



ROLE OF EDUCATIONAL TECHNOLOGIES IN TEACHING-LEARNING PROCESS DURING COVID-19 PANDEMIC

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Abstract: The COVID-19 pandemic has brought about a significant shift in the way education is delivered, with many schools and universities around the world having to rapidly transition to remote learning. In this context, educational technologies have played a crucial role in ensuring the continuity of the teaching-learning process. This paper highlights the importance of educational technology in teaching learning process and its challenges faced by teachers and students are discussed. Students are struggling to deal with their time really, as they are facing distractions and absence of design at home. To conquer these difficulties, students need support from their teachers and parents. Online learning platforms, video conferencing tools, digital textbooks and educational resources are of the ways that educational technologies have supported remote learning during the pandemic. Overall, educational technologies have proven to be essential in ensuring that the teaching-learning process has continued even in the face of the pandemic

Index Terms - Educational, Technologies, Teaching-Learning, Pandemic, Covid-19

1. INTRODUCTION

During the Covid-19 pandemic, educational technology assumed a basic part in facilitating remote learning and maintaining the continuity of education. Online learning platforms, virtual homerooms/classrooms, video conferencing tools, and educational apps assisted the educators and students with connecting, communicating and collaborating continuously from distant locations. These technologies empowered schools and colleges to convey addresses, conduct evaluations, give criticism, and support students' learning needs even without any actual homerooms. Thus, the utilization of educational technology has turned into a fundamental part of the teaching-learning process during the pandemic and is probably going to continue even after the pandemic is finished.

The Covid-19 pandemic essentially affected the teaching-learning process in India. With the conclusion of schools and colleges, numerous teachers and students had to adjust to remote learning, which was a new and challenging experience for some. The Covid-19 pandemic has carried huge changes to the education framework around the world, and India is no exception. The pandemic has upset the traditional teaching-learning process and has constrained schools and colleges to move to remote learning. The abrupt transition to online learning has brought difficulties and open doors for the education area in India. This exposition will break down the impact of the Covid-19 pandemic on the teaching-learning process in India and the difficulties faced by teachers, students, and the education framework overall.

Impact of the Covid-19 Pandemic on the Teaching-Learning Process in India

Coronavirus illness (COVID-19) is an infectious sickness caused by the SARS-CoV-2 virus. A great many people infected with the virus will encounter gentle to moderate respiratory disease and recuperate without requiring exceptional treatment. Nonetheless, some will turn out to be truly sick and require clinical attention. More established individuals and those with underlying ailments like cardiovascular infection, diabetes, chronic respiratory sickness, or malignant growth are bound to foster difficult disease.

The Covid-19 pandemic has prompted the conclusion of schools and colleges, which has brought about an unexpected shift to remote learning. The pandemic has constrained teachers and students to adjust to new techniques for delivering and receiving education. The utilization of technology has turned into a fundamental part of the teaching-learning process, as teachers and students are relying on online learning platforms, video conferencing tools, and educational apps to remain connected.

In India, around 250 million students were impacted because of school terminations at the onset of lockdown induced by COVID-19. The pandemic represented a few difficulties in the open and private schools which included a normal ascent in dropouts, learning misfortunes, and increase in digital gap. The pandemic likewise raised doubt about the readiness of the systems, including teachers to address such an emergency and sustainability of private schools. Be that as it may, COVID-19 likewise went about as a catalyst for digital adoption in school education. With schools reopening in many states, it is critical that a careful strategy is worked in to smoothen the transition of youngsters class kickoff after over 15 months of locally established learning. This transition needs to consider the learning misfortunes which had occurred over the earlier year too adopt a cutting edge strategy to construct a versatile framework which can withstand any future shocks

One of the greatest difficulties looked by the education area in India is the digital gap, where students from lower-income families and country areas need admittance to technology and the internet, which influences their capacity to participate in online classes. This has brought about inconsistent admittance to education, which is a concern for the government and educators. One more test looked at by teachers and students is the absence of eye to eye interaction, which is fundamental for building relationships, exchanging thoughts, and maintaining motivation. Online learning can be isolating, and students can battle to remain connected with and motivated, particularly in subjects that require hands-on learning encounters.

Notwithstanding these difficulties, the pandemic has additionally given an open door to the education area in India to embrace technology and innovation. Numerous teachers have become more creative and innovative in their teaching techniques and have grown new strategies to draw in students online. Additionally, the utilization of technology has made education more open and inclusive, as students can attend classes from distant locations and approach a more extensive scope of assets.

Challenges Faced by Teachers

The abrupt shift to remote learning has brought new difficulties for teachers, who are facing troubles in delivering viable lessons online. The absence of up close and personal interaction has made it harder for teachers to measure students' understanding and give input, and they are likewise facing specialized troubles and absence of familiarity with online tools.

Teachers have likewise needed to adjust to new teaching techniques, for example, delivering talks and conducting evaluations online, which can be tedious and require additional preparation. Numerous teachers are likewise concerned about the nature of education and the impact on student results, as online learning can be less viable than in-person instruction.

To defeat these difficulties, teachers have needed to foster new abilities and become more educated. They are likewise seeking professional advancement and amazing chances to learn new teaching strategies and work on their digital proficiency. Additionally, teachers are collaborating with partners and seeking support from educational organizations to give the most ideal education to their students during the pandemic.

Challenges Faced by Students

Students are likewise facing new difficulties because of remote learning, like admittance to technology and the internet, motivation, and commitment. Numerous students from lower-income families and rural areas need admittance to the technology and internet required for online learning, which influences their capacity to participate in classes and complete tasks.

The absence of eye to eye interaction has additionally made it harder for students to remain motivated and connected with, particularly in subjects that require hands-on learning encounters. Additionally, students are struggling to deal with their time really, as they are facing distractions and absence of design at home. To conquer these difficulties, students need support from their teachers and parents.

Educational Technologies

Educational technologies play had a vital impact in transforming how education is conveyed and gotten. As of late, the turn of events and implementation of educational technologies has seen a huge increase, with technology becoming an integral part of the educational experience.

Impact of Educational Technologies on Teaching-Learning Process

1. Improved Access to Education

Educational technologies have improved access to education for students, as students can attend classes and complete assignments from remote locations. This has been especially beneficial for students from lower-income families and rural areas, who may not have had access to quality education otherwise.

2. Increased Engagement and Motivation

The utilization of educational technologies, particularly educational apps and gamified learning experiences, has increased commitment and motivation among students. The interactive and fun nature of these technologies can assist with keeping students motivated and taking part in their learning, even in a remote learning environment.

3. Enhanced Collaboration and Communication

The utilization of educational technologies, particularly video conferencing tools and online learning platforms, has improved collaboration and communication among teachers and students, as well as between students themselves. This has assisted with fostering a feeling of local area and backing among students and teachers.

4. Improved Learning Outcomes

The utilization of educational technologies, particularly online learning platforms and educational apps, has further developed learning results for students. Online learning platforms furnish students with admittance to.

Technologies used during Covid-19 Pandemic in secondary school Education

The Covid-19 pandemic significantly affects the education framework around the world, with secondary schools being no exception. The unexpected conclusion of schools and the shift to remote learning have featured the requirement for innovative and powerful teaching strategies. In this context, technology plays had an essential impact in supporting the education of secondary school students during the pandemic. This exposition will examine the technologies used in secondary school education during the Covid-19 pandemic and their impact on the teaching-learning process.

Technologies Used in Secondary School Education during Covid-19 Pandemic

There has been a quick take-up of technology in secondary schools during the Covid-19 pandemic, with teachers and students relying on various digital tools and platforms to remain connected and continue their education. The following are a portion of the technologies used in secondary school education during the pandemic.

Online Learning Platforms

Online learning platforms, like Google Study hall, Microsoft Groups, and Blackboard, have turned into a fundamental device for secondary schools during the pandemic. These platforms give an incorporated location to teachers to share assets, communicate with students, and convey lessons. They likewise permit students to participate in online discussions, complete tasks, and get criticism from teachers. Online learning platforms have turned into a fundamental device for education lately, providing an incorporated location for teachers to share assets, communicate with students, and convey lessons. These platforms have revolutionized how education is conveyed, allowing students to participate in online discussions, complete tasks, and get criticism from teachers.

Online learning platforms give teachers the capacity to create and oversee online courses, delivering lessons, and assessing students. Teachers can likewise transfer course materials, like videos, slides, and archives, which can be gotten to by students at any time.

Online learning platforms furnish students with the valuable chance to communicate and collaborate with their teachers and classmates. Teachers can utilize these platforms to communicate with students through declarations, direct messages, and online discussions. Students can likewise participate in online discussions and work on bunch projects, which can assist with fostering a feeling of local area and backing.

Online learning platforms give teachers the capacity to give students criticism on their tasks and appraisals. This can include composed criticism, grades, and the capacity to attach documents or links to help student learning.

Online learning platforms furnish students with the capacity to get to course materials, tasks, and grades from anyplace, at any time. This is particularly helpful for students who might not approach an actual homeroom, for example, the individuals who are remote or homebound.

The DIGITAL INFRASTRUCTURE FOR SCHOOL EDUCATION (DIKSHA) platform created by the Ministry of Education has the necessary building blocks to foster online courses, invigorated reading material, questions bank tools and others. It caters to all the persona in the biological system and is upheld in 30 dialects.

DIKSHA being an open-source platform, can be additionally improved by integrating the Learning Management Personalized e-Learning administrations on the platform. While registering on the DIKSHA platform, students would be approached to finish up a questionnaire, which would help in identifying the student's learning styles. It might likewise administer a pre-test before the course's beginning to evaluate the student's information level. The pre-test will likewise be used to segregate students into three gatherings: Beginner, Intermediate and Progressed. The metadata of the students will be put away in the database and will be gotten to by the master framework. A redid learning path would then be intended for the students, premise their level of understanding, learning style and speed.

Video Conferencing Tools

Video conferencing tools, like Zoom, Skype, and Google Meet, have turned into a significant instrument for remote teaching and learning. They permit teachers to conduct live classes and give students continuous criticism and backing. Video conferencing tools likewise give students the valuable chance to interact with one another and their teachers, which can assist with fostering a feeling of locality and decrease feelings of isolation.

Video conferencing tools have turned into a vital part of the education framework lately, particularly directly following the COVID-19 pandemic. These tools give teachers and students a virtual platform to interact and participate in live homeroom sessions, enabling remote and distance learning. In this exposition, we will investigate the various video conferencing tools used in education and their impact on the teaching-learning process.

Video conferencing tools give live video and sound, enabling teachers to conduct live homeroom sessions and interact with students continuously. This assists with creating a seriously engaging and interactive learning environment.

Screen sharing is a feature that permits teachers to show their PC screen during a video conference. This can be used to share presentations, slides, and other course materials, making it more straightforward for students to track and understand the content.

Virtual whiteboards are an interactive instrument that can be used during video conferencing sessions. Teachers can utilize virtual whiteboards to annotate and illustrate concepts, helping to make the content more open and engaging for students. Video conferencing tools give the capacity to record sessions and play them back at a later time. This empowers students to return to the lessons, which can be particularly valuable for the individuals who might have missed the live session or need to survey the content.

Educational Apps

- Educational apps, like Quizlet, Kahoot, and Duolingo, are being used by secondary schools to connect with students and give additional assets. These apps give interactive and gamified learning encounters, which can assist with keeping students motivated and locked in. They can likewise be used to convey evaluations, tests, and practice works out.
- Educational apps have revolutionized the manner in which students learn and interact with educational content. With the increasing accessibility of smart phones and tablets, educational apps are currently open to a more extensive scope of students, allowing them to learn at their own speed and on their own timetable.
- Gamified learning apps utilize game mechanics, like points, rewards, and leader boards, to make learning really engaging and fun. These apps can be used to reinforce key concepts and further develop student motivation.
- Language learning apps furnish students with interactive and vivid lessons to assist them with learning another dialect. These apps utilize a combination of text, sound, and video to reinforce key concepts and further develop listening, speaking, and writing abilities.
- Concentrate on help and flashcard apps give students tools to help them remember and retain information, like flashcards, tests, and mnemonics. These apps can be used to further develop, review and prepare for tests.

Learning Management Systems (LMS)

LMS are being used by secondary schools to oversee and arrange online courses. LMS platforms, like Moodle, give teachers the capacity to create and oversee online courses, convey lessons, and survey students. They likewise give students admittance to course materials, tasks, and grades.

A LMS gives a concentrated platform to course management, allowing educators to create and oversee online courses, and students to get to course materials, tasks, and evaluations. LMSs often include collaboration tools, for example, discussion gatherings, bunch projects, and online chats, which permit students to interact with one another and with their teachers progressively. LMSs give tools to creating and delivering appraisals, and for tracking and reporting student progress. This includes grading tools, progress tracking, and execution reports. A LMS regularly includes a library of assets, for example, videos, sound records, pictures, and reports, which educators can use to help their courses and draw in their students.

CONCLUSION

Notwithstanding these difficulties, the pandemic has additionally given an open door to the education area in India to embrace technology and innovation. Numerous teachers have become more creative and innovative in their teaching techniques and have grown new strategies to draw in students online. Additionally, the utilization of technology has made education more open and inclusive, as students can attend classes from distant locations and approach a more extensive scope of assets. Additionally, students are struggling to deal with their time really, as they are facing distractions and absence of design at home. To conquer these difficulties, students need support from their teachers and parents. Online learning platforms, video conferencing tools, digital textbooks and educational resources are of the ways that educational technologies have supported remote learning during the pandemic. Overall, educational technologies have proven to be essential in ensuring that the teaching-learning process has continued even in the face of the pandemic.

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