of COVID-19 on the teaching-learning process in higher education. The study mentioned the Impact of COVID-19 on Higher

Education, Opportunities in COVID-19, Challenges in Higher Education, Role of Government and Teaching and Learning after COVID-19. It is found that the gradual shift towards e-learning brings afloat few challenges such as technology up gradation needs investments, Network connectivity, lack of training to handle e-learning issues and mindset of entire stakeholders should align towards a common goal. [5]

Saykili (2019) This study addressed the learner, instructor, learning environments and the administration dimensions of HE and how the digital connective technologies are impacting on these dimensions in the digital age. The study concluded the current advancements in these areas also raise suspicions as to whether the HEIs' capabilities to function effectively rest on the paradigms of old. Digital tools and applications are offered as solutions to the challenges faced by the HEIs. This study suggested that hybrid learning environments that integrate the digital, virtual, online and physical environments are more effective in providing deep learning. [9]

Arkorful & Abaidoo (2014) This study investigated the effectiveness of using e-learning in teaching in tertiary institutions. This study reviewed literature and gave a scholarly background to the study by reviewing some contributions made by various researchers and institutions on the concept of e-learning, particularly its usage in teaching and learning in higher educational institutions. It unveiled some views that people and institutions have shared globally on the adoption and integration of e-learning technologies in education through surveys and other observations. It looked at the meaning or definitions of e-learning as given by different researchers and the role that e-learning plays in higher educational institutions in relation to teaching and learning processes and the advantages and disadvantages of its adoption and implementation. [2]

Conclusion:

With the exclusive study analysis made in this area, it has been concluded that online learning/e-learning plays a vital role in the modern education system. Digitally enabled technologies/platforms give learners the freedom with anywhere and anytime mode of learning. The true features of the Education world as Equity, Quality, Accessibility and Affordability comes with online delivery and evaluation mode. The review of studies has sought to explain the opportunities and challenges of e-learning and also educational policy initiatives and reforms in education. So, overall literature suggests that there is a need for implementation of e-learning for learners to take the full benefit of it and at same time solutions for the challenges discussed to overcome with enhancement of networking and content development.

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