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# New facets of learning during the COVID-19 pandemic in Higher Education in India

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## ABSTRACT

India has been facing major challenges in many sectors, but the worst situation is in the education sector during COVID-19 pandemic. Class room learning was temporarily stopped as in other nations around the world to control/stop fast spread of the coronavirus mutants. Educational institutions have been suffering from the extension of the pandemic even after reopening. Hence, they are adopting smart solutions to overcome various challenges of the pandemic. It is not an exaggeration that COVID-19 has changed education forever. New trends have been adopted in the learning process of higher education to face the pandemic. Central and State Governments are also exploring online learning platforms to access educational resources. The present study focuses on the various online learning initiatives, Digital initiatives of the Department of Higher Education (MHRD) and the University Grants Commission (UGC), MOOC platforms, tools to create digital learning content and video collaboration tools that are being used to overcome the learning challenges in Higher education during the pandemic.

**Keywords**: *COVID 19 pandemic; Digital initiatives; MOOCs; video collaboration; Higher education*

## INTRODUCTION

All organizations including educational institutions across the world were closed during the pandemic to stop the fast spread of COVID-19 and mutations such as Alpha, Beta, Delta, Gamma, and Omicron. In 2020 UNESCO reported that more than 91% of the world's student population in schools/colleges didn't go to school. In this period learning took place online, if not offline and data was transmitted through virtual media. Assessment of the student's performance can be measured through exams but most of the exams were cancelled, and some were postponed for a couple of months. The teacher and student community has been suffering with various issues related to online learning and are struggling to have access to uninterrupted Internet services. As a result, educators had to be come up with clever arrangements to address the issue of the pandemic through the utilization of online instruction. This article is an attempt to provide an overview of online initiatives, Digital learning management systems, MOOCs, tools to create digital learning and video conferencing tools.

## METHODOLOGY

This paper presented is based on a review of several online research articles published in magazines, research reports and other studies. Some diaries and e-content related to the online learning program were also perused to identify issues for online learning during the COVID-19 pandemic. The digital learning management system and tools adopted to overcome the challenges of higher education is presented in this article.

### Objectives

- To present some successful tools that help the teaching-learning process in higher education during the pandemic

- To understand the new methods of learning amidst COVID-19 used by UGC and MHRD.

## NEW FACETS OF LEARNING IN HIGHER EDUCATION

### HRD and UGC digital initiatives:

There are several ICT initiative digital platforms of the UGC and MHRD which can be accessed by all stakeholders in the education sector such as students, teachers and researchers. The following is a list of computerized programs initiated by the UGC and MHRD to join schools, intermediate, UG and PG level instructions.

***Table 1:*** *UGC and MHRD digital platforms and their websites*

| Online Platform | Website |
|---|---|
| SWAYAM Online Courses | https://storage.googleapis.com/uniquecourses/online.html |
| UG / PG MOOCs | https://ugcmoocs.inflibnet.ac.in/ugcmoocs/moocs_courses.php |
| e-PG Pathshala | epgp.inflibnet.ac.in |
| e-Content courseware in UG courses | http://cec.nic.in/ |
| SWAYAMPRABHA | https://www.swayamprabha.gov.in/ |
| CEC-UGC YouTube channel | http://www.youtube.com/user/cecedusat |
| National Digital Library | https://ndl.iitkgp.ac.in/ |
| Shodhganga | https://shodhganaa.inflibnet.ac.in |
| e-Shodh Sindhu | https://ess.inflibnet.ac.in/” |
| Vidwan | https://vidwan.inflibnet.ac.in/ |

*SWAYAM Online Courses* provides the finest education assets for teaching and learning already presented on the SWAYAM portal. UG / PG MOOCs learning material provides for SWAYAM UG and PG (Non-Tech) archives*. e-PG Pathshala* handles high-quality, curriculum-based, content of Graduate in Social Sciences, Arts, Mathematics, Fine arts, Humanities and Sciences; and e-Content courseware in UG courses with around 24,110 substance modules present. *SWAYAMPRABHA* provides 32 DTH channels that offer curriculum based high quality course content in all streams. *CEC-UGC YouTube channel* offers free curriculum-based unlimited courses. The *National Digital Library* is an advanced store of huge sums of instructive content in an assortment of designs and gives back intuitively for driving Indian languages for all levels of education. *Shodhganga* is an Indian Electronic Theses and Dissertations for investigate researchers to develop their Ph.D. theses to make them accessible to the community via open access*. e-Shodh Sindhu* provides access to current and archived relevant and peer-reviewed open access journals and several books, citations and facts*. Vidwan* is a proficient information base that provides data to increase proficiency in multidisciplinary courses.

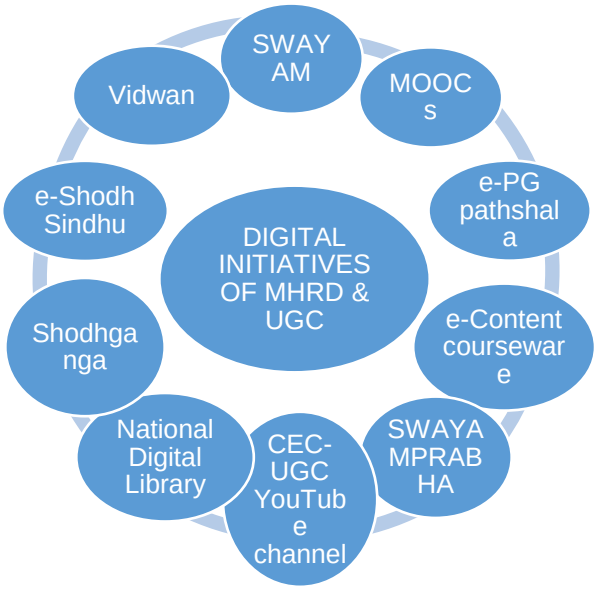


***Figure 1:*** Digital Initiatives of MHRD and UGC

**Digital learning content Tools:**

The tools used to create content for digital learning specified by UNESCO are as follows:

*Pear Deck* is the educational technology company tool used for designing educational content with various integrated features. *Thinglin*k is used to create multimedia resources like images, videos, and other resources. *Kaltura* is a tool for Video creation and is a management tool with learning management systems integration. *Squigl* is a quick video maker for learning development in education, training, and learning. *EdPuzzle* is software used to create interactive video lessons. *Nearpod* is used to create interactive lessons, interactive videos, formative assessment, and gamified learning, among other resources. *EduCaixa* provides entrepreneurship, communication, STEM and big data courses in Spanish language. *Trello* is a tool of visual collaboration that helps professors and teachers in classroom organization. *Buncee* helps in the creation and sharing of learning content in visual format such as newsletters and presentations.

The tools and the associated websites are shown in Table 2 below.

***Table 2:*** *Digital learning content tools*

| Name of the Tool | Website |
|---|---|
| Pear Deck | *https://www.peardeck.com* |
| Thinglink | https://www.thinglink.com |
| Kaltura | https://corp.cultura.com |
| Squigl | https://squiglit.com |
| *EdPuzzle* | https://edpuzzle.com |
| Nearpod | https://nearpod.com |
| EduCaixa | https://educaixa.org |
| *Trello* | https://trello.com |
| Buncee | https://app.edu.buncee.com |

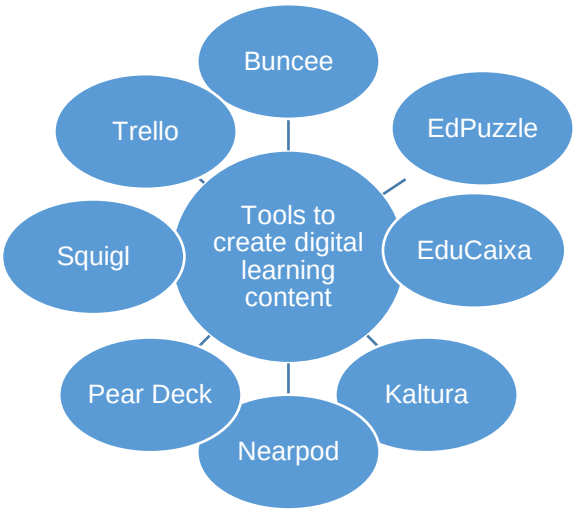


***Figure 2:*** Tools to create digital learning content

Other tools not shown in Figure 2 above, that are used for digital learning content preparation are: *Prezi, Haiku Deck, Scratch, Animoto, Pixton, BoomWriter, Explain Everything, Educreations, Glogster, Flipsnack, Padlet, VoiceThread, StoryJumper, Storybird, Quizlet, Socrative, Edmodo, Schoology, Piktochart*, and *Visme*.

**Interactive Video collaboration tools:**

To conduct live classes, conferences, and other official meetings the video collaboration tools that are useful include:

- **Teams:** Microsoft Company produces Teams software to make video calls, chat, share files and collaborate.
- **Skype:** A video conferencing tool used for desktops and other devices.
- **Zoom:** A cloud platform used often during the lockdown period as a video collaborative tool.
- **WhatsApp:** A mobile application for video and audio content sharing with limited participants.
- **DingTalk:** A mobile workplace for video conferencing support, workflow management, attendance tracking, calendar management, etc.
- **Lark:** Supports various languages such as Japanese, Korean, Italian and English for numerous tasks like chat, calendar, creation and cloud storage.
- **Hangouts Meet/Google Meet:** Helps in Video calls, Google workspace, docs, messaging and tasks.
- **WeChat Work**: In this video collaboration tool a maximum of 300 participants can be involved in video/audio-conferencing. It is available in English and Chinese languages. It also supports content sharing, messaging, etc.

Other video collaboration tools not shown in Figure 3, that are available include *Dialpad Meetings, TrueConf Online, FreeConference, Lifesize Go, Slack Video Calls, Facebook Live, YouTube Live, GoToMeeting, Bluejeans*, and *Cisco WebEx*.

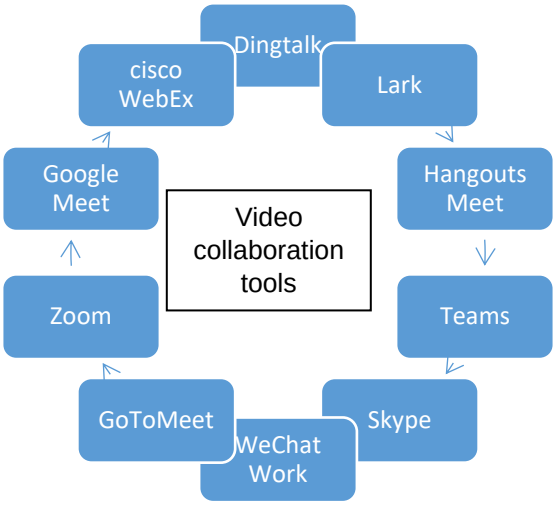


***Figure 3:*** Video collaboration tools

**Digital Learning Management System:**

Online learning management system applications provide platforms for learning, documentation, reporting and assessment among other activities. These are shown in Table 3 below along with the associated websites.

***Table 3:*** *Digital learning Management Systems and websites*

| Digital LMS | Website |
|---|---|
| CenturyTech | https://www.century.tech/ |
| ClassDojo | https://classdojo.com |
| Edmodo | https://new.edmodo.com |
| Edraak | https://www.edraak.org/en/ |
| EkStep | https://ekstep.org/ |
| Google Classroom | https://edu.google.com/ |
| Moodle | https://moodle.org/ |
| Nafham | https://www.nafham.com/ |
| Paper Airplanes | https://www.paper-airplanes.org/ |
| Schoology | https://www.schoology.com/ |
| Seesaw | https://web.seesaw.me/ |
| Skooler | https://skooler.com/ |

*CenturyTech* is a team of experienced teachers, neuroscientists, and technologists who share knowledge. *ClassDojo* builds the classroom community by connecting teachers, students and parents. *Edmodo* connects all learners with the people, network, global education and resources needed to reach their full potential. *Edraak* is an online education resource for schoolteachers and learners. *EkStep* supports literacy and numeracy as an open learning resource platform.

*Google Classroom* helps higher classes connect and communicate virtually. *Moodle* is a globally supported and Community-driven open learning platform. *Nafham* is an online learning platform in Arabic language hosting educational video lessons that correspond with the Syrian and Egyptian curriculum. *Paper Airplanes* is a video conferencing platform that matches individuals with personal tutors for a period of 12-16 weeks and is available in Turkish and English.

*Schoology* is a tool to support learning, instruction, grading, assessment, and collaboration. *Seesaw* is another tool that enables the creation of learning resources and collaborative digital portfolios. *Skooler* is a tool supported by Microsoft Office to enhance learning through an education platform. Other LMS sources not shown in Figure 4 below, are available such as: *Mindflash, SkyPrep, ProProfs LMS, iSpring learn, Canvas, Litmos, Blackboard*, and the *Joomla LMS*. Users can choose based on their requirements.

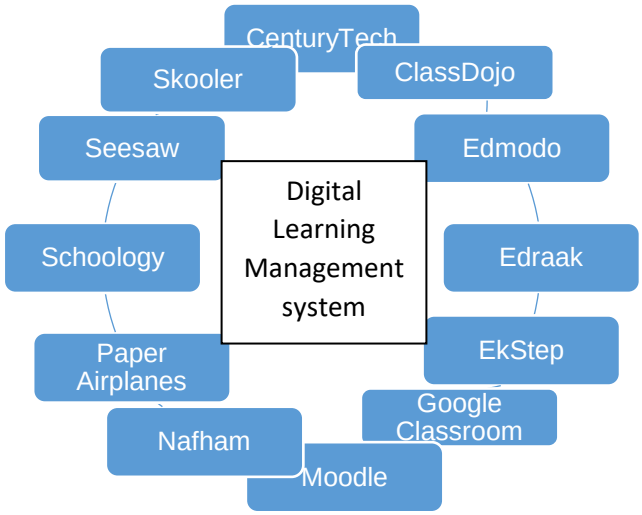


***Figure 4:*** Digital Learning Management Systems

**Massive Open Online Course (MOOC) Platforms**

Some of the MOOC platforms available are presented below and the associated websites are shown in Table 4.

The *Canvas Networ*k offers free courses for teachers in order to support professional development and lifelong learning. *Alison* provides English, French, Spanish, Italian and Portuguese language online courses from experts. *Coursera* offers professional online courses taught by professionals from well-recognized companies and universities. *iCourse* offers Chinese and English language courses for university/PG students. *TED-Ed* Earth School offers online lessons for 5-week periods during April (Earth Day) to June (Environment Day). *European Schoolnet Academy* offer courses in English, Italian, French and other European languages for professional development of teachers. *Udemy* offers Spanish, Portuguese and English language courses on Information and Communication Technology skills and programming. *EdX* provides online courses with experts

from top educational institutions. *Future Learn* provides online courses to help learners study and build professional skills and connect with experts. *Icourses* provide courses for PG/University students in Chinese language, while *XuetangX* provides Chinese and English on different subjects collected from various universities.

***Table 4:*** *MOOC platforms and websites*

| MOOC platforms | Website |
|---|---|
| Alison | https://alison.com/ |
| Canvas Network | https://www.canvas.net/ |
| Coursera | https://www.coursera.org/ |
| European Schoolnet Academy | http://www.eun.org/ |
| EdX | https://www.edx.org/ |
| iCourse | https://i-course.com/ |
| Future Learn | https://www.futurelearn.com/ |
| TED-Ed Earth School | https://ed.ted.com/earth-school |
| Udemy | https://www.udemy.com/ |
| XuetangX | https://www.xuetangx.com/global |

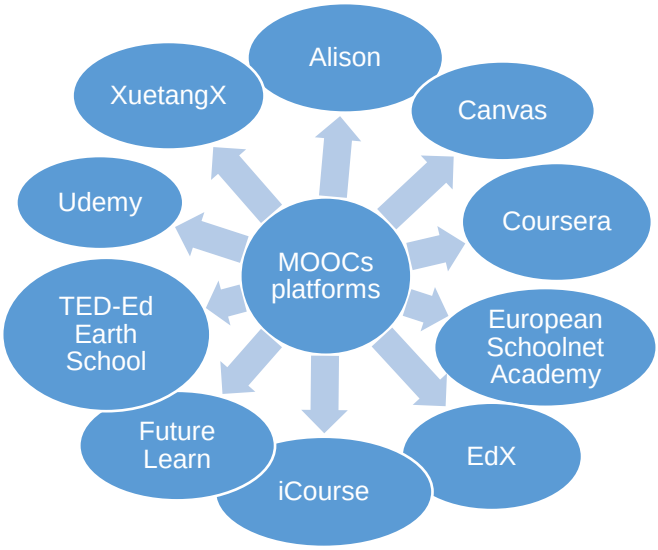


***Figure 5:*** MOOC Platforms

## CONCLUSION

In higher education nowadays, learning through an online platform is the most common way to overcome the access issues associated with the pandemic. The Government of India has propelled different online learning gatherings to encourage instructive exercises amid COVID-19. The Online Learning System uses different online programs to spread classroom framework and offer

assistance for students and instructors to collaborate. Employing an assortment of online learning innovations, instructors can assist with development of student skills by conveying a real-time, reliable video conference presentation. The future learning process is in online learning as it considers the potential for an alternative instructional method of learning in today's world. Be that as it may, the essential steps ought to be taken to prepare all instruction partners within the online learning environment. The government and the instructors and teachers must embrace an approach to providing free web access and free advanced devices for all students to advance online learning that keeps individuals locked in during closure of educational institution to remain secure from the pandemic. The experts believe that the sudden shift from the classroom learning to online learning will continue after the pandemic. We must wait to see, how these new facets of learning in higher education leads the future learning.

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