

Opportunities and Challenges of Online Teaching-Learning Platforms

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Received 12.10.2021, received in revised form 19.10.2021, accepted 19.10.2021

doi: [10.47904/IJSKIT.11.2.2021.97-100](https://doi.org/10.47904/IJSKIT.11.2.2021.97-100)

Abstract – Online teaching-learning platforms have emerged in last 8 years in various dimensions of education sector which include school, graduation, post-graduation and other training courses. This study analyses such popular platforms through secondary data available. Online learning aids traditional methods of teaching. Therefore, to create a vibrant knowledge economy India must encash on this opportunity and makes every effort to provide quality education to all stratum of the society. The paper also focuses on the merits and demerits of online platforms.

Keywords: Teaching, Education, Quality, Technical Skills

1. INTRODUCTION

Education is a fundamental right in India as per Article 21-A (86th Amendment). The Covid 19 pandemic and changing technologies have pushed us to think about the isolated learner. As per UNESCO Report 2020, more than 157 crore students across 191 countries have suffered education loss and in India more than 32 crore students have been affected due to covid-19 pandemic. Globalization has made online learning a friend of the education system. Knowledge is now, just a click away. There are various platforms launched both by government and private sector to facilitate online learning. We have tried to discuss some popular online education platforms by government (SWAYAM, Diksha, e-ShodhSindhu, e-PG Pathshala, Swayam Prabha, NPTEL) and private sector (youtube, byju's, unacademy, vedantu). After examining these platforms, their benefits and drawbacks have been discussed. An attempt has been made to understand the online learning environment in India and to provide suggestions to minimize harm and maximize gain out of it.

2. MAJOR ONLINE TEACHING-LEARNING PLATFORMS

2.1 Swayam

(Study Webs of Active-learning for Young Aspiring Minds). The Government of India launched SWAYAM on 9th July 2017 after realizing the need for ICT enabled education in a country with such a high percentage of youth in population. SWAYAM delivers free courses for classes 9 to post-graduation. The courses hosted on SWAYAM are in 4 quadrants:

1. Video lecture
2. Specially prepared reading material that can be downloaded/printed
3. Self-assessment tests through tests and quizzes
4. An online discussion forum for clearing the doubts [1].

Those candidates who wish to acquire a certificate need to take a proctored exam after paying a fee.

2.2 Diksha

Digital Infrastructure for School Education (DIKSHA). It is an initiative of the National Council of Educational Research and Training (Government of India). Diksha can be accessed by students, teachers, school heads, parents and others. It includes preference options for languages as well. Digital textbooks and online courses can be viewed for NCERT, CBSE and other state boards across India. Diksha app has been launched in order to facilitate learning through android mobile phones. As on 7th October 2021 there are 4365 courses available and 11, 56, 17,618 course enrolments on DIKSHA platform.

2.3 e-Shodh Sindhu

It is an initiative by the Ministry of Education (Government of India) and is being executed by INFLIBNET centre. e Shodh Sindhu is formed by merging three former initiatives namely UGC-INFONET Digital Library Consortium, LIST and INDEST-AICTE Consortium. The main objective is to provide access to electronic resources including full-text, bibliographic and factual databases to academic institutions at a lower rates of subscription [2].

2.4 e PG Pathshala

It was launched in November 2015 and initiated by MHRD under National Mission on Education through ICT. It provides contents in 70 subjects and has 3 pillars:

1. e-Adhyayan (provides 700+ e Books and video contents)
2. UGC MOOCs (online courses)
3. E-Pathya (offline access study material)

2.5 Swayam Prabha

Considering Covid-19 and lack of resources with a large majority of students, Government of India

launched Swayam Prabha which is a group of 34 DTH channels for telecasting educational programs. These programs will be repeated 5 times a day for students to choose their preferred timings. GSAT-15 is used to telecast contents provided by NPTEL, IITs, UGC, CEC and IGNOU [3].

2.6 NPTEL

(National Programme on Technology Enhanced Learning) is an initiative of IITs and IISc. The courses are free of cost and can be used to enhance concepts in the field of civil engineering, computer science and engineering, electrical engineering, electronics and communication engineering and mechanical engineering and others. The certification can be obtained by giving a proctored exam for Rs.1000 which in turn enhances employability of candidates [4]. NPTEL tries to update courses on new and emerging technologies among which are courses on electric vehicles and renewable energy, design for IoT, business and sustainable development [5].

2.7 Youtube

YouTube is an American video-sharing website headquartered in San Bruno, California. It is a video sharing platform where anyone in the world can upload content free of cost. On a given topic, a learner can find many videos from the best academicians in the world to a trainee teacher. Use of animations and variations in duration of videos provides unique benefits to the learner. One can find a two minute video on a topic or a playlist of 30 videos of 90 minutes each.

2.8 Byju's

The Learning App (Byju's) is India's largest educational app with over 3,00,000 annual subscriptions. This popular application uses high end technology and media to increase learning outcomes. Their method of teaching keeps students interested in a topic and clears their basics.

2.9 Unacademy

Unacademy is an Indian startup formed in 2015 by Gaurav Munjal, Roman Saini, and Hemesh Singh. It offers free and paid courses for various competitive exams. Educators register themselves with unacademy and teach on their website and mobile application. They get remuneration based on courses purchased and views on their videos.

2.10 Vedantu

India's 28th unicorn in 2021, vedantu is an online tutoring platform where several tutors register for free and learners can choose their tutors for preparation of competitive exams or school education.

3. MERITS

3.1 Flexibility and Self Paced Learning

Online platforms give a chance of learning to a large number of students with fewer resources to be put into use. They provide choice to learners as to which course they wish to choose and through which medium. Flexibility of time and place is given. Cost of fuel, transport and attending physical classes is often more than attending classes online. Example- students living in hilly areas can benefit from the place utility provided by online platforms. This in turn reduces absenteeism and dropouts [6].

3.2 Self Motivation

Motivation is needed for a student in distance learning as initiative has to be taken by a student to persist on a course [7]. Time management is also inculcated among students as they schedule their classes and assignments on time creating self discipline.

3.3 Technical Skills

Online learning platforms and pandemic has pushed both teachers and students to look for innovative ways to learn use of Zoom, Google Meet, Microsoft Teams etc for conducting classes and online submissions of assignments have lead to enhanced technical skills in education area. Teachers initially reluctant to use technology are now being trained through various ways by government and institutions to facilitate technology adoption. Research says that a two week faculty development program can significantly change attitudes towards online classes, seeing it as more participatory and interactive [8].

3.4 Reduced Costs

Technology might be able to bend the cost curve for higher education if it reaches the masses. The cost of online classes depends on how exciting the online classroom is created using impactful feature loaded lecture. Online education reduces cost for institutions by less student teacher time and economies of scale. From a student perspective, costs of travelling and living expenses are reduced.

3.5 Communication with Instructor

Doubts can be cleared by chat, email or one to one online doubt clearing sessions. Traditionally it was difficult to communicate with teachers due to low contact hours and introvert nature of students. With advent of new online platforms, students feel free to communicate and resolve their doubts.

4. DEMERITS

4.1 Digital Divide in India

The under privileged group in a society is often unable to access the internet due to poor network connection in remote areas, electricity failure, lack of laptops/smart phones and cannot afford to repair such systems at home [9]. The Government of India has tried to minimize this gap by various schemes like Digital India and Skill India. The use of sophisticated technology in a developing country like India poses a threat to poor and marginalized sections of the society. Online education may widen the knowledge gap and in turn income gap between the rich and poor as the child of poor may not be able to have access to education. This may turn into a dangerous vicious cycle of inequalities.

4.2 Addiction and Physical Harm

Online education has pushed children and adults to increased screen time. Attending classes, submitting assignments, clarifying doubts and online proctored exams have glued this new generation to screens. Spending a lot of time online may lead to internet addiction. Sports and games have taken a back seat and online gaming like PUBG is new friends of this generation pushing them to depression and suicides. Increased screen time puts a strain on eyes and back. Physical inactivity also contributes to obesity and other heart problems.

4.3 Learning Outcomes

Learning depends on interaction, student motivation, knowledge of instructor and course structure [10]. Learning through platforms like you tube may not be very effective as the course structure is not professional and knowledge of the instructor may be questionable. Courses like Nptel and swayam are structured but without an exam, it is difficult to calculate learning outcomes. Often proctored exams have fees which a learner might not be able to afford.

4.4 Technological Competencies of Teachers

Traditionally teachers were knowledge sharers and guides. Now they have to use ICT to disseminate information to students and guide them how to find correct material for study. Technological competencies of teachers are very important in underdeveloped and developing countries to facilitate equitable education.

A stunning 84 percent of instructors said they were having trouble delivering instruction online, with nearly half of them having problems with the internet, including signal issues and bandwidth costs [11].

4.5 Data Protection

Several online platforms ask students to fill in their details. As India does not have clear data protection laws, some sections of Information Technology Act 2008 contain provisions relating to data which are insufficient to meet the requirements of the present day. A case of Byju was reported where data was available on the dark web. This data contained names of students and classes along with email addresses and phone numbers of parents as well as teachers [12]. Such incidents raise alarm regarding the safety of large amounts of data being collected and stored by education platforms. This data contains sensitive information of young students and a data breach could have disastrous consequences.

5. CONCLUSION

With the advent of disrupting technology, new age startups have compelled teaching professionals to adapt to dynamic environment. This can be done by imparting regular technical enhancement skills by government and institutions. These skills will in turn help teachers to improve the learning outcome by making online classes more interactive and interesting. Another major concern is the ill effects of online classes on the mind and body of students. Efforts should be made to reduce screen time by changing course structure. Also, online counseling sessions should be provided to students to avoid internet addiction and feeling of loneliness leading to depression. At last, online education should be used as a means to reduce inequalities. Therefore, efforts should be made to bring aboard marginalized sections of society by upgrading the telecom infrastructure and providing low-cost subsidized equipment for access to online education.

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