



ROLE OF DIGITAL EDUCATION SYSTEM DURING AND POST COVID-19

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ABSTRACT:

In the Current Covid-19 Pandemic all Educational Institutes across the world is adopting Online Teaching. Classes are conducting online, Examinations are conducting online, and Assignments are submitting online, students assessments are doing online. To perform all these activities online an educational institute requires a strong Digital Education System. Digital Education System Provides a better platform where educational institutes can move towards online teaching, assessment, examinations system.

The Basic requirement of Digital Education System is the Internet Connectivity between Teachers and Students. So For countries like India, this is a good opportunity to strengthen the internet connectivity across rural India. Every village and towns in India should be digitally connected for better interaction between the students and teachers.

Educational Institutes have “a sort” of infrastructure to connect students but the experience shows that not all students had good interaction due to various reasons. Some of the students are quick to adapt to this system and some take little longer time to acquaint with this system. Thus Proper Training is also required to train the students and teachers about using Digital Education System.

In section –I of this Paper we will give the brief introduction of Digital Education System. In Section-II we will introduce one Digital Education System i.e. Google Classroom in detail. We will see features of Google Classroom, How to Use it, Implementation, advantages and benefits. In Section III we will see Challenges in adopting and implementing digital education system and Conclusion in Section IV.

Keywords: covid-19, Google Classroom, Pandemic, India.

Section – I

At this point, we don't know the extent to which COVID-19 will cause some proportion of colleges and universities to close down or merge. The most vulnerable of tuition-dependent institutions, particularly the ones already facing demographically driven declines in demand, will be the hardest hit by the pandemic.

1.1 Emerging Trends of Digital Education:

Digitalized classroom/Flipped Class rooms a growing Trend

Technology is leading to a revolution in the way we learn. It is helping solve the problems of scale, quality of education, and learnability of the student.

Teachers can now reach the full classroom through digital screens, enabling each child to get the same base content.

Student engagement is higher as it combines various instructional styles. And each student gets exposure to world-class education, something that was just not available in a chalk and talk approach. Each student gets in contact to world-class education, which is not easy to impart by the traditional white chalk and black board teaching. This new learning is more interesting, personalized and enjoyable.

Video based learning.

Video-based learning makes education engaging, entertaining and exploring. The interactive

preface of this segment ignites learning with a pedigree of learning out of leisure with creativity, fun and entertainment on cards via the wonderful Apps, podcasts, videos, interactive software, eBooks and online interactive electronic boards.

Video-based learning as a part of digital marketing has geared up in Indian Education Sector and has made education engaging, entertaining and exploring. It enables learning with a pedigree of learning out of leisure with creativity, fun and entertainment on cards via the wonderful Apps, podcasts, videos, interactive software, e books and online interactive electronic boards.

Massive open online course (MOOCs) & Other distant learning programs

Talking about the popularity of MOOCs in India, India is the second biggest market for MOOCs in the world, after the USA. It is however expected that India in the coming years will supersede the USA. Our country has the second largest population in the world after China and is the third in terms of university enrollment worldwide. Respectively, the USA and China are first and second for university enrollment at the moment but this may soon change.

A massive open online course (MOOC) is an online course aimed at unlimited participation and open access via the web. Online distant learning programs give a great opportunity to avail high quality learning with the help of internet connectivity.

1.2 Advantages of Digital Learning

No Physical Boundaries

Digital Learning has no locational and time restrictions. In case of face-to-face learning, the location limits the group of learners to those who have the ability to participate in the area. But this is not the case in digital learning. In digital learning, there is no physical restriction and the learner can attend the sessions

anytime, anywhere according to his/her comfort.

More Engagement

Digital learning is a more engaging experience as compared to traditional learning. Through digital learning, a course can be designed in a way that makes it interactive and fun through the use of multimedia. Even, the more recently developed methods of gamification can be used to enhance the engagement factor.

Cost Effective

Digital learning is cost effective way of education as compared to traditional learning. This is directed towards both learners and teachers. In digital learning, here is a good chance that you don't have to pay exorbitant amounts of money to acquire textbooks for school or college. As textbooks often become obsolete after a certain period of time, e-learning is definitely a cost effective way of learning because of the reduced cost.

Comfort Zone

Comfort zone can be established in digital learning as you can study at the time that suits you. In case of traditional learning where all the students have to present in the class when the teacher is teaching. The same is not the case which digital education. In digital education, the student can study at the time of his own comfort.

Section-II

In this Section we will briefly explain the Digital Education System **"Google Classroom"**.

2.1 What is Google Classroom?

- The Google Classroom: a free web service by Google: aims to simplify creating, distributing and grading assignments in a paperless way.
- The primary purpose is to streamline the process of sharing files between teachers and students.
- "Classroom is designed to help teachers create and collect assignments paperless,

including time-saving features like the ability to automatically make a copy of a Google document for each student.

- It also creates Drive folders for each assignment and for each student to help keep everyone organized.
- Students can keep track of what's due on the Assignments page and begin working with just a click.
- Teachers can quickly see who has or hasn't completed the work, and provide direct, real-time feedback and grades right in Classroom.”
- Teachers can monitor the progress for each student, and after being graded, teachers can return work, with comments.
- However, to use it in Educational Institute, institute need to sign up for the Google for Education package by providing domain and host details. For Personal Use you can use your Normal Gmail Account.

2.2 How to Create Google Classroom

- First login your mail by using personal gmail account or G-Suite Account
- To start Google classroom visit the site : <https://edu.google.com/products/classroom/> and Click on Goto classroom
- OR just <https://classroom.google.com/>
- After Logged in we can see the existing classes.
- To create new class, click on plus symbol as shown above.

2.3 How do I sign in to Classroom (Which Account is Used) ?

Depending on your learning setting, sign in to Classroom with one of the following user account types:

School account: also known as a G Suite for Education account, this account is set up by an accredited school. It looks like you@yourschool.edu. If you don't know your G Suite for Education account details, ask your teacher or the school's IT admin.

Personal Google Account: This is set up by you, or your parent or guardian. Typically you use a personal Google Account outside of a school setting, such as a homeschool. It looks like you@example.com.

G Suite account: This is set up by your organization's admin looks like you@organization.com

2.4 Creating and Managing Classes

- As a teacher, one of the first things you'll do in Classroom is create a class for each of the classes you teach.
- In a class, you can assign work and post announcements to students.
- Anyone over 13 can create a class using a personal Google Account.
- However, if your school has a G suite for Education account, you should use that email to create your classes. For details, go to About Classroom user accounts.
- On the class page, Click Add + > Create class, Click on create class to proceed further
- After This Specify Class name, Details of class is □ Section, Subject & Room, After this Click on Create Button

2.4 Invite/Join your students to a class

- Each class has a code as displayed above
- Using the class code, students and teachers can join the class
- Other way of inviting is sending individual mails to join the class
- To enroll students in your class, you need to invite them or give them a code to join.
- (Students can go to Google class room and type in the code for your classroom)
- Using the Classroom Code to join
- Students have to go to Google Classroom and Click on the plus sign in the right hand corner then Click on join class and type classroom code and click join.
- Another way to invite the students via email to join Google class.

- Students will get a link in their email to join the class.

2.5 Add a co-teacher to a class

- You can invite teachers to join your class to help coordinate class activities.
- If you use Google Groups, you can also invite a group of co-teachers at the same time.
- Your G Suite administrator might only allow teachers and students from your school to join classes.
- If you want to add a teacher from another school, contact your admin to update your domain's class membership settings.
- What can co-teachers do?
 - Co-teachers can perform the same tasks as the primary teacher, including:
 - Create assignments
 - Give feedback on student work
 - Enter grades
 - Post on the class stream
 - Access the class Google Drive folder
 - Email teachers and students
- Co-teachers cannot:
 - Delete a class
 - Remove the primary teacher from a class
 - Mute another teacher in a class

2.6 Share Something with Your Class (Post Messages/ Share Contents with your students)

- This Feature let a teacher to upload resources of their subject that could be handouts, Assignment, Project Work etc.
- Teacher can post some Announcements for whole class like Notices, Time Table, etc.
- To do this, first Teacher has to open their Google classroom and on home page click on Share Something with your class.
- Teacher can type their Message in the given Text Area.
- Teacher can attach Resources from Local PC Drive/ Google Drive/ Link by clicking on Add button.

- Finally Teacher has to click on post button to immediately post to students, or if teacher wants to schedule they can schedule by clicking on side arrow of post button.

2.7 Assignments in Google Classroom

- Google Classroom eliminates sharing issues by placing the document in the teacher and the students Google Drive immediately.
- Students simply need to press the “turn in” button within Google Classroom to let the teacher know they are ready to have their work assessed.
- Teacher Can Give Following Types of Assignments in Google Classroom
 - Collaborative Group Assignments
 - Individual Writing Assignments
 - Note taking templates
 - Tests and Quizzes
 - Test Prep
 - Project Based Learning

- Teacher can attach a document from your computer, from your Google Drive, a YouTube Video, or Attach a Link with the Assignment.

2.8 Creating, Assigning and Grading Assignments in Google Classroom

- Paper less assignment is a key feature of Google classroom
- Teacher can Create Assignment and Assign to all students from their Google classroom.
- To Create Assignment teacher has to click on Classwork then click on Create Button and then click on Create Assignment button. Following Screen Explain.
- Teacher has to enter Title, Description of Assignment.
- Attach File from your Local/Google Drive or link/you tube video of your assignment.
- Teacher can set total points/grade of assignments and also due date of assignment.

2.9 Assessing and Grading Assignments of students (Tracking your Students Progress)

- Teacher can Assess Assignment/Work returned by Student and Assign Grade to the Student.
- After Assessing all students assignments teacher can return Grades to the students
- Turned in: Shows List of Students Return/Completed Assignment and remain to assess by teacher.
- Assigned: Shows List of Students has not Return/Complete Assignment
- Graded: shows List of Students Assessed and Graded by Teacher

2.10 Creating and Grading Online Exam/Quiz Assignments

- Teacher can Create an Online Quiz (MCQ) Assignment
- Go to Classwork and Click on +Crate Quiz Assignment
- On Create Quiz Assignment page Click on Blank Quiz Google form it will open blank Google form then Prepare All Questions in Google Form
- Assign Immediately or Schedule Quiz for Students
- Students can see Quiz Assignment in their classwork and appear for the quiz.
- Teacher can Import all Grades of Quiz Assignment and Return Grades to Students
- Teacher has to enter Title and Instructions of the Online Quiz.
- Google Classroom provides Blank Quiz Google form to create your Online Quiz.
- Teacher has to enter all their questions in this Google Quiz Form.
- Teacher has to keep Grade Importing Option ON; it is used to import all students' grades from Google quiz form into your Google classroom.
- Teacher can set total points/grades of online quiz.

- Teacher can set time limit for Exam by using Due Date and Time option.
- Teacher can Immediately Assign or Schedule the Quiz.
- Students will see this online exam in their classroom and can appear for this exam.

2.11 Importing Grades of Quiz Assignments

- During Exam Time teacher can track how many students has finished their exam and how many students pending by seeing Turned in Count and Assigned count respectively.
- When all students finished their exam teacher can Import all Grades of Quiz Assignment by clicking on Import Grades.
- It will Import all grades from Google Quiz Form into your Google Classroom
- Teacher can Return Grades to their students

2.12 Creating Google sheet of All

Assignments Together

- Teacher can create a single Spread sheet of all Class Assignments where you can see grades of all assignments of all students.
- It shows all assignments grades in a single sheet
- It creates individual column for each assignment grades of all students.
- Teacher can get Consolidated Grade Sheet of all Students.
- Teachers can Download Excel File.

Section III

Challenges in adopting and implementing Digital Education System

3.1 The Infrastructure:

It is a problem that both Educational Institute and students face. Most schools do not have IT infrastructure that can support large-scale eBooks and digital curriculum distribution. While a mature market like the United States has access to fast internet that can support large data downloads required for digital books, most of the developing world still struggles with this.

3.2 Resistance to change:

Let's face it, the biggest impediment to technological change has never been technology itself, rather it has been the people affected by the change. The teachers, administrators, librarians, and parents are all stuck in old ways of learning. The challenge lies in trying to get them to adapt to digital ways of learning.

Every improvement has two sides of coin, with one leading to advancement and development and other relates to certain challenges associated with the implementation of this advancement. Unfamiliarity of employees towards technology is one of the biggest challenges of Digital Learning, which the managers need to work with it.

3.3 Content creation:

Digital learning is not limited to converting existing content and books to digital formats. In order to have its full effect, digital learning in institutes must be accompanied by dynamic and interactive created content. This curated content consumes time and effort that are often the reason for the increase in implementation costs.

3.4 Technological changes:

Digital curriculums are not one time investments. The curriculum needs to be constantly upgrading the platforms as and when technologies change. Technology shifts can have an important impact on existing content.

3.5 Learners Motivation

Classroom which are run in the form of a seminar and discussion have the advantage of accountability and supervision. One of the common challenges in digital Learning is that, left to their own devices, employees may not explore the course material. Even worse, employees may resent using their own time to do coursework, rather than enjoying the "vacation" from their everyday responsibilities afforded by an in-person seminar.

3.6 Technological Skills of Learners

The Digital Learning implementation will be dependent upon the computer literacy of the employees using it. The ability of the learner's to access and interact with the course material dictates the utility he will get out of the program.

3.7 Evaluating effectiveness

Yet another important challenge of Digital Learning is the task of determining whether the course is having the intended effect. In the absence of pop quizzes and report cards, how can an employer tell whether the eLearning implementation is achieving its goals?

SECTION-IV

CONCLUSION

At this point, we don't know the extent to which COVID-19 will cause some proportion of colleges and universities to close down or merge. So Every Educational Institute's Teachers and Students should adopt and use Digital Education System for Online Teaching and Learning.

With so many different ways to define e-learning and the educational approaches that can be taken in these learning environments, it is the conclusion of this author that e-learning is an innovative approach to learning. However, in order for learners to be successful in this learning environment the challenges to e-learning must be overcome with support and best practice solutions.

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Fig. 1

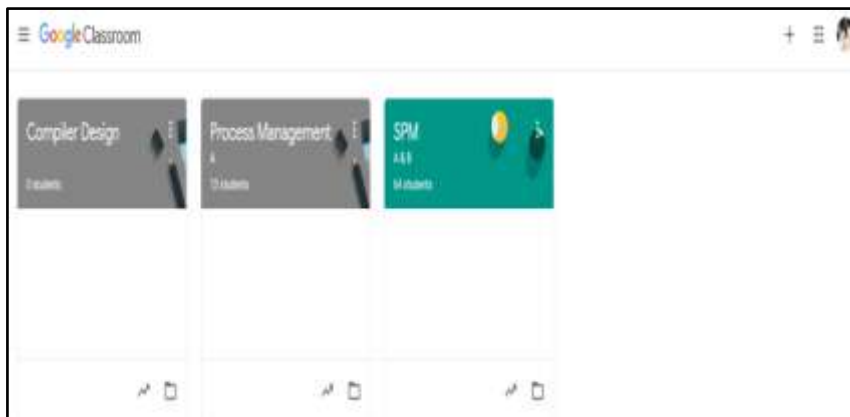


Fig. 2

Create class

Class name (required)

Section

Subject

Room

Cancel Create

Fig.3



Fig.4



Fig.5



Fig.6

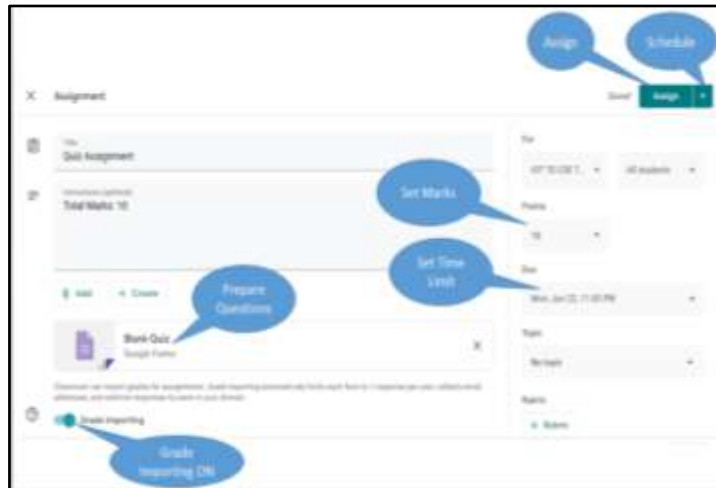


Fig.7

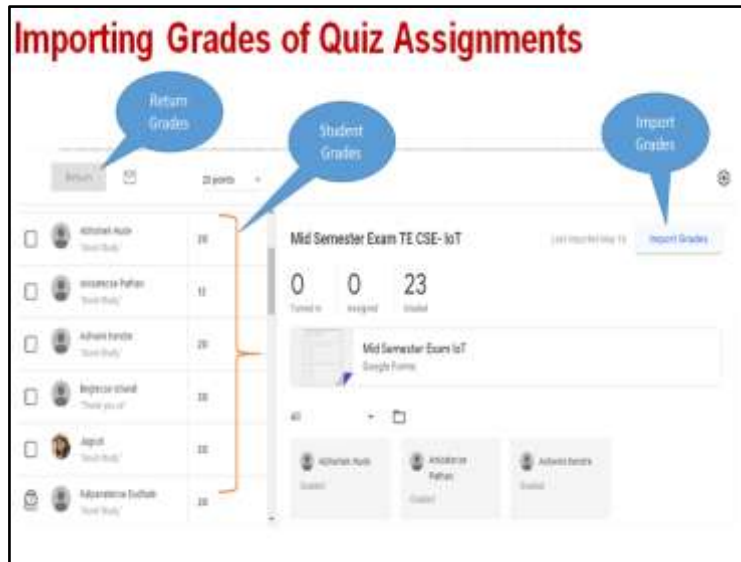


Fig.8

IOT TE CSE						
1	IOT TE CSE				Apr 21	Jun 01
2	TE CSE				Mid Semester Exam TE CSE- IoT	CA-2 Assignment on Chapter-4
3	OPEN CLASSROOM			20	10	10
4						
5	Class average		90.2%	19.52	8.13	8.43
15	JAGDALE	PRIYANKATECSE	priyankatecse@sa	90.0%	20	8
16	Niture	Prakashtecse	prakashtecse@sa	90.0%	20	7
17	BHISE	RUTUJATECSE	rutujatecse@sandi	90.0%	20	8
18	Pawar	Rajshreetecse	rajshreetecse@sa	96.67%	20	9
19	Shaikh	Shaneen	shaneen@sandipa	97.5%	20	10
20	Shaikh	Simrantecse	simrantecse@sanc	87.5%	19	7
21	Jagirdar	Soheltecse	soheltecse@sandi	95.0%	20	10

Fig.9