

# Digital Tools for Effective online Teaching post COVID-19

Ms. Rekha D

*Assistant Professor, Department of Languages, Hindustan Institute of Technology and Science, Padur, Chennai – 603 103. Tamil Nadu, India*

**Abstract:** Today, human beings experience highly sophisticated and technological advancement in all fields. The field of Education is no exception. As technology plays a critical role amidst this pandemic, Covid-19, there arises a necessity to move towards online teaching and learning activities using various online tools available today across the globe. Many of us are familiar with the use of popular online platforms such as Google Meet, Zoom Meeting, Webex, Microsoft Teams, etc. to teach online. There are plenty of other tools available online to enhance the online teaching and learning process effectively. This research paper aims to make an in-depth analysis of such tools and how they could be used effective implementation of online teaching.

**Key words:** Technology, education, Covid-19, tools, online.

## I. INTRODUCTION

Pandemic mandates all those who work regular mode to switch over into a fully digital one, i.e. using various technology enabled tools for their work. Teaching is also no exception for this. Teachers use different tools to teach effectively online. There is a great dilemma among teaching community on what are the tools will be user-friendly and effective in teaching online. This research article addresses this issue and suggests various popular and less-popular tools for the effective implementation of teaching.

**Purpose of the study:** The main purpose of the current study is to present popular as well as lesser-known digital tools for the online teaching and learning process.

**Methodology:** This study has used qualitative research and findings have been gathered from various online and offline resources.

**Main Findings:**

Applications of this study: The research study on technological tools make teaching a simpler one rather than a complicated process by using diverse online tools. Moreover, teachers can use any type of tools as per their choice for teaching effectively online and track students activities by using simple add-on software.

Novelty/Originality of this study: This study helps teachers to know various tools available online apart from popular tools. These tools make teaching a rewarding experience. Knowing how to use certain tools will keep track of students and what they are doing during attending online classes.

## II. LITERATURE REVIEW

Teaching or taking classes through online is not a new concept. It is quite popular in western countries for some time now. After the outbreak of COVID-19 pandemic, using digital mode for all activities gains momentum. Especially teaching through on line mode using various tools available is considered to be a boon to the teaching community. During and after COVID-19, many research articles, peer reviewed papers, etc. have been published.

**I. Online Communication Tools:**

Effective communication is mandatory for successful teaching and learning process. It is highly challenging in maintaining communication with a large number of students online. There are so many communication platforms available today, which help overcome this problem. These platforms can be used with large groups, with video conferencing, audio calls, virtual rooms, monitoring student attendance with add-on software, etc. with any device and from anywhere. They are giving autonomy to the students, improving

the administration of academic processes, encouraging collaboration, and facilitating communication between teachers and learners. The following are some of the popular tools among users:

1. Zoom – Currently, the zoom platform is widely used by all. Originally it was designed for business meetings for companies online. It is largely used as a virtual classroom by individual teachers, universities, colleges and schools to create large virtual classrooms for hundreds of students. Zoom is considered one of the best tools both for academic and for the workplace. The quality of video calls and audio calls are crystal clear in Zoom. Above all, it's a free tool to use as far as academic purposes concerned. Anyone can download the Zoom app and use it both on a laptop as well as on mobile. For more details: <https://zoom.us/>

### 2. MS Teams

Microsoft Teams basic version is free to all. It is used especially for Team Meetings with large companies and establishments and office chats. Now, it can be used with family and friends to call, chat and make plans. It is a good application for business meetings and chats. Anyone can purchase either on a monthly basis or on an early basis to use its premium features. For details click the link: <https://www.microsoft.com/en-in/microsoft-teams/group-chat-software>

### 3. Google Hangouts

It is a video conferencing tool suitable for live classes and lessons online. Hangouts can be used to:

- a. Share screens and files
- b. Use a shares hangout space to collaborate
- c. Chat

To use Google Hangouts, one must need Gmail. After logging in to Gmail, you can find out Google Hangouts in the left side menu. Link: <https://hangouts.google.com/>

Below is the YouTube link to watch about Google Hangouts:

<https://www.youtube.com/watch?v=QwQGPr78vxQ&t=25s>

### 4. Google Meet

Google Meet is a video communication service developed by Google. It was released in the year 2017 as a replacement to Google Handouts and Google Chat. It's a free one and anyone with a Google account can create an online meeting with upto 100

participants and meet for upto 60 minutes per meeting for general users. Google provides video conferencing facility without time restrictions for academic purposes. It has features such as recording options, host can control participants, video sharing, document sharing, student attendance monitoring through add-on software, etc. For details use the below link:

<https://apps.google.com/meet/>

### 5. Edmodo

Edmodo makes distance learning possible for the school or college. It is a necessary tool for teachers/educators, to send messages, share class materials, and make learning accessible anywhere. Save yourself time by bringing all your classroom tools together. It is a student friendly platform. Students will love to use it. It helps to raise their confidence, find their voice and experience digital world. It will empower students learning and become part of a vibrant classroom community. Parents in turn will get class updates, stay in touch with teachers, and support learning at home. They can also monitor classroom activity and grades to help students stay on track. For further details: <https://new.edmodo.com/>

### 6. TEDEd

TED-Ed is an online educational platform wherein teachers and students meet together globally to exchange their ideas in a constructive way. It supports learning in terms of original animated videos, providing international platform for teachers to create their own interactive lessons, and thereby helping curious students around the globe. It serves millions of teachers and students around the world. For more details: <https://ed.ted.com/>

Things to do for the optimum utilization of these tools:

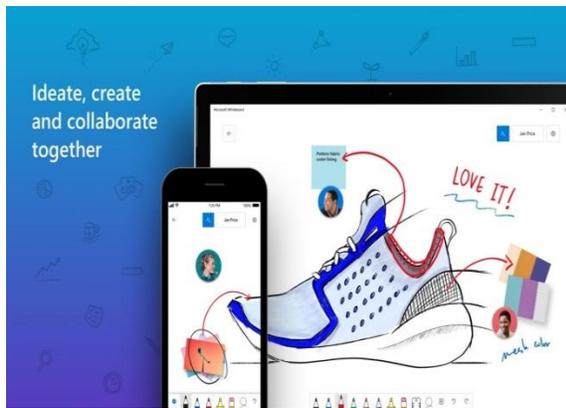
- a. Devise a plan for each online class and share it before the lesson.
- b. Explain online etiquette to the students clearly. What should be followed during the class and what is expected from them at the beginning of the lesson.
- c. All microphones should be muted, except the person who is speaking. This will help reduce unnecessary noises and maintain focus of the students. If anyone wishes to speak he/she can raise hand so that the microphone will be enabled to that person alone.

- d. Give time to students to take down notes, to view or to go through a presentation, or sharing an image, document or file.

### III. WHITEBOARDS / DIGITAL WHITEBOARDS FOR TEACHING ONLINE

#### 1. Jamboard

Jamboard is a digital interactive whiteboard developed by Google to work with google workspace, formerly known as G suite. It was officially announced in 2016. Google Jamboard is an innovative tool that permits teachers to interact with students with a whiteboard-style experience, only digitally without being in the same room. It will even work via the web using Google Drive so it is really widely accessible.



#### 3. Online whiteboards by Canva

Due to pandemic, working with teams or with multiple individuals simultaneously is a new normal. Even people work across the globe from various cities to various countries. With such a remote working together with teams or individuals, communication and collaboration with each other becomes tough and critical.

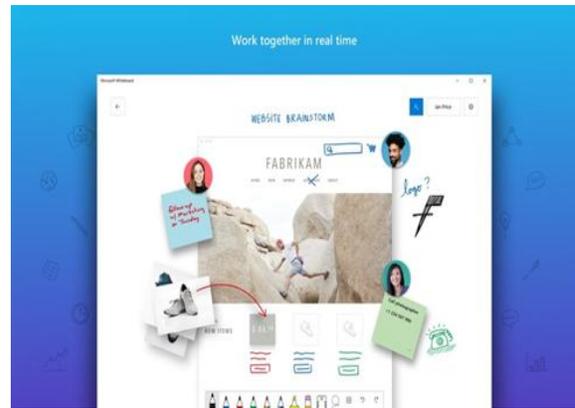
Organizing Brainstorming virtually is really a tough task. Canva has an online whiteboard option built in with a lot of templates or a blank white board option. The whiteboard features the design tools as in Canva with some cool animation tools. It can be shared with editable or view only mode for collaboration. There is a provision to present or record directly in Canva. These whiteboards could be published or shared to Google Drive or embed it in a site. For further details:

#### 2. Microsoft Whiteboard

Microsoft Whiteboard is a digital canvas where ideas, content, and people come together. Anyone can create freely and work naturally. Your ideas can grow with Whiteboard and transform your work into professional looking charts. You can create shapes on an infinite canvas with an interface designed for pen, touch, and keyboard.

Collaborate in real time, wherever you are. Bring your team together on the same virtual canvas, around the world and across devices. Brainstorm simultaneously in the Whiteboard app or from your browser window.

Save automatically and resume seamlessly. Your whiteboards are safe in the cloud. You can access it from any synched device. No need to take photos of your whiteboards or mark them with "Do not Erase." Below are a few screen shots of Microsoft Whiteboard:



<https://www.canva.com/online-whiteboard/templates/>

#### 4. Microsoft OneNote

The following is the details taken from the Microsoft OneNote url:

##### a. Your world organized:

Get organized in notebooks you can divide into sections and pages. With easy navigation and search, you'll always find your notes right where you left them.

##### b. Gather your thoughts, then make them even better:

Revise your notes with type, highlighting, or ink annotations. With OneNote across all your devices, you will never miss a flash of inspiration.

##### c. Share and collaborate:

Great mind don't always think alike, but they can share ideas and create together in OneNote.

#### d. OneNote in Education

Teachers can use OneNote to organize lesson plans in searchable digital notebooks, and staff can create a sharable content library. Encourage students to handwrite notes and sketch diagrams.

OneNote at a glance

- i. organize – sort content across notebooks, sections, and pages.
- ii. Tag – Highlight, can't miss notes with important and To-Do tags.
- iii. Ink – Draw your thoughts and annotate your notes, using a stylus or your finger.
- iv. Mix Media – Record audio notes, insert online videos, and add files.
- v. Clip and Save – Use the OneNote Web clipper to save content with a single click.
- vi. Share – share notebooks with coworkers, friends and family.

For details: <https://www.microsoft.com/en-us/microsoft-365/onenote/digital-note-taking-app?ms.url=onenotecom&rtc=1>

#### File Sharing Applications

##### 1. Google Classrooms

Google Classroom is a web based service developed by Google offered free of cost to all. It can be used both in Laptop and on Mobile Phone. Initially, it was started as an aid to schools to create, distribute and grade assignments. The main aim is to share files between students and teachers.

#### Paid online tools or services

##### 1. Teachable

It is one of the world's leaders and the biggest platform worldwide for online courses. It is highly user-friendly offers affordable plans to suit the needs of the teachers as well as teachers.

Salient features:

- a. Create your school
- b. Add your own contents by uploading text, images, videos, or whatever content you want to add in your lessons.
- c. Teachers can set the pricing of the courses and able to design sales pages of their own

Popular Proofreading Tools for teachers and researchers

Proofreading is one of the integral part of any research paper or ordinary writing. After completing writing, proofreading must be

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