Digital Literacy Initiatives in India: Bridging the Gap for Online Education

Jyoti[1], Karishma[2]

[1]Assistant Professor, Mahalakshmi College for Girls, Duhai, Ghaziabad
[2]Student (M.Ed.), Mahalakshmi College for Girls, Duhai, Ghaziabad

Abstract

As technology continues to change, educational change is inevitable. A lot of research is being done to understand the pros and cons of online education as compared to face-to-face education. In India, there are many challenges and opportunities for online education. In this paper, we have identified key factors that will drive online education in India through a comprehensive literature review. We have identified internet penetration, low cost of online education, ease of doing course, government initiative, employer recognition and bridging gap as the key factors for the growth of online education. There are certain factors that are hindering the growth which include inadequate digital infrastructure, credibility and language used in online education. The paper also looks at the future opportunities in the education sector with the increasing number of internet users in India.

Keywords: Online education; Face-to-face education; Challenges and chances; Digital infrastructure.

Introduction:

Growing technology has transformed almost every aspect of living. Technology has also affected the process of education. Over the last 10 years, face-to-face education has undergone a remarkable transformation. Although face-to-face education is still considered the norm, the acceptance of online courses is increasing in the field of management and engineering. Some of the reasons for the exponential growth of online education are that it is instant, online, accessible anywhere, self-paced and on the go. MOOCs (Massive Open Online Courses) are the main reason for the phenomenal growth of online education.MOOCs are online courses designed for unlimited participation and open access through the web, according to Kaplan, Andreas M.; Heinlein, Michael (2016). Since their development in 2008, MOOCs have become increasingly popular. So far, over 800 universities worldwide have launched at least one MOOC. According to a report by Class Central, 83 million students had registered for MOOCs as of December 2017.The list of top five MOOC providers in terms of registered users includes Coursera, ex., XuetangX, Audacity and Future Learn.

 As part of the Digital India initiative, the government is supporting online education in India because of its potential to improve the quality and reach of education. Government of India in A programme called SWAYAM (Study Webs of Active -Learning for Young Aspiring Minds), which aims to achieve the three basic objectives of education policy - access, equity and quality - has been initiated by the Association in collaboration with the Ministry of HRD. A making quality teaching and learning resource available to all, including those who cannot afford them, is the main objective of this effort. This programme, SWAYAM, aims to provide education to those students who have not yet become aware of the digital revolution going

on and are still unable to join the mainstream of the knowledge-based economy offered through Sway am and approximately 150 million students are enrolled in various courses around the world. Almost 2000 online courses are offered through Swayam and approximately 150 million students are enrolled in various courses around the world.

Review of Literature

There have been many definitions of online learning. Khan (1997) has defined online learning as the delivery of instruction to a remote audience using the Internet as an intermediary. Elaine Allen, Jeff Seaman (2011) have defined online courses as those in which at least 80 per cent of the course content is delivered online, and face-to-face courses as those in which less than 30 per cent of the content is delivered online.

According to Stack, Steven Dr (2015), online education has proliferated in the last decade. In his research, he did not find any significant difference in the performance of students taking online courses and those taking face-to-face courses.

Another research conducted by Dr Fahd N. Al-FAHAD, examines the attitudes and perceptions of 186 university students from different colleges towards the effectiveness of mobile learning in their studies. Their research findings indicate that students perceive mobile technologies as an effective tool to enhance their communication and learning.

Herman, T., & Banister, S. had done a research on comparing the cost and learning outcomes of traditional and online coursework. Their findings show that online courses engage students in the learning process, support strong student learning outcomes, and also save costs for the university.

According to a report by Google and KPMG, the online education market in India was $247 million at the end of December 2016 and is expected to reach $1.96 billion by 2021. India's online education market is also the second largest market after the US. The report's findings also indicate that the paid user base for online education services will also grow by at least six times, to around 9.6 million users by 2021.

India's online education growth drivers

Due to the following factors, the acceptance of online education in India is growing exponentially:

1. Internet penetration rates in India As per a report by IAMAI and Kantar IMRB, there were 481 million internet users in India and the growth rate is 11.34%. Also, the internet penetration in urban India was 64.84% while in rural India it was 20.26% till December 2017. India's internet user growth is largely driven by Smartphone penetration. As of December 2017, India had close to 291.6 million Smartphone users, says a report from US-based market research company remarketer. They predict that this number will grow by 15.6% to 337 million by the end of 2018. The key factors behind this growth are the increase in Smartphone usage and the availability of more affordable smart phones. The availability of high-speed internet at a very affordable price is the reason for the growth in mobile internet users. Through internet, world class education becomes easily accessible to urban and rural population.

2. Saving time and money with online education As online education is through internet, it can be easily accessed anywhere and anytime. You can access the content early in the morning, late at night, at home, in the cafeteria or on the train. Since the content is usually pre-loaded, you can download the lectures/videos and watch them over and over again at your convenience. The cost of online education is also very low compared to face-to-face education. There is also a great saving on accommodation and transport costs. Since all the content is available online, there is no need to buy books.

3. Easy courses for professionals

For working professionals who cannot leave their jobs to pursue higher education, online education is a great option. Online education can help them find new career options by offering a variety of courses to choose from. This is also supported by the Google and KPMG report which states that reskilling and online certification is the largest sector in online education. Another online platform, UPGRADE, offers online courses on the topic of big data and also offers job opportunities in this sector.

4. Indian government initiative

The Indian government is also making a push for online education. They have launched Swayam through which they are offering free education and certification courses to all. With the main objective of providing quality education, they have tied up with IITs, IIMs and NPTEL. They are also tying up with universities through which students can earn credits through online courses. The government has also launched the National Optical Fiber Network, which is an initiative for the development of digital infrastructure in India. Increasing broadband connectivity and creating a high-speed network is the main objective of this initiative. An online National Digital Library with 17 million digital books and magazines has been launched by the government. There are 32 Lakhs registered users who access NDL for free. Government has provided Wi-Fi facility to all central universities.

Bridging the gap between educated and expected

There were 18.3 million unemployed Indians in 2017 and the number is expected to increase by 18.9 million by 2019, according to a report in The World Employment and Social Outlook - Trends. According to the report, India's working-age population is on the rise and is expected to be 64 per cent of the country's population by 2021. Do you think this is because there are not enough job opportunities in India? According to Nascom, 6 million people will be needed in cyber security by 2022. According to Tech Mahindra CEO C P Gurnani, 94% of IT graduates are not employable. According to Sanjay Bansal, 58% of unemployed graduates and majority of unemployed post-graduates (62%) say that jobs matching their skills and education are not available and this is the main reason for their unemployment. Online education is therefore an alternative to bridge the gap between industry expectations and educational provision. Online education provides an opportunity to upgrade skills through continuing education courses in various fields.

Challenges in the online education sector

Online learning in India faces many issues. Some of these challenges that need to be overcome are:

1. Inadequate digital infrastructure

Even though the Government of India is taking the initiative to develop the digital infrastructure, a lot of work still needs to be done in this direction. The biggest problems are high-speed internet and stable electricity. India ranks 89th in the world in terms of internet speed and stability. According to the World Economic Forum report, only 15 per cent of households have access to the internet and mobile broadband remains very low, with only 5.5 subscriptions per 100 people. In addition, current broadband coverage is only about 600 corridors, mostly in and around India's top 50 to 100 cities, leaving rural areas with poor connectivity. 5G network technology is the need of the hour, which will increase the speed of data, downloads.

2. Limited social contact

There is very little direct interaction with the teacher and other people taking the course, as online

education can be accessed from home or any other convenient location. There is very little discussion among peers, especially in self-paced courses, according to Dhirendra Kumar (2010). Most of the discussion takes place through e-mails, chat rooms or discussion groups. You don't get to socialize and interact with each other on campus. So you are not able to develop social links that help in career growth.

3. Questionable credibility of degrees and diplomas

There are still many fraudulent and unaccredited degrees being offered online, although the industry has started to recognize online degrees. There has been an increase in the number of fraudsters on the market with fake degrees which do not have any qualifications. Not only do these scams undermine the credibility of online degrees, but they also undermine the confidence that potential employers have in online programmers.

4. Motivation

some need nudging to get going. Students may procrastinate in self-paced online programmes. There is a very high dropout rate in online education and training. Completing assignments and uploading them on time requires self-motivation and discipline. You may struggle in an online programme if you have difficulty working independently, staying organized and meeting deadlines.

5. Language of the course

India is a multilingual country and the large majority of the population is from rural areas. The content of most online courses is in English. As a result, those students who are not able to speak English will struggle with the availability of the language content. Hence, it is the duty of computer professionals, educators, administrators, language content creators and content disseminators to sit together and provide a viable framework and standard solution for the learners who know only Indian languages.

Online education opportunities

Technological change offers many opportunities for all stakeholders in the online education sector, including entrepreneurs, education providers and learners. Some of the factors that offer different opportunities in this field are –

1. Mobile Learning

The number of individuals accessing the internet via their mobiles is estimated at 332.57 million for 2017, as reported by Stastia (2018). This number is expected to increase to 462.26 million by 2021. The increase in the number of users is attributed to the availability of 4G internet and smart phones at very low prices. Going forward, IAMAI hopes that the National Telecom Policy (NTP) 2018, which focuses on new technologies such as 5G, will promote better quality data services at more affordable prices and help bridge the digital divide, which will boost internet penetration in rural areas through mobile internet. According to a report by Zenith, mobile devices will account for 73 per cent of time spent online by 2018. This means that the vast majority of students will have access to e-learning through mobile phones in the future.

2. Attention of investors

With the Digital India campaign, the cultural importance of education and falling mobile data prices, many entrepreneurs are venturing into online education, which is expected to grow over the next five years. Bertelsmann India has invested $8.2 million in Eruditus, and Kaizen Management Advisors and DeVry Inc. have invested $10 million in EduPristine. Khan Academy is a non-profit organization that receives funding from philanthropic organizations such as the Bill and Melinda Gates Foundation, Google and Netflix founder Reed Hastings. Online learning platform Unacademy also raised $11.5 million in funding led by Sequoia India and SAIF Partners; and Eruditus Executive Education, a provider of executive

education programmes, had raised $8 million in funding from Bertelsmann India Investments. So, the online education sector will continue to attract more interest from entrepreneurs and investors and attract more funds.

3. Blended model

The future will see a convergence of offline and online education. Online digital media is combined with traditional classroom methods in this concept of blended learning. It requires the physical presence of both teacher and student, but the student has some control over time, place, route or pace. This model will take advantage of both face-to-face teaching methods and computer-mediated activities. In the future, there will be virtual classrooms where face-to-face offline pedagogy is supported by digital courses on practical knowledge and soft skills.

4. New courses

Today, the most popular courses in online education are related to IT; including topics such as big data, cloud computing and digital marketing. But in the future, there will be an increasing demand for different types of courses in unexpected subjects such as culinary management, photography, personality development, forensic science, cyber law, etc.

Conclusion

If implemented in collaboration with industry, academia and government, online education can change the entire future scenario of education. To bridge the gap so that students are industry ready after graduation, drastic changes in the curriculum are required. By making the educational process more practical through the use of technology, it needs to be changed. To widen the reach and create more opportunities for the youth in rural India, courses should also be designed in different languages. There is a need for innovation in the development of ways in which the social skills of online learners can be enhanced.

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