International Journal of Multidisciplinary Research and Development
www.allsubjectjournal.com
ISSN Online: 2349-4182 ISSN Print: 2349-5979
Received: 02-04-2025, Accepted: 01-05-2025, Published: 16-05-2025
Volume 12, Issue 5, 2025, Page No. 42-46

Online learning and transformation of higher education

Dr. Sajla[1], Garima Kaur[2]
[1] Head, Department of Economics, SCD Government College, Ludhiana, Punjab, India
[2] Research Scholar, Department of Economics, SCD Government College, Ludhiana, Punjab, India

Abstract
Online learning refers to acquiring education and skills, where learning and instruction takes place in digital form over the internet. Although in practice since many years, it has come up as a mainstream form of acquiring education during the COVID 19 pandemic. This research attempts to analyse various ways in which online learning has impacted and transformed higher education during the past few years. The aim of this research is to examine the effectiveness of online mode of learning and how it has modified the scenario of higher education in India.

Keywords: Online learning, higher education, transformation, impact

Introduction
An emerging form of acquiring knowledge and skills, Online learning refers to acquisition of such new skills over the internet. It falls under the broader concept of digital learning, which is learning supported by the use of technology. Digital learning also includes tele-learning, learning through pre recorded lectures and other forms of learning which may or may not necessitate the use of the internet, but online learning requires the use of the Internet.
Teaching and learning has evolved since ancient times from Gurukul to modern universities and virtual learning in present times. This evolution has resulted in meaningful changes in the way teachers and students interact with each other.
India'S higher education system, one of the largest in the world, has traditionally been characterised by a strong emphasis on face to face instruction, limited access in rural areas, And infrastructural constraints. Such limitations had constrained the availability, Accessibility and affordability of education for a long time. The rapid advancement of digital technologies and the global shift towards online learning have prompted a revaluation of the traditional models.
Studies have shown that acquiring higher education not just enhances the individual'S intellectual ability, but also has a positive impact on his/her economic condition, as advanced skills make him eligible for better and higher paying jobs.
The emergence of COVID 19 pandemic gave a push to adoption of online learning, when people were locked inside their homes. In the absence of online learning, imparting education and covering the curriculum would have come to a standstill, leading to gaps and delays in completion of ongoing courses. During lockdown, Various live interaction platforms such as Google Meet, Zoom, Microsoft Teams etc became instrumental in imparting education. Some platforms that existed prior to 2020 like Unacademy, Byjus, Udemy, Coursera etc got a big push, as people resorted to online learning while staying safe indoors.

Materials and Methods
The present study is based on secondary data and is descriptive in nature. This research aims to analyse the impacts of online learning and transformation of higher education in India.

Objectives
1. To analyse the opportunities and limitations of transitioning from traditional face-to-face education, made possible by the fourth Industrial Revolution.
2. To comprehend the nuances of online education and its effects on the higher education landscape.
3. To evaluate the potential of online mode of learning in developing skills of people at micro level and development of the economy and society at macro level.

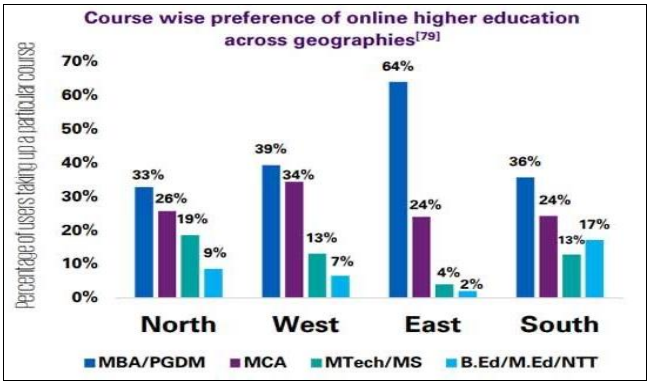
History of Online Learning in India
It can be said that the journey of online education in India began with initiatives like Indira Gandhi National Open University (IGNOU), Established in 1985, Which aimed to provide distance education to a diverse population.It was the launch of the National Programme on Technology Enhanced Learning (NPTEL), A collaborative effort by the Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc), Which offers online courses in engineering, Science and humanities, Making quality education accessible to students across the country.
The Government of India launched SWAYAM (Study Webs of Active Learning for Young Aspiring Minds) in 2017 under the Ministry of Education, further facilitating the adoption of online learning. SWAYAM provides a platform for Massive Open Online Courses (MOOCs) across various disciplines, enabling students to learn at their own pace and convenience. By 2024, SWAYAM had offered over 10,000+ total courses, with more than 5 crore total enrolments (https://swayam.gov.in), Reflecting the growing acceptance and demand for online education in India.
Besides these initiatives, Private tech-led companies like Byjus- one of the leading edTech companies in India was launched in 2011, Unacademy launched in 2015, Gave a push to online learning in India, providing quality education to their subscribers.
Also, there are several other platforms that provide online education in India, namely, Skillshare, Udemy, Coursera,

Vedantu, UpGrad, Toppr, EdX, Khan academy, SimpliLearn etc.
Many traditional higher education institutions also provide distance learning courses to their students, whose content is available online.

History and Background of Higher Education
The history of higher education in India spans thousands of years, Influenced by ancient traditions, colonial influence, And modern reforms. Ancient India had advanced and institutionalized higher education centers, Offering diverse fields like medicine, Mathematics, Astronomy, Grammar, and logic. Education was often linked with religion and focused on intellectual and moral development. The medieval period saw the arrival of Islamic theology, law, Persian language, literature, And subjects like mathematics and science.
The British colonial period introduced Western education to form an English-speaking administrative class, leading to the founding of modern universities in Calcutta, Bombay, And Madras in 1857. This led to a more structured, Elitist, and urban-centric education.
India gained independence in 1947, Emphasizing higher education as a means of nation building. The government established institutions like the IITs, IIMs, And AIIMS. The University Grants Commission was created in 1956 to regulate and fund universities. Post-liberalization, Private universities and technical institutions grew rapidly. The National Education Policy (NEP) 2020 proposed reforms to address quality and equity concerns.

How online learning complements Higher Education
The impact of online learning on education represents a significant change in the way information is gained and educational content is presented. When people of various ages and places can access ongoing and adaptable learning opportunities, these impacts are demonstrated. Digital technology is used in online learning to transmit material and to make engagement and communication easier. In order to improve their comprehension of difficult subjects, Students can engage in virtual reality simulations through the interactive learning experience offered by online learning technology. This encourages self-motivation and active engagement in educational processes, which advances education and attains knowledge equality. People in remote locations or with little means can access educational content over the internet, Bridging the geographic and financial gap in learning opportunities.

Recent Trends
According to a report by KPMG in 2017, The online education market in India is projected to reach a staggering USD 30 Billion by 2025 (Mangalayatan online, 2024). With a projected market volume of US$18.94 billion by 2029, Revenue is expected to grow at a rate of 25.76% annually (CAGR 2025-2029).
The market for online learning platforms is projected to be worth US$6.20 billion by 2025. By 2025, It is projected that the online education industry would generate an average revenue per user (ARPU) of US$34.62. The market for online education is expected to reach 309.1 million users by 2029. It is projected that the online education industry would have a 15.0% user penetration rate in 2025 (Statista, 2024). A few researches indicate that 28% generation Z (Gen Z) and 23% of millennials in India are eager to pursue higher education and enhance their skills, underscoring a shift towards lifelong learning (India Today, 2024)
According to PwC's 2022 Global Workforce Hopes and Fears Survey, 70% of Gen Z participants in India express a readiness to invest in ongoing education and skills enhancement. They demonstrate a significant inclination towards online courses and certifications that can improve their job prospects. This trend highlights the increasing significance of online learning platforms in defining the future of higher education. According to KPMG report: Online education in India: 2021, An online (or distance learning MBA programme is the most preferred across geographies in India. Most students and working professionals opt for an MBA programme to enhance their knowledge base and skills. The next most preferred is the Masters in Computer Applications (MCA), Showing a growing trend towards preference for technical courses. In South India, more people prefer to get a degree in teaching as compared to MTech and MS, while in other regions, It is the vice versa.



(**Source:** KPMG report: Online Education in India: 2021)

Progression of online learning trends from COVID 19 till 2024
The COVID-19 pandemic served as a driving force behind India'S quick embrace of online learning.

2020-2021: Immediate Response
Educational institutions concentrated on maintaining learning continuity during the first phase (2020–2021). The teaching process had become reliant on platforms such as Microsoft Teams, Zoom, And Google Classroom. The abrupt change, However, also brought to light the digital gap, as many students struggled because they lacked access to devices and dependable internet.

2022-2023: Consolidation and Innovation
Institutions had adjusted to the new normal by 2022, and blended learning methods were becoming increasingly popular. 65% of universities had included online learning trends and courses into their regular curriculum, according to the All India Survey on Higher Education (AISHE) 2022 edition. Additionally, innovative approaches like flipped classrooms and virtual labs became widely used.

2024: Future
It is anticipated that the trend towards online learning will continue to grow. There is a need for more digital infrastructure and resources in education, according to data

from the National Education Policy (NEP) 2020. To improve the use of technology in education, NEP 2020 places a strong emphasis on the establishment of a National Educational Technology Forum (NETF). It is expected that this program would propel the creation and uptake of cutting-edge online learning platforms.

Impacts

Positive impacts

1. **Flexibility:** Virtual classrooms are great for people who wish to advance their skills while working. In traditional classrooms, lectures are scheduled at a specific time of the day and one'S schedule will be formed around the availability of classes. It might be challenging to balance a course load with work responsibilities if one is currently employed and courses are not offered after business hours.

2. **Efficiency:** Teachers can include all of the online learning resources—such as videos, PDFs, And podcasts into their lesson plans. Teachers can become more effective instructors by using online resources into their lesson plans in addition to traditional textbooks.

3. **Accessibility of time and place:** The ability for students to attend lessons from any location is another benefit of online learning. Additionally, it frees schools from geographical limitations and enables them to connect with a wider range of students. It is also possible to record, store, and share online lectures for future use.

4. **Affordability:** Reduced expenses are another benefit of online education. This is due to the fact that online education removes the expenses associated with student meals, Transportation, and—above all—real estate. Additionally, all courses and study materials are available online, creating a paperless learning environment that is more cost-effective and ecologically sustainable.

5. **Personalised education:** Each learner has a unique learning path and learning preferences. While some like to learn by listening to music, Others are visual learners. With its various tools and options, the online learning system can be customized in a variety of ways. It is the most effective method for designing an ideal learning environment that meets each student's needs.

6. **Inclusivity:** Digital tools make quality education available even in underprivileged areas, Democratising learning.

7. **Skill upgradation at any age:** Generally, when it comes to online learning, Age is no bar and one can learn new skills and upgrade knowledge at any age, Unlike traditional education systems.

8. **Global collaboration and cultural exposure:** Online learning platforms connect learners and educators from different countries, encouraging cultural exchange and broader worldviews.

9. **Scalability of education:** Institutions can reach a much larger audience with minimal marginal cost, Scaling education in a way not possible with physical classrooms.

10. **Asynchronous learning support:** Beyond flexibility, recorded lectures and forums allow students to review content multiple times, Aiding comprehension and retention.

Negative impacts

1. **Isolation:** Learning is significantly impacted by social contact. Students learn in groups in traditional settings and are used to receiving comments and attention from their instructors in person. Such relationships are almost tough to replicate in an eLearning setting. Many students report feeling alone as a result of their restricted peer contacts, which has an impact on mental health.

2. **Less Attention Span:** Students find it challenging to focus and understand what is presented in online classrooms, which is another significant obstacle to online learning. The main cause of this is a lack of communication between the faculty and the students. If pupils are watched, they pay close attention in the first few minutes and comprehend everything that is taught, but eventually they become distracted. As a result, Students frequently struggle when studying on their own or getting ready for tests. This is one of the main issues that students face when learning online for a long enough period of time.

3. **Lack of clarity and timely feedback:** Getting timely feedback is essential for academic reflection and improvement. Students' inability to understand instructions is one of the main problems with online learning. In order to determine whether or not they are completing the jobs accurately, it is crucial that they comprehend the directions. Effective communication between educators and students is crucial throughout these periods.

4. **Health issues:** Online classes follow the same timetable as regular classes, which last six to seven hours. A student's health suffers when they spend too much time in front of a screen. One of the most frequent problems with online learning is health. Since there are no set meal hours for online classes, they somewhat disturb the daily schedule. Exercise is typically disregarded, which impairs the body's capacity to maintain its fitness and leads to frequent disease.

5. **Lack of productivity:** The fact that students must spend hours sitting still in online classes is a major disadvantage since it promotes inactivity. Most of the time, the student is exhausted and has little desire to engage in new activities. Instead of doing anything useful, the kids can decide to sit still and go through their phones. In the long term, this may be a significant obstacle for students enrolled in online courses.

6. **Inefficient time management:** Better time management reduces anxiety and improves a student's

academic achievement. In reality, A lot of students find it difficult to balance their daily activities with their studies. For example, when students are given assignments, they might begin working on them the day before they are due.

7. **Distractions:** Although digital gadgets can be an excellent tool to support learning, they can also occasionally act as a barrier. The ugly truth is that, despite their seeming usefulness and dynamic nature, Smartphones and tablets are made to entice consumers to spend as much time as possible on them. Youngsters can quickly become distracted and begin utilizing social media, Games, and other apps that do not support learning, which is the intended outcome.

8. **Less motivation:** Students are typically inspired to perform better during a traditional offline lecture by seeing the overall pattern that their fellow students are following. When students see that their performance falls short of the average statistics in their class, they are inspired to work more in class and raise their grade in order to avoid falling behind their peers. Conversely, Students who are left alone during an online lecture typically experience a decrease in motivation as they are unable to better assess their position and adjust their efforts accordingly.

9. **Security risks:** Online learning may expose learners to security threats including electronic fraud or cyberbullying.

Challenges

1. **Internet access and connectivity:** Poor internet access and connectivity in remote areas is a major challenge to online education. As online learning requires the use of the internet, its lack of availability poses a great challenge.

2. **Reduced engagement:** it is harder for teachers to engage students and their concentration for long.

3. **Unawareness of specially abled children:** While hearing-impaired students closely examine sounds, visually impaired pupils use braille to learn. The fact that videos are used to teach the majority of the material in online courses is one of the main obstacles. Since videos were one of the primary visual aids utilized for online instruction throughout the online learning phase, many students with special needs were overlooked.

4. **Language of content:** As most content for online learning is available in English Language only, It is a challenge for those who prefer courses in their regional languages, thus reducing its scope and reach.

Govt initiatives

1. **SWAYAM:** SWAYAM is a government platform designed to give college and high school students access to online courses. It covers a wide range of topics, Including higher education, Vocational training, And elementary school education. Students who might not have access to traditional educational institutions or who want to continue their education in addition to their regular school or college coursework are the target audience for the platform. Top Indian universities, such as the IITs, IIMs, and government-run institutions, Prepare SWAYAM courses, Guaranteeing that students will learn top-notch material. This program is especially crucial for those who want to bridge the gap between high school and college by pursuing higher education online.

2. **DIKSHA:** Diksha is a government initiative that aims to provide a digital platform to students and teachers across India. DIKSHA, which was introduced in 2017, Is a comprehensive e-learning resource that provides lesson plans, Study guides, And teacher training modules. It guarantees that no student is left behind because of language difficulties by giving them access to textbooks and instructional materials in a variety of languages. Students in rural locations can more easily access high-quality education because of the platform's availability through both web and mobile applications. On the other hand, educators can use DIKSHA to improve their teaching strategies and further their professional growth.

3. **National Digital Library:** The National Digital Library of India (NDL India) is an all-digital library that houses metadata on various digital content types, such as books, articles, Movies, Audios, Theses, and other educational materials that are useful to users with varied skill levels and educational backgrounds. In addition to other digital sources under one roof, It offers a single-window search function for accessing digital information that is now available in India.

4. **Virtual Labs:** The Virtual Labs initiative was started by the Government of India's Ministry of Human Resource Development (MHRD) under the auspices of the National Mission on Education through Information and Communication Technology (NMEICT). This effort is the first of its kind in remote experimentation and represents a paradigm change in ICT-based education. The initiative has created more than 100 Virtual Labs with over 700 web-enabled experiments that can be viewed and operated remotely.

5. **e-Acharya integrated e-content portal:** A website that houses all e-content initiatives created or supported by the National Mission of Education through ICT. Under NME-ICT, more than 70 e-content projects have been established or are in the process of being developed across a range of academic disciplines by different Indian colleges, Universities, And institutes. Through a single interface, Learners can effortlessly access desired materials, such as textual content, Multimedia-enriched materials, And audio/video learning materials, Thanks to the portal's search and browse capabilities for all hosted content.

6. **Spoken Tutorial:** As part of its "Talk to a Teacher" campaign, The Ministry of Human Resources and Development of the Government of India announced the Spoken Tutorial project as part of the National Mission on Education via Information and Communication Technology (ICT). Through a portal, It

provides users with access to many award-winning instructional materials that allow them to learn different types of free and open-source software independently, in multiple languages, And at any time.

7. **ePG Pathshala:** The UGC's e-PG Pathshala program, which is part of the National Mission on Education through ICT (NME-ICT), Provides top-notch, Curriculum-based, interactive e-content in 70 courses from all academic fields.

Future prospects

With new technologies like virtual reality and artificial intelligence, Online learning is changing as a result of the rapid development in technology. While machine learning helps in determining students' Requirements and offering customized advice, these technologies also provide immersive and interactive learning environments. Equal learning opportunities, Easier access to higher education, and advancement on both a personal and professional level are all expected outcomes of this integration of technology and education. Enhancing student-teacher collaboration, Virtual classrooms, and fostering intellectual and cultural interchange through interactive platforms and educational social networks will be the main areas of future development.

Conclusion

India'S higher education system, dominated by the face to face mode, has been undergoing a change since the past few years. With improving penetration of internet services and digitisation of general life, Online learning has come up as a blessing for those who want to learn new skills but are constrained by geographical factors and other responsibilities of life. Those who had to give up on their education at an early age, As they had to take up the responsibilities of life, Can now catch up with learning and enhance their skills, As age is generally not a barrier when it comes to online learning. Working people can learn new skills, Without the need to leave their job and move to a physical institution. Online learning resolves the problem of flexibility and affordability, Leading to wider spread of learning opportunities. Despite the challenges, this form of learning complements the traditional form of learning, making education available for everyone.

References

1. Amber blog. Top 10 Challenges of Online Learning as a student, 2023. https://amberstudent.com/blog/post/top-10-challenges-of-online-learning-as-a-student#strong2-lesser-attention-spanstrong
2. Jehad Ali AM, Moen Salman SA. Perspective Chapter: Online Learning and Future Prospects, 2024. https://www.intechopen.com/chapters/1178294
3. Drexel University. https://drexel.edu/soe/resources/student-teaching/advice/benefits-of-online-and-virtual-learning/
4. Edument. Role of Government Backed Initiatives in Promoting Online School Education in India, 2024. https://edumentonline.com/role-of-government-backed-initiatives-in-promoting-online-school-education-in-india/
5. eLearning Industry. Advantages and Disadvantages of Online Learning, 2025. https://elearningindustry.com/advantages-and-disadvantages-online-learning
6. Fun to Learn English. 10 Main Disadvantages of Online Learning for kids in 2024, 2024. https://funtolearnenglish.com.hk/blog/10-disadvantages-of-online-learning-for-kids/
7. India Times. The impact of online classes on students, 2021. https://timesofindia.indiatimes.com/readersblog/expressons4b/the-impact-of-online-classes-on-students-39348/
8. India Today. Online Education reshaping India's higher learning landscape, 2024. https://bestcolleges.indiatoday.in/news-detail/online-education-reshaping-indias-higher-learning-landscape
9. K12 Digest. The Emergence of Online Education in India, 2021. https://www.k12digest.com/the-emergence-of-online-education-in-india-2/
10. Hamia K, Juman I. Evolution of Online Education: Transformation of Education in India. ResearchGate, 2021. https://www.researchgate.net/publication/357187562_Evolution_of_Online_Education_Transformation_of_Education_in_India
11. LIS Portal. 28 Digital Initiative of Government of India in Higher Education, 2019. https://www.lisportal.com/lis-blogss/digital-initiative-of-govt-of-india-in-higher-education
12. Medium. When online education started in India, 2023. https://dynamindsolutions.medium.com/when-online-education-started-in-india-e4f8aadfe1bd#:~:text=The%20National%20Programme%20on%20Technology,engineering%2C%20science%2C%20and%20humanities.
13. Modern Campus. Unpacking the Evolution and Future of Online Education, 2024. https://moderncampus.com/blog/future-of-online-education.html
14. Raghav Foundation. The Emergence of Online Education in India, 2023. https://raghavfoundation.org.in/blog/rise-of-online-education-in-india/
15. Shiksha. Online Education in India: Trends and Future Prospects, 2024. https://www.shiksha.com/mba/articles/online-education-in-india-trends-future-prospects-blogId-14763
16. Mekala S, Mohana Aishwarya K, Sangeetha T. Online Learning and its Transformative Impact on Digital Learning in Higher Education Institutions. *MIER* Journal of Educational Studies Trends & Practices, November,2024:14(2):269-294. https://www.mierjs.in/index.php/mjestp/article/view/2663/1605
17. Varthana. 74% Gen Z prefers Online Learning. How will this impact India's higher education?, 2024. https://varthana.com/student/74-gen-z-prefers-online-learning-how-will-this-impact-indias-higher-education/