

A Study on Existing E-Learning Websites for Quality Education during Covid-19 in India

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Covid-19 has resulted in the shutdown of schools all across India and the world. The demand for e-learning has risen distinctively. Education is essential for everyone now, but no one can reach the physical education sector due to the Pandemic. Still, virtually education platform contacts them and its open for 24/7 for everyone access anytime at anywhere. The present study explores the availability of e-resource platform in India during the Pandemic. Many e-resources Initiated by India's government like SWAYAM, NDL, SWAYAM PRABHA, and many more provide e-resource to its user without charging any cost. The study's main motive is to make aware of Indian students' availability of e-resource and make sure to take proper advantage so that no one in India is deprived of education in Covid-19. e-resource has a vast scope and is cheaper than print study material, and it is a demand of time. No will have to go physically to the classrooms, ensuring sops of Covid-19.

Keywords: *E-Resource platform, NDL, SWAYAM, Shodhganga, eGyan Kosh, Covid-19.*

1 INTRODUCTION

Covid -19 has not only challenged us socially and economically, but it also has significantly impacted our education system. The lockdown and sudden closure of educational institutes have compelled us to move towards education digitization. The teachers now share their lectures, notes, presentations remotely through an electronic medium. The e-mediums like zoom, teams and Google classrooms are used widely by many educational institutes to cover this

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education gap. Students log in with their id, attend lectures and submit assignments.

If the students cannot come to education, education must reach them nowadays, and it is possible with ICT. ICT is playing a considerable role in education during the Pandemic. An e-resource platform is the best way to reach the students. Many initiatives start by India's government free of cost, highly impactful and valuable for all types of learners without any discrimination.

The electronic resource (e-resource) is also known as an online information resource. An electronic Resource (e-resource) is a resource that requires electronic devices to access the resource (information). Example of e-resource: - e-book, e-journal, online database, websites etc.

E-learning or Moodle's concept is not new, but its use has increased significantly in the last few years, especially in pandemic. Moodle is an open-source management system also known as a Learning Management System or virtual learning environment. Martin Dougiamas has developed the concept of MOODLE (Modular Object-Oriented Dynamic Learning Environment) initially. The first version of Moodle was released on 20 August 2002. Moodle has been translated into more than 150 languages.

The paper is organized as section 1 is the introduction of our topic of interest. In section 2, we will study the purpose of our study. Section 3 is related work. Section 4 discusses in detail the architecture of the e –systems. Section 5 analyses the existing e-systems in India. Section 6 discusses the pros and cons of these systems. Section 7 finally concludes the paper.

2 PURPOSE OF STUDY

The main objective of the study is to explore the availability of e-resource platform in India. When studying with e-learning platforms, the students can easily access the information provided by the top renowned universities. Still, also they can keep themselves safe from the deadly disease of coronavirus. The use of e-resource in Covid -19 is highly increased due to its online availability or 24/7 access facility. Students who may not be studying at the top intuition like AIMS, IIT, IIM, NIT or any central universities like BHU, BBAU, DU, etc. but wish to such impulses or universities, they can easily create their account and just one click they can access all the notes or video lecture which are made by one of the best subject teachers. Some other importance's are: - The cost of e-resource is less than a printed resource, Remote access from anywhere at any time, numerous accesses. Etc. Nevertheless, there are also some issues with using e-resource, which are as:-User awareness, lack of security and

privacy, Requirements of hardware and software for access e-resource. Etc. Fig 1, shows how education is impacted by Covid-19. There is a need for awareness of quality e-learning platforms to provide better education to students in India.

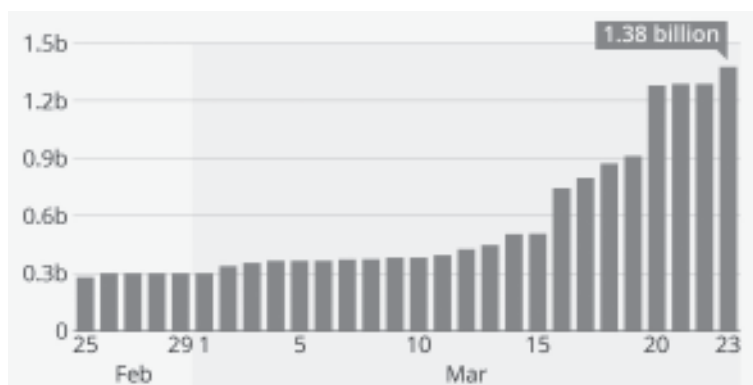


Figure 1 Covid-19's Impact on Education Worldwide

3 LITERATURE REVIEW

The importance, types, issues and challenges of e-resource have been constantly under study since e-platforms. The research suggests that students should be aware of the use and availability of e-resource¹. Similarly, the student's perceptions regarding online learning platform are explored with time. The researchers have used a questionnaire to reach the study's objectives, and the study found a positive response from the responded². A study deeply analyzed the e-pgpathshala and found that it is handy for students, and the researcher suggests that there is a need for an awareness program regarding e-pgpathshala³. It has been analyzed after conducting interviews and questionnaires that the e-learning system is greatly affected by the factors like technology, culture, quality, efficacy, trust, management, financial and technical issues. If these factors are considered, the result will be more impactful e systems⁴. As a result of this pandemic, the e-learning systems has opened more opportunities for the world. The advancements are being made in technological and research.

During the Pandemic, the people are making more improvements in technological sectors to make the transfer to digitization easier. Also, a new research topic is being explored day by day. This gap of distance and collaboration for innovations is being covered by the e-learning platforms, allowing more people from across the world to collaborate and work on something new⁵. E-learning has proved itself cost-effective, uniform, fast mentoring, rapid economic development and fast learning process in Nigeria.

Instructors are a valuable asset in e-learning. Their limitations could really affect the whole process⁶. More than 60% students of postgraduate agreed that e-learning proved beneficial for them. The e-learning from home allowed them to view videos of lectures and short practical session. They viewed the videos any time they want, and their concepts became clearer. However, the hands-on practical could never be replaced⁷.

4 E-LEARNING QUALITY FRAMEWORK

A design framework⁸ provides a designing instruction creation of online e-learning platforms. This framework offers a blend of all three approaches. This will help us create a system that is more efficient in delivering education.

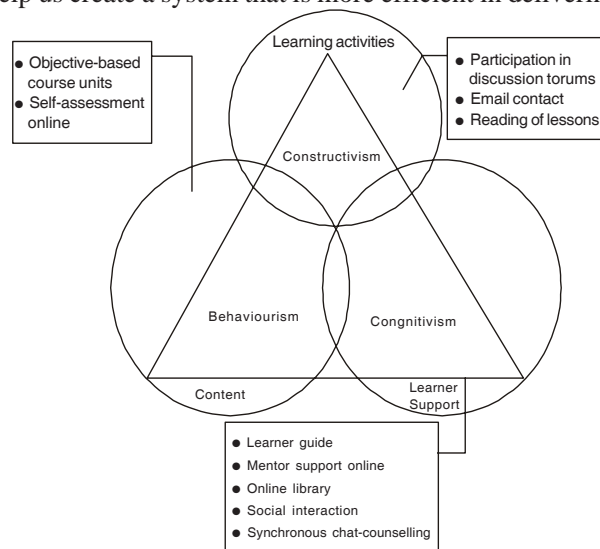


Fig. 1 Design Framework for E-learning Systems

1. **Constructivism:** In constructivism education, the learners construct their knowledge instead of passively taking information. Online approaches of constructivism education are discussion groups, writing emails, social media activities, streaming online and group projects.
2. **Behaviourism:** In behaviourism education, students learn all behaviours by interacting with the environment. This theory focuses on how the student learns. Learning in this kind of theory is achieved through immediate responses and rewards . Self-assessments are an example of behaviourism.
3. **Cognitivism:** This theory focuses on how is information stored and retrieved from the mind. In this area, the learners actively process the

data. The new report is built on existing knowledge. Notes taking and information searching is a process of cognitivism.

The e-learning platform should be a blend of these three schools of thoughts to create a successful system. In the next section, we will discuss the existing e-learning systems of India.

5 EXISTING E-LEARNING WEBSITES

- a. National Digital Library of India, One Library All of India (ndl.iitkgp.ac.in) It works as a virtual repository of e-learning resources with a single-window search facility and aims to support all academic level, including researchers. It is sponsored by the Ministry of Education, India and developed by IIT Kharagpur. Available in 11 languages, including English, Hindi, Gujarati, Marathi and many more. Furthermore, the user can search over 60,001,390 resources. The prime motive of NDLI is to make digital educational e-resource available for citizen of the country.



Fig. 2. ndl.iitkgp.ac.in

- b. SWAYAM PRABHA (www.swayamprabha.gov.in), Free DTH Channel for Education

The SWAYAM PRABHA is 34 DTH channels broadcasting devoted high-quality educational programmes on a 24X7 basis using the GSAT-15 satellite and available 24/7. Narendra Modi, prime minister of India, launched it in 2017. The web portal maintains by The INFLIBNET Centre. All the contents are provided by NPTEL (National Programme on Technology Enhanced Learning), UGC, NCERT, NIOS and CEC. It is only available on DD free dish and Dish TV. It was not available on Tata Sky, Airtel or Videocon DTH service providers. The channels are categorized as:



Fig. 4. ess.inflibnet.ac.in

- d. e-PG Pathshala (epgp.inflibnet.ac.in), A Gateway to all postgraduate courses “e-PG Pathshala is an initiative of the Ministry of Education under its National Mission on Education through ICT (NME-ICT) being executed by the UGC.” e-PG Pathshala offers 70 subjects across all disciplines. It provides more than 20,000 e-texts, 19000 videos by more than 3200 subject experts. The aim of e-PG Pathshala is to provide e-content up to Post Graduate courses level.



Fig. 5.epgp.inflibnet.ac.in



Fig. 6. epgp.inflibnet.ac.in

e. Vidya-Mitra (vidyamitra.inflibnet.ac.in), Integrated e-Content Portal

“Vidya-Mitra: Integrated e-Content Portal” was developed by the INFLIBNET Centre. Vidya-Mitra is Funded under the National Mission of Education through ICT. Vidya-Mitra has 46515 content for undergraduate and 20487 content for postgraduate, and 4753 contents for others. “Vidya-Mitra: Integrated e-Content Portal” offered the facility to search and browse all hosted content. Users can easily access study material, including video, audio, textual study materials, through a single interface.



Fig. 7.vidyamitra.inflibnet.ac.in

- f. **Shodhganga (shodhganga.inflibnet.ac.in), a reservoir of Indian theses:** Shodhganga is the repository of Indian Electronic Theses and Dissertations setup by the INFLIBNET Centre. The Shodhganga is set up using open-source digital repository software called DSpace, developed by the MIT in partnership with HP. The aim is to facilitate open access to Indian theses and dissertations to the academic community worldwide. Five hundred sixty-nine universities signed MOU, and 476 universities are contributing. Shodhganga has also offered an advanced search option.

According to the UGC Notification (Minimum Standards & Procedure for Award of M.Phil. / Ph.D. Degree, Regulation, 2016), dated 5 May 2016, mandates submission of theses' electronic version and dissertations in universities.



Fig. 8.shodhganga.inflibnet.ac.in

- g. **eGyanKosh:** eGyanKosh is a National Digital Repository. It store, index, preserve, distribute and share the digital learning resources. It was developed by the Open and Distance Learning Institutions. IGNOU reserves all rights. More than 38000 numbers of e-book available in PDF format with worldwide availability also offered more than 200 programs. The main motto is to provide digital study materials to the students. Students can easily access resource ant anytime, anywhere without any cost.



Fig. 9.egyankosh.ac.in

h. SWAYAM, Free Online Education

- The SWAYAM stands for “Study Webs of Active Learning for Young Aspiring Mind”. SWAYAM is an online education portal announced by India’s Government in the General Budget presented on 1 February 2017. It was launched on 9 July 2017 by the Ministry of Human Resource Development and the All-India Council for Technical Education (AICTE) with Microsoft’s help. It covers all higher education subjects and skill sector courses. With every student’s motive, access to the best quality of higher education at a low cost.
- Academicians from more than hundreds of institutions throughout the country are involved in developing & delivering Massive open online courses (MOOCs) through SWAYAM in almost all disciplines from senior schooling to Post Graduation.
- The courses hosted on SWAYAM are in 4 quadrants – Quadrant I: e-Tutorial lecture by video, Quadrant II: e- Text: (e-books, pdf, research paper, etc.), Quadrant III: Discussion forum and Quadrant IV: self-assessment tests.

To ensure that the best quality content is produced and delivered by nine National Coordinators have been appointed. They are as following:

- All India Council for Technical Education (AICTE) for self-paced and international courses
- National Programme on Technology Enhanced Learning (NPTEL) for Engineering
- University Grants Commission (UGC) for non-technical post-graduation education
- Consortium for Educational Communication (CEC) for under-graduate education

- National Council of Educational Research and Training(NCERT)for school education
- National Institute of Open Schooling (NIOS)for school education
- Indira Gandhi National Open University (IGNOU) for out-of-school student
- IIMB (Indian Institute of Management, Bangalore) for management studies
- National Institute of Technical Teachers Training and Research (NITTTR) for Teacher Training programme



Fig. 10.Swayam.gov.in

i. NPTEL

- National Programme on Technology Enhanced Learning is the programme executed jointly by seven Indian Institutes of Technology -Bombay, Delhi, Madras, Kanpur, Kharagpur, Guwahati and Roorkee, along with the Indian Institute of Science, Bangalore in 2003. It is funded by the Ministry of Human Resource Development, which is now called the Ministry of Education. The disciplines covered are Mechanical Engineering and Core Science, Electrical Engineering, Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Management Studies and Language.
- NPTEL is the world most prominent online repository for engineering, basic sciences and select humanities and social sciences subjects.
- NPTEL Total Live Courses is 935 and more than 56000 hours of video content; plus 52000 hours of transcribed content; and 51000+ hours

of subtitled videos also YouTube channel for NPTEL is the most subscribed educational channel, 1.8 million+ channel subscribers, 900 million+ views

- Navigating the NPTEL website: <http://nptel.ac.in>

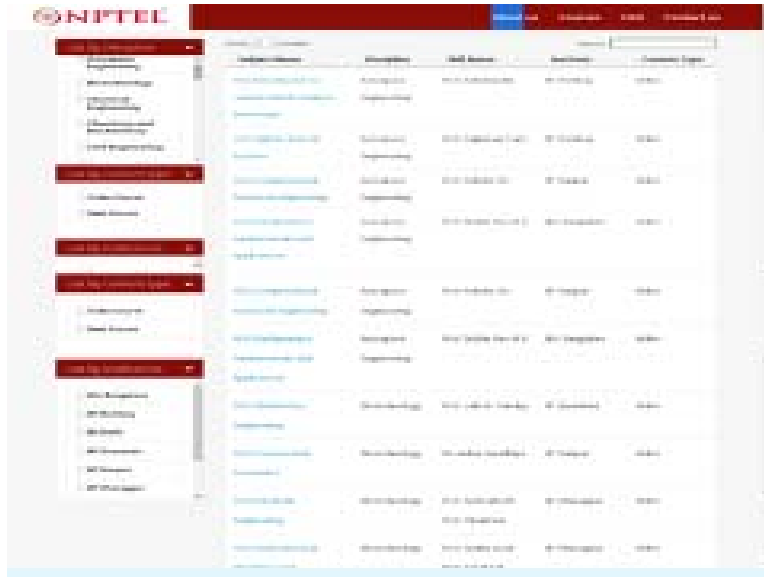


Fig. 11.nptel.ac.in

6 CHALLENGES

Where e-learning has proved itself beneficial, there are some challenges as well. The Researchers have identified the following challenges in e-learning platforms [4] [5]:

- Change Management issues
- System Technical issues
- Financial Support issues
- System quality factors
- Technological Challenges
- Cultural factors
- Self-Efficacy
- Trust Factors

These factors affect the performance of the e-learning system and should be taken into account for future improvements.

7 COMPARISON OF PLATFORMS

6	NDLI	SWAYAM PRABHA	e-Shodh Sindhu	e-PG Pathshala	Vidya Mitra	Shodhganga	eGyanKosh	SWAYAM	NPTEL
Education Level	school - post-graduation	12th, UG, and PG	universities and colleges	postgraduate	Under Graduate, Post Graduate, Secondary & Higher Secondary School, Teacher training and Life-Long Learners	Universities	Undergraduate	School UG, PG	Universities
Content	eBooks, videos, theses, manuscripts, documents, and many more	MOOCs courses, Educational content on TV, Multiple Disciplines	e-resources like journals, eBooks, factual, bibliographies, citations	high-quality text contents, illustrations, videos, tutorials, documents, PDFs, e-books	e-books, e-journals, e-theses	theses	Books, pdfs, notes	study materials, video lectures, discussion forums, and online tests	courses in engineering, science, social sciences, and humanities.
Ownership	Government	Government	Government	Government	Government	Government	Government	Government	Government
Cost	No	No	No	No	No	No	No	No	Certification exam fee
Approach	Cognitivism	Cognitivism	Cognitivism	Cognitivism	Cognitivism	Cognitivism	Cognitivism	Cognitivism/ Behaviourism/ Constructivism	Cognitivism/ Behaviourism
Languages	70	English	English	English	English	English	English	English	English

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