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Research Paper

Technology-Driven Learning: Assessing the Growth of Online Education in India

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ABSTRACT

Working professionals and students pursuing higher education have embraced online education in droves. These types of online students benefit greatly from the autonomy and freedom that these courses provide. Online courses may be scheduled around their busy schedules, which may include full-time work, internships, and family responsibilities. They can also use online learning to get some peaceful time to study. It has been discovered that many areas of the economy, including education, have evolved over time. Unlike any other industry, education has seen several revolutions and evolutions. The education system evolved from Guru-Shishya Parampara to classroom teaching, then to teaching using projectors or LEDs, and finally to online teaching courses or teaching via E-Learning portals or Web Based E-Learning. The online education system, often known as E-Learning, has emerged as a strong competitor for a new educational system in recent years. Several online courses have been undertaken in the recent past to educate millions of individuals across the world on a variety of topics. Despite cultural and linguistic differences and a varied population, the E-Learning system has grown in popularity, increasing Indians' affordability and purchasing power. The only reason for the E-Learning system's expansion is the rapid advancement of information technology and technical advancements. The purpose of this essay was to investigate the influence of E-Learning, also known as Web-Based eLearning, in the modern Indian educational system.

KEYWORDS: Education, E-Learning, Web-Based E-Learning, Information Technology, Purchasing Power, Education System Market, Government initiatives.

1. INTRODUCTION

India is a significant player in the global education market. India boasts one of the world's most extensive networks of higher education institutions. The educational system, on the other hand, still has a lot of room for improvement. With 26.31 percent of India's population between the ages of 0 and 14, the country's education sector offers various chances for development. India is a vast country having diversified culture, heritage, and language, class of population and education system. We have various schools following Gurukul system to schools having world class infrastructure. We have some schools conducting in-house activity for physical and overall development of students where as some students are still struggling for basic educational facility such as books and stationery. Some schools and colleges have international tie-ups sending students to different country for study or for orientation programme. There are great variations in quality education due to reasons like social background, poverty, difference in standard of living, lack of teacher training programme etc. Indian education system is one of the largest education system in the world and holds key position in global education industry. There are 10,30,996 schools in India, out of which 8,53,184 are in urban and 1,77,812 are in rural area. Up to 31st March 2019, there are total number of 907 universities in India in which, 399 are state universities, 126 deemed to be universities, 48 central universities and 334 private universities. Irrespective of such a large number of school, colleges and universities, there is still a ray of growth and development in education system. However there is still a lot of potential in Indian education system. The online education market is forecasted to be USD 18 billion by 2022, growing at a CAGR of around 20% over a period of five year. WBEL or online learning is paperless and electronic education system with the use of information and technology. It is a combination of learning service and technology. It is learning educational curriculum outside traditional class room with the use of electronic technology. As we are aware that that technology has almost taken every part of our life and is considered as path breaker.

Size of the Market

India boasts the world's biggest population of people aged 5 to 24, with a population of over 500 million. This presents a huge potential for the education industry. In FY18, India's education industry was valued at US$ 91.7 billion, and it is anticipated to grow to US$ 101.1 billion in FY19. In FY19, there were 39,931 colleges in India. The numbers of universities in India have increased to 981 as of May 17, 2021. In the fiscal year 2019, India has 37.4 million students enrolled in higher education. Higher education in India had a Gross Enrolment Ratio of 27.1 percent in FY20. There were 9,700 AICTE-approved institutions in 2020-21. There were 4,100 undergraduates, 4,951 postgraduates, and 4,514 diploma students in total. According to the QS (Quacquarelli Symonds) World University Rankings, 12 Indian universities made the top 100 list. After the United States, the Philippines has become the second largest market for e-learning. By 2021, the industry is anticipated to be worth $1.96 billion, with 9.5 million consumers. By 2026, the online education industry in India is expected to reach US$ 11.6 billion.

Investments

According to data published by the Department for Promotion of Industry and Internal Trade, FDI equity inflows totaled US$ 4,495.19 million from April 2000 to March 2021. (DPIIT).In recent years, India's education and training industry has seen significant investments and improvements. Here are a few examples:

Amazon India established Machine Learning Summer School in June 2021 to assist students in learning new skills. Domestic service providers have created a joint venture with international companies. For example, GMR Aviation Academy and Emirates Group Security, located in the United Arab Emirates, will provide a variety of aviation and security courses in India. The Institute of Health & Management (IHM) in Australia announced in May 2021 that it will award nurses in India scholarships worth Rs. 10 crore (US$ 1.3 million) to recognise their effort and devotion in the face of the COVID-19 epidemic. Nurses enrolled in the 'Gateway to Global Nursing Program' will be eligible for the award. The BITS School of Management (BITSoM) and London Business School will collaborate in May 2021. (LBS). This collaboration will be divided into three parts: a student engagement programme, LBS faculty teaching at BITSoM, and the development of a combined executive programme in the field of women's leadership. Rebright Partners provided US$ 3 million in Series A investment to Virohan, a healthcare ed-tech start-up that provides vocational training for paramedics, in May 2021. According to the Union Budget 2021-22, about 5.6 million teachers would be educated under the NISHTHA training programme in 2020-21. School Acquisition Module will get a Rs. 20 crore (US$ 2.4 million) investment from Education India, India's academic partner and a start-up in the field of education, in April 2021. Until 2023, the firm intends to have more than 200 schools on lease Module. The Union Education Minister inaugurated the NCTE Web Portal's 'MyNEP2020' Platform on April 1, 2021. The platform aims to gather input/suggestions/memberships from stakeholders in order to produce draughts for the National Professional Standards for Teachers (NPST) and the National Mission for Mentoring Program Membership (NMM). From April 1, 2021 to May 15, 2021, the 'MyNEP2020' platform will be available. The Indo-Tibetan Border Police (ITBP) opened an internet-based learning centre for schoolaged children in a Naxal-affected area of Chhattisgarh in January 2021.

2. RESEARCH METHODOLOGY

This research is based on secondary data. Secondary data is gathered from a variety of sources, including E-Learning reference books, Web portals, Online Education, and Distance Learning. Secondary data for this research study was gathered from a variety of publications and journals related to E-Learning, Web Portals, Online Education, and Distance Learning. Secondary data is also gathered for the research study

from numerous websites, search engines, and online information suppliers.

3. OBJECTIVES OF THE STUDY

The foremost objective of E-Learning varies from one individual to the next. These goals might be broad or specialized. General goals are the same for everyone, but specific businesses differ from one individual to the next. The following are some of the most typical research paper objectives:

- Research the definition and idea of e-learning.
- To research the various E-Learning portals available in
- India.
- Research of the influence of e-learning in India
- Research the advantages and goals of e-learning
- To investigate the drawbacks, drawbacks, and limits of e-learning
- Research the potential for E-Learning in India and its future.

Hypothesis of the Research Study

With the use of information and technology, online learning is a paperless and electronic education method. It's a hybrid of educational services and technology. E-learning portals offer the flexibility of use in terms of location, time, and media. We don't need to travel to school or spend a lot of time and money to utilize a Web Based Learning System; all we need is a decent internet connection and a computer system, whether it's a mobile phone or a laptop. The investigation was conducted with the following hypothesis in mind:

- For a country like India, which has a huge young population, e-learning is extremely beneficial.
- It allows for more effective use of information technology.
- E-Learning has a favourable influence on the Indian educational system.
- With the increasing usage of the internet, the scope of E-Learning is expanding.
- WBEL has a lot of development potential in India, however there are certain restrictions.

Online education for educators

Online education can also be designed to accommodate a variety of learning styles among students. As educators, it is likely that we will have to put in additional efforts to incorporate online learning programmes into the curriculum in the most suitable manner. Online training programmes are helping teachers/educators advance their skills in curriculum implementation, policy, education systems and leadership, both independently and with the support of their institutions. It lets them collaborate with their peers and learn new instructional skills that are relevant to their career. These programmes can help them develop new skills and capabilities in their students with the help of technology and interdisciplinary approaches. As the overlap of the traditional and online modes of education is becoming more and more inevitable, we owe it to our students to

make their education relevant to their future through ingenuity, passion and careful planning.

Types of E-Learning Models

1. There are basically 3 types of E-Learning i.e. Synchronous, Asynchronous and Blended Learning.
2. Synchronous means at the same time, so in Synchronous type of E-Learning, there is a interaction between participant and instructor via Web Bases Portal.
3. Asynchronous means not at the same time, so in Asynchronous system of E-Learning the portal allow the participant to complete the syllabus or training without interaction with the trainer or instructor.
4. Blended learning is a combination of E-Learning tool with traditional class room teaching. In Blended learning students can enjoy classroom experience with interaction with teachers and students via actual classroom. Blended E-Learning has benefits of face to face interaction with social benefits of classroom training and different teaching techniques

Some of the Different E-Learning Portals

There are numerous E-Learning portals around the globe. Some of the famous E-Learning portals working in India are as follows:

- Indiaeducation.net
- Gradeup
- Unacdemy
- Khan Academy
- Coursera
- EDX
- Byju's
- Meritnation □ Ask IITians
- W3 School
- Academic Earth □ Code Academy,
- Open Yale Courses.
- Investoo, & many others.

Government Initiatives

India, Bangladesh, Brazil, China, Egypt, Indonesia, Mexico, Nigeria, and Pakistan joined the UN's E9 project in April 2021. The E9 project is the first of three phases of a three-phased process to co-create a digital learning and skills initiative for marginalised children and youth, particularly females. By promoting fast reform in education systems, the project intends to expedite recovery and promote the Sustainable Development Goal 4 agenda.The government allotted Rs. 54,873.66 crore (US$ 7.53 billion) to the Department of School Education and Literacy in Union Budget 2021-22, compared to Rs. 59,845 crore (US$ 8.56 billion) in Union Budget 2020-21. Higher education had a budget of Rs. 38,350.65 crore (US$ 5.28 billion) while school education and literacy received a budget of Rs. 54,873 crore (US$ 7.56 billion). Under the Rashtriya Uchchatar Shiksha Abhiyan, the government has set out Rs. 3,000 crore (US$ 413.12 million) (RUSA). The government has prioritised

developing the country's digital infrastructure for education in the Union Budget 2021-22 by establishing the National Digital Educational Architecture (NDEAR). The Ministry of Education existing rules for the identification, admission, and continuing education of migrant children in January 2021, in order to reduce the effect of problems generated by the COVID-19 pandemic. The third phase of the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) was inaugurated on January 15, 2021, across 600 districts with 300+ skill training. The third phase, which will be led by the Ministry of Skill Development and Entrepreneurship, will focus on new-age and COVID-related abilities. The goal of PMKVY 3.0 is to train eight lakh people. The Ministry of Skill Development and Entrepreneurship, in partnership with the Tata Indian Institute of Skills, will establish two short-term industrial automation courses in December 2020.

Advantages of e-learning

One of the most important advantages of using E-Learning is that the user may access the E-Learning portal at any time and according to their convenience. It's also accessible through any browser and on any platform or device. E-Learning portals and services are becoming increasingly popular among youth and professionals because to their flexibility in terms of time and location. One of the most significant advantages is that current information can be accessed from anywhere in the globe using simply the internet. Through E-Learning portals, even users in the most remote parts of the world may access and learn current learning content. Working professionals benefit greatly from it since it allows them to study at their own pace. Many certification courses are now readily available, which were formerly unavailable due to the time and expense of travelling from one location to another.

Disadvantages of e-learning

Beside many advantages, there are some disadvantages of E-Learning are also there, one of them is Limited Internet connection. In a country like India, connection of internet is limited in respect of geographical expansion. There are many remote areas of India where there is no internet connection as well as there are many places where there is slow or limited connections and speed. Low connection, slow downloading and uploading speed, bad quality of audio and video are some of the big problems of E-Learning services in India. As E-Learning portals are static in nature, limited interactions between educator and learner are often leads to great disadvantages of E-Learning portal. People also resist changing from traditional way of learning to Web Based Learning. E-Learning portals and providers find it difficult to reach end users as it is difficult to convince users to deliver their E-Learning access. Not all courses could be delivered through Web Portal as some topics or courses require more personal attention and touch. Many E-Learning courses are outdated as they were developed 10 years back and required regular update according to changing environment. It requires improvements from time to time.

Current state of e-learning in India

Due to new-startups, new technology and higher internet speed and availability of Smartphone's, the dimension of online learning is growing manifold. Government of India is also making endless efforts to provide access to online learning available to students in every corner of the country. Low internet tariff, cheap mobile phones and easily availability of SIM cards provides stimulus to the effort of government. Today in India we have online courses from primary level to professional level. Large number of training institutes and start-ups companies are provide wide variety of services in E-Learning. Many service providers are providing video lectures along with study material. Many people, on the other hand, are focused on giving access to courses at any time and from any location through a conveniencebased training and learning system. Another reason for growth of E-Learning in India is requirement to update in skill and knowledge. For example a software professional having experience of 10 years, also is in needs to update his or her shill in the field of programming language, data analytics, cloud computing etc. Increment in salary, promotion, better working condition also insists people to update their skill and knowledge and this can be achieved only with the help of E-Learning resources.

In India, lot of start-ups is already setting their business in the field of E-Learning or online learning. many startups like Learn Social, Simplilearn and Intellipaat are playing a role of aggregator and aiming mid-level professionals to provide them access to E-Learning resources. Simplilearn, the Bengaluru based start-up is currently providing near about 200 certification courses in the field of Quality Management, Financial Management, Project Management, Information Technology etc. the company has trained over 2,25,000 professionals across the globe. According to CEO of Intellipaat, Diwakar Chittora, after starting its operations in 2011, the company is witnessing growth of almost 1000%. Intellipaat is providing online IT training including corporate training and more than 80 technological courses worldwide. Learnsocial, six year old Hyderabad based company is working on an aggregator model. The aim of company is to become Amazon of online learning. mid-level professionals and students are targeted customers of company. According to founder, Raju Vanapala, company has above 2,00,000 users and trained over 1,500 learners.

Challenges faced by e-learning in India

From last 50 years, Government of India is providing immense support and funds to make India, world's largest system of Education. In attaining this objective government is facing many challenges. Unable to maintain high standard of education, slow pace of growth of technology and knowledge, awareness amongst people, rigid bureaucracy are some of the constrains of development in E-Learning. creating awareness amongst people staying in rural parts of country, lack of infrastructure, poor availability and connectivity of internet is a major challenge in development of E-Learning system in India. Difference in culture, gender, religion and level of literacy is one of the major challenges faced by E-Learning providers. Due to religious or

spiritual difference, some contents, although important for courses, may sometime unacceptable with certain sections of the society. geographical difference creates major challenges specially in Live Classes because of difference in time zone.

Future of e-learning in India

Integrate training techniques such as online learning and gaming, and is anticipated to increase 38 percent in the next 2-4 years embrace transformational and creative ways in higher education have a 50 percent enhanced Gross Enrolment Ratio (GER). Decrease state-by-state, gender-based, and societal disparities in Germany to 5% emerge as the world's single largest source of global talent, with one out of every four graduates coming from India's higher education system; be among the top five countries in the world in terms of research output, with an annual R&D spend of US$ 140 billion; and have more than 20 universities among the top 200 universities in the world. Various government efforts, as well as an emphasis on innovative education approaches like as E-learning and M-learning, are being implemented to support the expansion of the distant education industry.

In recent years, the education system has experienced a slew of reforms and increased financial outlays that have the potential to turn the country into a knowledge sanctuary. With human resources playing an increasingly important role in the country's overall growth, education infrastructure development is likely to remain a top priority in the coming decade. In this scenario, education infrastructure spending is anticipated to grow significantly over the next decade. The Indian government has taken a number of initiatives, including establishing additional IITs and IIMs and giving educational grants to research researchers in most government institutions. Furthermore, with numerous educational institutions adopting online learning, India's higher education industry is poised for significant transformation and progress in the coming years. India has a key role to play at the international level in the E-Learning business. India is the world's finest E-Learning supplier since it has some of the greatest training experts and educational infrastructure. The future of the E-Learning portal is promising, as India is currently a leader in the IT industry. The Government of India is taking every step possible to improve India's elearning environment through legislation and financial assistance. Not just the government, but several private sector actors are working hard to speed up India's e-learning system. Many international companies are considering establishing an E-Learning system in India. In India, there are more than ten open universities that provide over 500 courses. Distance education is also growing its breadth and pace in India, as it costs half as much as traditional education and allows students to access better and higherquality education without having to leave their homes or jobs. We may conclude that the future of elearning services in India is quite promising, given the growing number of mobile phone users and young awareness.

CONCLUSION

After the United States, the Philippines has become the second largest market for e-learning. By 2021, the industry is anticipated to be worth $1.96 billion, with 9.5 million consumers. By 2026, the online education industry in India is expected to reach US$ 11.6 billion. In the lives of students and working professionals, online education has had a favourable influence. It has provided them with the chance to take extra courses in addition to their education or jobs, as they see fit. Online education has also aided teachers in institutions by allowing them to ask students to study specific parts of the curriculum online that do not require a lot of classroom instruction. As a result, the online study allows instructors to save time so that they may spend more time interacting with students. The quality of education has increased as a result of online courses, and students may now refer to the information at their leisure. The reach of online education is expanding in the digital age, and it will benefit students, professionals, and institutions alike. E-Learning, or web-based learning, will be the future of education in the coming years. It is a gift to society since it is accessible to people from all walks of life. The government should broaden the scope of online education and raise awareness among all segments of society. E-learning is advantageous not only to students, but also to instructors and professionals who want to improve their knowledge and abilities. The growth of the E-Learning system can assist a country like India attains a higher level of economic development, education, and literacy. Online education will give a diverse chance for corporates to grow their commercial prospects, not just for students, instructors, and professionals.

REFERENCE

1. Tamrakar A, Mehta KK. Analysis of effectiveness of web-based e-learning through information technology. *Int J Soft Comput Eng*. 2011;1(3). ISSN: 2231-2307.
2. Littlefield J. The difference between synchronous and asynchronous distance learning [Internet]. 2018 [cited 2020 May 4]. Available from: online educational resource.
3. Gaikwad A, Randhir VS. E-learning in India: wheel of change. *Int J*. 2016.
4. India Today. Digital learning taking shape in India [Internet]. Available from: www.indiatoday.intoday.in/education/story/digital-learning-taking-india
5. Gaikwad A, Randhir VS. E-learning in India: wheel of change. *Int J e-Educ e-Bus e-Manag e-Learn*. 2016;6.
6. Escueta M. Can digital education transform India? *Indian Express* [Internet]. 2015 Aug 17. Available from: Indian Express website.
7. Sathish Kumar AS. Emerging technology on smart class teaching in school education: a literature review. *Int J Sci Res*. 2014 Aug;3(8).
8. Tubaishat A, Lansari A. Are students ready to adopt e-learning? A preliminary e-readiness study of a university in the Gulf region. *Int J Inf Commun Technol*. 2011;1(5).

9. Nelasco S, Arputharaj AN, Paul GA. E-learning for higher studies of India. In: *Proceedings of the Fourth International Conference on e-Learning for Knowledge-Based Society*; 2007 Nov 18–19; Bangkok, Thailand.