

TRANSFORMATION IN EDUCATION SYSTEM DURING AND POST COVID-19

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Abstract

The center of attention of this study is the drastic changes or transformations in the education system during COVID-19. It also brings to light the problems faced during the digital teaching-learning process by the students and teachers. It aims to highlight how teachers and students dealt with the difficulties with technological support. We will talk about the various tools that helped in the learning process during tough times, and today it's, become part of the education sector. The main objective is to know about the different learning modes and their pros and cons. Also, to identify the need for technology-based education. Moreover, we will comment upon the future of the education system after this severe pandemic.

Keywords: *Digital transformation, Education, Online learning, Offline learning, Technology*

Introduction

Nobody would have ever imagined that a little virus could destroy our lives to an extreme extent. In March 2020, the outbreak of COVID-SARS-19 spread rapidly across India. To reduce the expansion of the virus in the country, the government enforced a lockdown to maintain social distancing. The covid-19 has affected every single individual, whether in terms of health or wealth means everything was shut down and disrupted. It has also affected the educational system worldwide, resulting in the closure of schools. Nobody was ready for the radical change, but we took the help of technology to continue learning for students. Now everybody's appreciating digital learning and its role. We'll study the various transformations and their impact on the teachers as they aren't tech savvy and on learners' social life and learning. Also, to study the future picture of education and demand reform to make changes in the conventional methods.

Literature review

This paper works on the shift from traditional learning to online learning due to COVID-19 in student perceptions. This research mainly uses a narrative approach. The

collection of information takes place through online interviews. The data was collected based on focus group discussions on online learning during the COVID-19 pandemic. According to the results, students appreciated the online learning mode and found it interesting, efficient, and effective. But the fact is students experienced many difficulties such as communication not being optimal, lack of resources & inappropriate use of learning media.

This research examines digital transformation competency and the challenges post-COVID-19. This research talks about the findings of multiple research tools, like interviews, observation, surveys, and case studies. This study shows that still, students have not developed the competency to use the technology, and there is a difference between students' maturity level for the digital world and the required maturity. The conclusion also addresses the multiple challenges of digital transformation, such as students lacking holistic vision and competency in using technology and data.

This pandemic has impacted social, economic, and educational activities. As the government announced for lockdown, learning activities has forced to shift online. In this crisis, lecturers, administrators, and students find it challenging to adapt to the sudden transition in learning—the paper looks into the challenges faced by universities, educational institutions, teachers, and students. The gathered information is analyzed qualitatively using the inductive thematic analysis technique. And its report reveals that challenges faced by students are lack of resources, connectivity, and technological issues. On the contrary, lecturers faced challenges like online class management, technical, competency, and isolation issues. In the meantime, institutions also faced multiple problems with financial assistance and management issues.

The schools and universities were shut down because of pandemics and resumed teaching-learning with an online mode of education. But online learning has various disadvantages that need to reopen all the institutes. The questionnaires related to reopening educational institutions, changes required in the course curriculum, and covid protocols to be maintained, such 21 questions are constructed. The motive for the questionnaire construction is to know about students' decisions. Likert scale and other measuring tools helped to gather information and report examination. The result shows students have different views on the reopening of institutions. The percentage of students choosing the option, availability of disinfection rooms and hand sanitization machines is 74.82%, and the measure of other students choosing hygienic places and regular health checkups is 80.69%, 74.48%, respectively. The percentage of students committed to adhering to the safety measures is 92.4%. But the percentage of students who believed it's impossible to follow safety measures inside the premises is 72.9%.

Digital Transformation

Digital transformation is the process of making changes in the working of an existing organization, business, or corporation by using new or innovative technologies. It helps in improving efficiency, productivity, value, and innovation. And also result in various organizational changes like cultural, operational, and institutional values. To survive in the 21st century, organizations need to adapt to the changing technology. Today's generation is tech-savvy and can easily use the digital mode for various works.

But after the pandemic, people were forced to learn technology for their day-to-day work. Due to the COVID-19 outbreak, finally, the significance of digital innovation in education has been realized by educational institutes. Digital transformation in education means applying new technologies to boost the learning environment. It also helps in making the teaching-learning process more effective.

Educational institutes opted for new ways to assist the students and the faculty members in the teaching-learning process while working digitally. It includes the following advantages for learners:

- Help students communicate through a mobile app like zoom, google meet, etc.
- Learning apps provide the facilities to ease the teaching-learning method.
- Student progress can easily track by technology.
- Easy operation of online classes.

Digital innovations have replaced conventional methods and made life easy with technology. The objective of digital transformation in education is to develop 21st-century skills in students. With the growth of these skills, students will become able to face life challenges. Today's generation takes much interest in technology and uses it to save time, so it's not difficult for them to learn more technological skills. Proper counseling and training are required for the students to use the technology in the right direction.

Education

Education is crucial in one's life to achieve specific goals such as knowledge or skills. It's a powerful tool for eliminating social evils. Education improves our way of living, thinking, and perspective. It helps in building the character of an individual and also for the betterment of the nation. Through education, we can develop technical skills essential for handling technology. Hence, without Education, it would be impossible to use the technology. Digital transformation in education helps students to study via mobile and provides flexibility. Also, teachers can keep a record of the progress of students and assess them. Now, there is more focus on transforming the teaching

approach from conventional methods to modern teaching methods. In today's world, education must be interactive so that students take part and learn joyfully. A digital platform creates a learning environment for the students and the faculty. Its goal is to make learning more efficient for the pupil. To see digital education become a reality, proper training to use digital media is essential for the teachers. During pandemics, online modes supported the learning of students. Now, students prefer online education as it's feasible for them.

There are two modes of education:

- Offline mode
- Online mode

Offline mode of education

It's a traditional approach to teaching in which students interact face to face with their teachers. Students attend offline classes in the institution to gain knowledge, not for attendance. It helps in the holistic development of the learners and provides real education. Offline learning gives an open environment for the students to interact with their friends and teachers. Hence, such interaction helps develop communication and social skills such as being responsible, punctual, attentive, kind, etc. offline classes create a competitive environment in class, which reinforces students to participate and perform well. In school, students gain proper knowledge with additional skills that helps them in real-life situations. Physical interaction plays a crucial role in the learning process. It also helps in building the relationship between teacher and student. Also, a student can easily convey their issues to the teacher. Offline classes help in clearing the doubts of students without any wait.

Online mode of education

Online mode or E-learning is the modern approach in which students study from home according to their time and pace. Online learning refers to the operation of an electronic device in which internet connections, smartphones, and computers, are required for proper learning outcomes. Online teaching occurs through lessons, audio, video, graphics, and images. Due to COVID-19, educational institutions have been closed then e-learning assisted the education of students. The government has also launched various campaigns and educational apps or channels, like e-vidya and the Diksha platform. Teachers can connect to the students through many apps like zoom, google meet, and Microsoft teams. Online learning is a student-centered approach as it's more advantageous for the students. With the advancement in technology, it becomes more flexible for students to learn anywhere and anytime. A teacher can easily teach a large no. of students at a time in contrast to classroom teaching. Nowadays, digital

learning is more attractive to students due to its easy accessibility and flexibility. Most large public and private universities offer online courses and many graduate or undergraduate programs for those who live in remote areas.

Educational Transformation After Pandemic

To alleviate the transmission of COVID-19, the government has taken various measures such as social distancing, lockdowns, and no personal contact outside the home. The pandemic brought drastic changes to the education system and the entire education system, primary to higher levels, had to change to a virtual mode of teaching-learning. The unexpected change has forced universities to take some necessary steps. By looking at the situation, educational institutions adapted the technology teachers also learned to use the technological resources. The main goal of institutions is to administer all the resources keeping in mind the changes made in the curriculum. Though it was a tough time for the schools or colleges to adopt the changes, it was also a time for new opportunities, bringing transformation to the education system. This sudden change also forced teachers or professors to learn new skills such as computer knowledge, communication skills for online setup, and handling teaching-learning tools and upgrade their teaching strategies. NEP 2020 policy also emphasizes ICT integration in the education system. Although, few institutions are using the technology from past years to update their teaching-learning process. But most schools or colleges evolved during the COVID era.

Students and teachers need to be competent enough to use the technological resources. We should teach the students different skills to operate the technology appropriately. During this emergency period enthusiastically, the learners accepted the sudden transition.

- Shifting from traditional classes to online mode
- Fixed schedule to the learning at own pace
- Peer learning to the individual learning
- Joyful learning to boredom in sitting in front of the screen

But, during this learning period, students faced many difficulties like technical problems, increased screen time, and lack of resources. So digital education requires proper infrastructure and tools for learning.

Technology was the only option to provide education to the students, but we don't know its future consequences. Because if we don't teach students about the proper use of technology, it will impact the quality of education. Teachers can become effective instructors for students by helping them learn joyfully.

Technologies Used During Covid-19

Due to the pandemic, traditional classes have shifted to virtual learning. This transition has changed the whole scenario, such as educational inequalities and social and emotional imbalances. Digital tools played an essential role in enabling teachers to teach students and making the class interactive by using learning tools, videos, podcasts, and presentations. Students were getting the content, but other aspects of effective learning, such as social connection, peer interaction, and teacher presence, were missing. Educational institutions changed their framework and teaching strategies to survive in the new atmosphere. The government provided multiple websites and TV channels to support the students. Various digital learning apps and tools are present such as Zoom, Google meet, Microsoft Teams, Google classroom, and Skype. It is shown that the most used platforms for the teaching-learning process were Whatsapp, telegram, zoom, and google classroom. The online mode of education has both advantages and disadvantages. It provides flexibility to the learners as they can learn or grasp at their own pace and time. It also saves transport money or other expense of offline learning. Students feel confident speaking in front of the computer screen, whereas students choose to remain silent in class. In online education, students learn according to their pace and comfort.

Digital learning not only supports teaching but can keep track of student's growth and performance. The NEP 2020 policy also mentioned artificial intelligence(AI-based) software that will keep track of students learning and progress. It'll also tell students about their strengths, weaknesses, and area of interest.

Online learning was not a good option for students belonging to low-income families. Also, nobody has thought about the needs of disabled students. There were no such special tools available for their learning and development.

Learning Challenges Faced By Students During Online Classes

The pandemic has changed the picture of the education system. Face-to-face learning in educational institutes turned to virtual learning at home. Teaching-learning process was dependent on technology, the only way left to connect with the students at home. Online education indeed made learning more flexible and convenient for students. On the other hand, many students were not interested in this different or new type of learning. Now we will talk about the various difficulties experienced by students:

- Students complained of lacking motivation due to the absence of physical interaction.
- One of the biggest challenges faced by both students & teachers was technical issues.

- Lack of appropriate learning tools for special needs students.
- Proper facilities (internet connection, quiet place, computers/smartphones) were unavailable for the students.
- Lack of digital literacy among teachers & students.
- Stress and depression among students due to a sense of isolation.
- Develop health issues due to using the computer screen for a long time.
- Teachers failed to make online learning attractive and fun for students.
- Poor connectivity distracted students and impacted learning.
- Lack of learning tools for disabled students.

Challenges After Covid Era

We have seen multiple changes in the educational pattern that reduced the quality of learning and affected the students mentally or socially. Now, it's time to look forward and think about making necessary changes. We can develop the education quality and teaching methods by learning from the crisis. Good quality education opens the door to the growth and development of the country. There is an instant need to change the education patterns to improve the quality of the teaching-learning process. In this direction, policymakers of NEP2020 have taken various steps. The four pillars of NEP are equity, affordability, quality, and accessibility. We must realize that equity in education is essential to provide the students according to their needs. An educational framework is such that it addresses the needs of the student and leads to inclusive development in education. To survive post-COVID-19, every student must possess 21st-century skills such as critical thinking, creativity, leadership, technical skills, practical knowledge, emotional intelligence, and tech-savviness. Nowadays, preference is more for practical-based, competency-based, vocational courses than degree courses. And most universities have already started running such programs to attract learners. The main goal after the pandemic is to bridge the gap between advantaged and disadvantaged groups of students. Let us discuss some challenges ahead in the future:

- To lessen the space between the advantaged & disadvantaged groups of students.
- To increase the enrollment of socio-economic backward students.
- To organize training camps for students & teachers to develop competencies in technology.
- To implement the changes made in the assessment techniques.
- To provide AI-based software to track the growth of students.

- ICT integration in education across all regions.
- To focus on starting more vocational or employment-based programs.

After knowing about the strengths and weaknesses of the education system in the crisis, it's time to implement better strategies to enhance the education system. Through NEP implementation and other innovations in education, students will develop competency to survive in the 21st century.

What were the difficulties faced by schools after reopening?

Schools were closed for the last two years due to the pandemic. But educational institutions slowly reopened again. Students were happy because they could talk one-to-one with their friends, classmates, and teachers. The pandemic brought a drastic change in the learner's lifestyle, and schools also need to change their systems. Most students are not interested in participating in the class activities and stay conservative due to a lack of bonding. So it is not an easy task for schools to make everything smooth as it was earlier.

Schools must develop socio-emotional skills among the students. Also, schools should organize guidance & motivation sessions for the students to rebuild their social skills and manage emotions. Now the other challenge for the school was to maintain social distance among students and assure their parents of their child's safety. It was impossible to adhere to COVID protocols with a group of students. But somehow, schools managed to do it. Parents of primary class students were not ready to send their kids to school, especially without vaccines, despite several efforts made by schools regarding sanitation programs. So here it was needed to council parents and guide them for their children's future.

The real task was to bring back students into the schools because after returning from the lockdown, they lost interest in almost all the activities. Keeping all these things in mind, schools need to reconstruct their schedule. Another challenging task is to motivate students to regain their skills and to follow a timetable. Now the habit of reading and writing is almost gone because, In online classes, they were dependent on technology. During the pandemic, they become habitual of pdf notes, listening to recorded lectures, and typing homework. Moreover, schools need to help the disadvantaged group of students to reach the level of other students.

Future Of Education Post-covid

Education is the tool that differentiates us from other living creatures on earth. It empowers humans with knowledge, culture, and belief and makes them mentally strong to face difficult situations. Through education, people learn to differentiate between right and wrong. The pandemic has disrupted the whole education sector across the world. Despite many efforts in delivering lessons through television, radio channels, and online,

many students remain behind. Those who belong to the minority groups, disabled learners, and those who live in rural areas are left behind.

It will be needed to maintain a balance between children's health and their education. It's necessary to consult with parents, teachers, and the young generation to take their views on educational changes. There must be an increase in education budgets to improve the quality of education and its growth. And for evolution in education, most countries are always ready to work together. It's the duty of all to check whether the education initiatives seek the needy students who were left behind, such as disabled learners, minority groups, and people in emergencies. There is an urgent need to reduce the digital gap among the students. It's time to look forward to providing skill-based and quality education. Also need to think about sustainable development goals for the future generation.

Digital literacy and infrastructure are required to achieve the set goals over and above for evolution. And we must think about developing innovative teaching methods, various technologies, and proper frameworks. There is a need for inclusive, equity, and quality education for the generation. Today's era demands 21st-century skills that will lead to the holistic development of students. The essential skills such as creative, social, cognitive, and physical skills are some of the skills which students need in the rapidly evolving world. Current education systems are realizing that they are still not evolved and lagging. It is high time to make the education system suitable for all students. There is a need to instill practical and competency-based skills more than theoretical knowledge. And that's only possible when everyone comes together to work in the same direction. Not only policy-making but their implementation in the right way is essential.

Conclusion

The COVID-19 pandemic has taught us important life lessons in every field. It shows us the weaknesses of our education system, where we are lacking. During times of crisis, technology was like a boon for us, which continued our teaching-learning process. Technology provided the opportunity to keep growing even during pandemics. Digital transformation or innovations have emerged in the education sector because of the pandemic. Students also liked the online mode due to its flexible nature. But everything comes up with its advantages & disadvantages. So students have faced many challenges during online learning. Even if our technology reaches the sky, nothing can be able to replace the traditional classroom. Classroom learning has a significant impact on the life of students. The physical interaction with teachers and peers makes them learn many additional skills besides bookish knowledge. Nowadays, students take more interest in practical-based, hands-on training and technology-based learning. So, it's the responsibility of schools to provide education according to the needs of the learners.

Online learning is beneficial for students with stable financial backgrounds, but what about those who can not have proper access to technology? They can't afford digital devices or internet connectivity, and they suffer the most and quit their studies. Similarly, specially challenged students were left behind during crises. Now it's not an easy task to bring back all the students at the same level. Parents also need to understand their responsibilities towards their children to provide them with socio-emotional support. We need to realize that everyone has the right to get an education, so we should take care of the disadvantaged group of students for the better development of the country. India needs to improve internet connectivity because developing educational institutes will not be enough without proper connections to the cities and towns. Implementation of various policies is more necessary than their formation.

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