

Online Learning Platforms for Flexible Learning in Educational Framework

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ABSTRACT

The aim of the education is to enable the learner to apply, analyse, synthesize and evaluate the basic concept of Education in classroom settings. Now a days the field of education is not only limited with books but has broadened in various new horizons. In this age of liberalization, privatization and globalization to enhance the quality of teacher education powerful pedagogical strategies required to acquire the higher order thinking. This could be supported by integration of ICT. Modern technology which consists Synchronous and Asynchronous media made education no longer limited to the four walls. Through its access we can't only meet the global requirements but also can exchange our ideas knowledge as well. This has made even far distance places near to our disposition. After using ICT, the classes have become more decorative, lively and interesting. In order to make the best use of interactive environment, it is necessary that all people who are engaged in the educational field and especially teachers and teacher educators should understand sufficiently first the mechanism of technology and should also know what and how latest trends can be incorporated to make environment interactive while teaching. The present study aims to give a capturing glance on the integrating ICT in teaching-learning process which will not only be fruitful for interactive learning but also seems helpful for self-learning. These trends will include use of podcasting, multimedia products, concept of virtual classrooms, use of teleconferencing web-based learning formats and what contribution we are getting from government for ICT access and its dissemination. The study also aims to discuss and analyse about various ICT initiatives started by Government of India for integrating ICT in educational framework. These initiatives are imparting a new dimension in various aspects of teaching-learning process.

Keywords: ICT Trends, Interactive Learning Environment, Government initiatives.

INTRODUCTION:

Technology is important as a means of changing teaching and learning in order to prepare students with the 21st century skills they need to be successful classroom teaching-learning process, the challenges before education, efforts of technology in teaching learning process leads to the changes in the role. Technology provides several tools that teachers can use in and out of the teaching space to enhance student learning outcomes. Technology ushers in basis structural changes that can be integral

to achieving important improvements in the productivity. Technology infuses classrooms facilities to support both teaching and learning with the digital learning platform, such as computers and hand-held devices; expands course offerings, experiences, and learning materials; supports learning 24×7 facilities; builds 21st century skills; fosters student engagement and motivation; and improving learning outcomes. Technology also has the potential to facilitate teaching by ushering in a new model of connected teaching. This model provides teachers to facilitate students for contents, resources, and systems to help them improve their own instructional process. Among the educational technologies applied to classroom settings, game-based learning technologies have aroused increasing interest in the last few years (Spires, 2008). The benefits of these educational technologies are related to the fact that they can simulate real-world phenomena easily, thus favouring a learning mode that is more closely connected to students' personal lives (Spires, Rowe, Mott, & Lester, 2011). It has also been shown that the use of these educational technologies produces a positive effect on students' learning because they involve students in an intrinsically motivating learning setting (Foster, 2008; Papastergiou, 2009).

INTEGRATION OF ICT IN TEACHING AND LEARNING PROCESS:

Along with the globalisation and advancement of technologies, at the current point of time integration of ICT are frequently used for interactive teaching-learning process in the area of education, some of them are given below:

Virtual or online learning: A virtual learning environment is a web-based educational platform for the digitalization facilities of the academic programs usually within educational institutions. The platform facilitates a resources, activities and instructions within an organised program, which provide for the different stages of learning and assessment. Many countries currently facilitate online learning platform that range from supplementing classroom instruction on an occasional basis to enrolling students in regular programs. These learning opportunities provide students dual enrolment, credit recovery, and summer school programs, and can make courses such as Advanced Placement and honours, or availability of remediation classes. These provide facilities to take both core subjects and electives online, provide many supported by online learning materials.

Full-time online schools: The online or virtual schools provides students on a full-time basis learning space. Students registered in these schools are not attending a class as in bricks and mortar school; instead they receive all the instructional facilities and earn all of their credits through the online school.

Blended learning: Blended learning platform combines online educational resources with face-to-face or traditional classroom methods. With some elements of student control over time, place, path, or pace, it requires the physical presence of both teacher and student. While students still attend traditional classroom in four walls with presence of a teacher, face-to-face classroom practices are combined with computer-facilitated activities of content and delivery. It can increase access and flexibility for learners, increase level of active learning, and achieve better student experiences. The resources and supports that students will need in this learning design are task instructions, learning guide, online tools, appropriate FAQs, web links, media files etc.

Open Educational Resources: The Open educational resources are teaching-learning and research resources that reside in the public domain and are freely available for everybody over the Web. These resources lead an important part of any infrastructure for learning and they are range from podcasts to digital libraries to textbooks and games. It is critical to ensure the reliability of open educational resources, to facilitate a standard of quality, integrity, and accuracy like any other educational resources.

Classroom Response Systems ("clickers"): The classroom response system is way to encourage student engagement by using electronic devices that allow students to record their answers to multiple choice questions and allow you to instantly display the results. The anonymity encourages the participation in actively involvement and their answers help the teacher know when further discussion is needed. The role of clickers is to serve as a catalyst in discussion.

Online Projects and Collaboration Tools: Technology advancement has given a platform for collaborating of group. The platform supports student for collaboration to creating new knowledge, reflecting on what they are learning or working together to achieve a deeper understanding of course material.

Information Visualization Tools: Technology can also clarify and stimulate thought through transforming words into visualizing pictures. This facilitating tool can help lead students to think more critically by encouraging them to visually structure information. This is another way to interact with large group of trainees as within three-dimensional environment. The atmosphere seems real but actually it's virtual.

M-learning: The usage of internet on mobile phones also has made web learning accessible for pupils. It provides a fast and accessible platform for self-learning.

Artificial Intelligence: Application of Artificial intelligence will impact education at greater level to individual learning. It helps in searching and assists in problem solving process.

MOOCS (Massive Open Online Courses): MOOCS can be considered as a term or word related to the scalability of open and online education. Currently, MOOCS provide an alternate of formal system of education. The UGC has time to time updates their online as well as technological pedagogy to the learners. Some of them are discussed here:

Videos: Videos as well as Multimedia Modules imparts an extra learning and makes learning interesting to the learner. It performs very useful for conceptual formation among the students in inculcating the concepts with meaningfully as well to their understanding level. It is an interesting and interactive way to make understand any concept of classroom instruction and revising as per need.

Face-to-Face Course to an Online Course: Teaching online always involves different techniques and different tools, whether it holds partially or fully online methods. Teachers may have very clearer about setting and articulating expectations for digital work and participation without any face-to-face contact. Encouraging interaction between teacher and student is an extra task, as it is monitoring student learning as the course progresses. The online framework requires the use of basic technologies to digitalize course materials as well as advancement of the institution's Learning Management System (LMS). Many tools like Skype, Blogs and Twitter can encourage synchronous as well as asynchronous interaction.

ONLINE LEARNING PLATFORMS IN EDUCATION:

Keeping in the view of enhancing the use of ICT in educational framework, Government of India targets many initiatives in collaboration with various stakeholders, which will come into progress to provide its access in a vibrant way with the feeding regular services for various educational programmes.

1) National Mission on Education through ICT (NME-ICT):

It is a Centrally Sponsored Scheme which has been envisaged as to enforce the potential of ICT in teaching-learning process for improving the quality of education by providing in any time anywhere mode learning facilities from 10% at present to 15 % by the end of the 11th Plan period in Higher Education Institutions. It is a milestone initiative of the MHRD to discourse all the teaching-learning related needs of students, teachers and lifelong learners. The three cardinal principles of Education Policy are

access, quality and equity. These principles could be maintained by facilitating connectivity to all colleges, institutions and universities, facilitating affordable access-cum-computing devices at low cost to all students and teachers and providing free accessible high-quality e-content to all learners in the country. The Mission aims to provide connectivity, along with provision for access devices to institutions and learners and Content generation. It has also objectives to develop appropriate pedagogy for e-learning, on-line testing and certification, providing facility of performing experiments with facilitating virtual laboratories, on-line availability of teachers to provide guidance for learners, utilization of available Educational Satellite and DTH platforms, training and empowerment of teachers for effectively use of innovative teaching-learning approach etc. The NME-ICT scheme had started for making ICT enabled teaching-learning environment, but in absence of follow-up mechanism in the scheme, it has not success in enriching ICT facilities in our educational framework.

2) National Digital Library of India (NDLI):

For integrating various national and internal digital libraries in one single web-portal, MHRD has launched National Digital Library of India (NDLI) in the year 2016. The NDLI platform provides many free accessible books in English and the other Indian languages. NDLI hosts 21,000,000+ items in its repository, with over 150,000 volumes in English till January 2019. The portal is open access for all peoples from around the world. Whereas, some contents are accessible only to registered users which are from some popular sources. The digital library provides a platform 24×7 library facilities for students. But, in India most of students don't have proper tools for using digital library. Most of the schools don't have proper computer and internet facilities, so these lacunae have decreased the importance of Digital Library. Therefore, the government should first establish a well-maintained computer lab with high speed internet facilities in all the schools.

3) Study Webs of Active–Learning for Young Aspiring Minds (SWAYAM):

For achieving the three fundamental principles of Education Policy viz., access, equity and quality, Government of India (GoI) initiated a MOOCs programme namely-Study Webs of Active–Learning for Young Aspiring Minds (SWAYAM). The objective of this initiative is providing the best teaching learning resources in open environment to all, including the most disadvantaged groups. It pursues to bridge the digital divide for students who have previously remained untouched by the digital exploration and lack behind the mainstream of the knowledge economy. This facilitate through a well-

developed technological platform which provide all the courses as taught in classrooms and to be accessed by anyone, anywhere at any time. It is developed by AICTE with the help of Microsoft under the guidance of MHRD. Currently, it has capacity of hosting 2000+ courses and 80000+ hours of learning: covering school, diploma, certificate, under-graduate, post-graduate, engineering, law and other professional courses. All the courses are well developed and interactive, prepared by the best academicians of the country and are available, free of cost to the residents in India. Learning environment provided specially through prepared reading material that can be downloaded/printed, self-assessment tests through tests & quizzes and an online discussion forum for clearing the doubts. The courses are hosting on SWAYAM in four phases-(1) video lecture, (2) specially prepared reading material that can be downloaded/printed (3) self-assessment tests through tests and quizzes and (4) an online discussion forum for clearing the doubts. Steps have been taken to enrich the learning experience by using audio-video and multi-media and state of the art pedagogy/technology. Nine National Coordinators have been appointed for ensuring best quality content could be produced and delivered. They are as follows:

Coordinators	Courses
NCERT	School education
CEC	Under-Graduate education
UGC	Post-Graduation education
NPTEL	Engineering
NIOS	School education
IGNOU	Out of the school students
IIMB	Management studies
AICTE	Self-paced and International courses
NITTR	Teacher Training programme

At the end of each course, there is a facility for assessment of the student through proctored examination. The marks/grades secured in this exam could be transferred to the academic record of the students in the form credit. UGC has already issued the UGC (Credit Framework for online learning courses through SWAYAM) Regulation 2016 for advising the Universities to identify courses where credits can be transferred on to the academic record of the students for courses done on SWAYAM.

4) SWAYAM PRABHA:

The SWAYAM PRABHA is a group of 32 DTH channels devoted to telecasting of high-quality educational programmes on 24×7 basis using the GSAT-15 satellite.

The DTH Channels shall cover the following:

- a) Higher Education: Curriculum-based course contents at post-graduate and under-graduate level covering diverse disciplines such as science, arts, commerce, performing arts, social sciences and humanities, law, engineering, technology, medicine, agriculture, etc. All courses are being certification in their detailed offering through SWAYAM, the platform being developed for offering MOOCs courses.
- b) School education (9-12 levels): To help students understand the subjects better the channels disseminates modules for teacher's training as well as teaching and learning aids for children of India. It also helps them in preparing for competitive examinations for admissions to professional degree programmes.
- c) Curriculum-based courses that can meet the needs of life-long learners of Indian citizens in India and abroad.
- d) Assist students (class 11th & 12th) prepare for competitive exams.

It facilitates new content for at least 4-hours Every day which is repeated five more times in a day and allowing the students to choose the time of their convenience for study. The channels are up-linked from BISAG, Gandhinagar. The contents are provided by NPTEL, IITs, UGC, CEC, IGNOU, NCERT and NIOS. The INFLIBNET Centre maintains the web portal.

5) e-Pathasala:

The e-Pathshala has been developed National Council of Educational Research and Training (NCERT) under the guidance of Ministry of Human Resource Development (MHRD), Govt. of India (GoI) for showcasing and disseminating all educational e-resources including textbooks, audio, video, periodicals, and a variety of materials in printable and non-printable form for Students, Educators, Teachers, Researchers and Parents. It provides digital textbooks and learning materials accessible to for all classes and enables participation in exhibitions, contests, festivals, workshops, etc. The platform offering comparable quality of e-content for addressing the dual challenge of reaching out from diverse areas and bridging the digital divide (geographical, socio-cultural and linguistic). All the

concerned stakeholders such as students, teachers, educators and parents can access e-books through multiple technology platforms i.e. mobile phones (android, iOS and Windows platforms), and tablets (as e-pub) and on web through laptops and desktops (as flipbooks).

6) e-PGPathshala:

The MHRD, under its National Mission on Education through ICT (NME-ICT) initiates e-PGPathshala, a gateway to all Post Graduate courses being executed by the UGC. The content and its quality are being the vital role in quality education system. So, the platform provides a high quality, curriculum-based, interactive e-content in 70+ subjects across all disciplines of natural & mathematical sciences, social sciences, arts, linguistics and languages, fine arts and humanities have been developed by the subject experts working in Indian universities and other research and development institutes across the country. It can be accessed as an open educational resource where no teacher support for students is available. Every subject has a team of principal investigator, content reviewers, paper coordinators, language editors, content writers and multimedia team. The contents of e-PGPathshala are also using by SWAYAM for offering MOOCs programme.

7) SugamayaPustakalaya:

“SugamayaPustakalaya” is an online platform that makes accessible content available for Blind and print-disabled people. It is a collaborative effort of several organizations to end the book famine faced by people with print disabilities. Here, disabled persons can access books in diverse languages from various libraries across India. It has also partnered with international agencies like Book share and Accessible Books Consortium to provide you with accessible books from all over the world. The library houses publications across diverse subjects and languages and multiple accessible formats. It has been created by Department of Empowerment of Persons with Disabilities (Divyangjan), Ministry of Social Justice and Empowerment in collaboration with member organizations of Daisy Forum of India (DFI) and powered by TCS Access. School Library, Public Libraries or any such institution can become a member of DFI or subscribe to the online library to offer the entire collection of the SugamayaPustakalaya to their members or students with print disabilities. Educational institutions can also contribute accessible format books produced for their students so that students from other educational institutions can access the same and avoid duplications of creation at multiple locations.

8) e-Granthalaya:

e-Granthalaya is an Integrated Library Management Software developed by National Informatics Centre, (NIC), Department of Electronics & Information Technology (DIET). The application is useful for automation of in-house activities of libraries and to provide various online member services. The initiative has taken with a vision to setup a libraries network to bring all libraries under an umbrella. It aims to provide a platform to see all government libraries well modernized and computerized. The software provides built-in Web OPAC interface to publish the library catalogue over Internet. 'Library and Information Services Division' took over the designing of the software where library professionals were involved in the designing process and, thus, improved the software with enhanced user interface and simplify the work-flow of library functions so that it can suit to all kinds of libraries. The digital software platform is currently integrated many of government agencies libraries and provide a one-step platform for users. The limitation of this platform is not providing facilities to the private and aided institutes/organisations/universities/schools.

9) e-Basta:

In line with the Government's Digital India initiative, this project has created a framework to make school books accessible in digital form as e-books to be read and used on tablets and laptops. The main idea is to bring various publishers (free as well as commercial) and schools together on one platform. In addition to the portal, a back-end framework to facilitate the organization and easy management of such resources has been developed, along with the web-based applications that can be installed on tablets for navigating the framework. The framework, implemented as a portal, brings together three categories of stakeholders: the publisher, the school and the student. It provides them with the following primary functionalities: School/Teachers have to Browse content, pick what suits, organise into bastas (a collection of e-contents); Students have to Identify e-content/bastas of interest and download and Publishers have to Upload and manage content in the portal. Students can easy access to interactive and dynamic content augmented with text, charts, graphics, videos and auxiliary resource. e-Bastas are delivered through the internet no packaging any shipping and hence 'No Wait'. e-Basta's are portable. e-Basta's can be carried in any storage medium without worrying about their weight. It provides a reading platform 'Any Where Any Time'.

10) Saransh:

Saransh is a self-review web portal developed by Central Board of Secondary Education (CBSE), New Delhi in the step to Digital India Campaign with a vision to improve children's education by enhancing interaction between schools and parents and offers a data-driven decision assistance system to help parents in evaluating the strengths and weaknesses of children in taking better decisions for their children's future. The tool helps in identifying the areas of improvement in students, teachers and curriculum and articulates necessary measures to implement change by comparison of results. This also facilitates the parents and students to look at and compare their results at school, state and national level. By the help of this tool information regarding competitions and attendance can be directly shared with parent. Among other benefits, it serves as an analytical tool for analysing data and publishing informational reports. Schools are using this tool for analysing subject performance of all students as a whole which would aid in identifying fields of improvement. Furthermore, the portal is equipped the data of last 3 years from all schools. Hence, a comparative year wise study can be done to recognize the well-achieved areas that still needs improvement. The portal provides a comparative data of students and schools, but a few of parents, teachers and schools are aware about the successful uses of the portal. The portal equipped with the information only available for parents of students studying in CBSE affiliated Schools in class IX, X, XI or XII. Also, the data is complex in for general parents, it is only useful for educated parents. The portal must include the 'frequently asked questions' assistance for analysing the data.

11) SAKSHAT:

MHRD has set up a vocational education programme named, "SAKSHAT" a 'One Stop Education Portal' for 50 crore users. The programme was formally launched by the President A P J Abdul Kalam on Oct 30, 2006. The portal has five functional modules viz. e-journals, e-books, digital library and digital repository. The links of various Olympiads would also be provided in this programme. Even students can interact with their teacher in real time and as well as access e-mail, web blogging, web casting online chat and discussion forum. The high-quality e-content once developed will be uploaded on SAKSHAT in all disciplines and subjects.

The portal would boldly seek to address many of the shortcomings in our education system by bringing together the best experts in the country in their respective fields and best available knowledge resources on the web in the public domain. It would seek to standardize the curriculum and learning

materials across the country and keep them in tune with the latest trends to world over so that Indian learners do not lag behind. Teacher- independent modules could work wonders in remote areas where the learner does not have access to good quality teachers or wants to study independently. Such a system could also enable a lot of community learning and formation of groups of learners of a given calibre from diverse fields to enable fusion of best practices of one field of knowledge with those of the other. It may also galvanize rural communities who may share their problems with each other and find solutions from the locally available knowledge and talent. In case, solutions to problems being faced by a community are not forthcoming within a geographic locale, the horizon could be expanded as the internet enables us to expand the boundaries to include even the entire world. Many educational services like scholarships, testing and certification, student/scholar/teacher/institution ratings, guiding demand and supply of talent through opportunity surveys and forecasting etc. are also expected to be delivered through this portal.

12) Shaala Darpan:

KV Shaala Darpan is an e-Governance platform for all Kendriya Vidyalayas in the country. It aims to improve the quality of teaching-learning process, strengthen school administration, good governance of various schools and service conveyance to the key stakeholders such as students, teachers, parents, schools and community. The web portal includes School Expert System which is an integrated application for schools for encompasses all academic and administrative processes. It is versatile, enhances productivity and performance and most importantly, triggers the growth of each individual within the domain enabling him to become a complete personality. The web portal also includes a Learning Support Platform which supports the entire learning spectrum including blended learning, traditional face-to-face classroom instruction and virtual online curriculum delivery systems. This platform has designed to bring both teachers and students together on one platform which facilitates a user-friendly tools and resources for learning. It has also an Analytics platform providing valuable information to parents about their child's learning activities and progress at school. At the same time, it provides a real-time digital view of the school to the school administration.

13) National Knowledge Network:

National Knowledge Network (NKN) is a multi-gigabit NREN scheme, whose purpose is to provide a strong and robust Indian network which will be capable of providing secure and reliable connectivity

and unified high-speed network backbone for educational institutions in India. Globally, the current trends of research and innovation are shifting towards multidisciplinary and collaborative paradigm. So, this require substantial communication and computational power. In India, NKN with its multi-giga-bit capability aims to connect all universities, research institutions, libraries, laboratories, healthcare and agricultural institutions across the country to address such paradigm shift.

14) Shiksha Vani:

For disseminating crucial information to students and parents in a proper manner, the Central Board of Secondary Education (CBSE) has launched a podcast app 'Shiksha Vani' in 2019. The aim of this platform is to provide up-to-date information regarding educational tools and initiatives to all stakeholders. This can improve educational outcomes, and that is the reason why the board constantly endeavours to be in touch with its stakeholders.

CONCLUSION:

The use of ICT creates open educational resource environment which enables to storage and reuse of information material whenever we required. It also enables the interface among the teachers as well as students. In the 21st century skills, the artificial intelligence is booming the world and most of things are possible by the technological based applications like "access to information" which considered to be one of the most important benefits of the uses of ICT in educational framework. Day to day changes are progress and fade very quickly. It represents things in more decorative way which makes teaching and learning more interesting and interactive as well as encouraging the student's pace of self-learning. This system provides a cohesive environment for learners to do programming activities without any restrictions. The ICT integration in teaching-learning also allows teachers to effectively monitor their teaching methods, techniques and educational progress of students and provide regularly feedbacks for them. The Government of India (GoI) initiates various policies and programs for integrating ICT in education and developed certain online platforms for educational framework, Apart from having enabled tele-communications and ICT policies, government, apex bodies and higher education institution are trying their level of best to achieve the goals by providing new initiatives for developing new dimensions in the teaching learning process. Hence, we can expect the developmental scenario is need of the hour for this country and to develop the government, apex bodies and higher

education institution of their own strategies for more effective ICT content delivery and media deployment and sustainability.

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