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# Impact of Online Education on Students in Covid-19

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## ABSTRACT

*As a global pandemic, Covid-19 has prompted a call for social isolation. It has compelled people to sit indoors, and sitting idle indoors can result in mental stress. Thus, online learning can play a critical role in keeping people engaged and mentally healthy. Online education is the only viable option in this pandemic situation. Teachers can use virtual classrooms to teach from home and have access to all necessary tools, making online sessions just as effective as in-person sessions. Pandemics frequently compel learners to remain at home for extended periods of time, impeding the teaching-learning process.*

*This article discusses the benefits of online education during times of crisis, such as job loss or pandemics. As a result, several tools and techniques for online learning are highlighted that can help ensure learning continuity. The government of India's emerging approaches to online learning are discussed. Additionally, the advantages and disadvantages of online learning platforms are discussed. The authors discuss learners' and educators' perceptions of the Online Learning system during lockdown.*

**Keywords:** *women fish vendors, Socio-economic, legal condition*

## I. INTRODUCTION

The coronavirus disease 2019 (COVID-19) was found in December 2019 in China and quickly spread throughout the world, eventually being declared a pandemic by the World Health Organization on 11th March 2020. Universities worldwide were forced to close their physical campuses in the spring of 2020 and relocate all academic programs online (Bao, 2020). Universities were unprepared for such a shift away from traditional classroom education toward entirely online education. Initially, the majority of universities lacked infrastructure and strategies. Educational technology has made tremendous strides over the last few decades, and these advancements proved to be extremely beneficial during this pandemic. Numerous online platforms were available to support online education.

Nonetheless, mapping educational activities in an online space posed a challenge for

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universities. Furthermore, professors and students encountered a variety of logistical, technical, financial, and social difficulties. The pandemic and the ensuing lockdowns have had a detrimental effect on people's mental health worldwide. Numerous students are stressed and anxious. These psychological issues frequently impede students' adaptation to online education. Additionally, not all students have equal access to or proficiency with digital technologies. Although these disparities existed previously, the COVID-19 pandemic exposed them.

Professors are now using a variety of tools to offer course material. Professors are teaching their courses via online educational platforms, video-conferencing software, and social media. Professors can share course notes and multimedia resources with their students via online educational platforms such as Google Classroom and Blackboard. Additionally, online educational platforms enable students to submit assignments and professors to monitor students' progress. Organization of online lectures and discussion sessions is facilitated by videoconferencing tools such as Google Meet, Zoom, and Microsoft Teams. Typically, these tools include slideshows and a chatbot. Additionally, some universities distribute course materials via their websites and their own learning management system. Additionally, professors are utilizing virtual laboratories to assist them in teaching science courses. Virtual laboratories enable students to conduct online simulations of experiments related to their courses. For many years, such tools were used for simulation and data visualization, but their use has recently become widespread.

While some members of society believe this is the long-overdue change in educational trends, another believes it is a step back and ultimately a hindrance to the right to education. While both may be true, it cannot be denied that the student's opinion and thoughts are what truly matter. Is this new trend going to stick around? Is it capable of displacing traditional classroom learning? What are the consequences and are they worse than those associated with classroom learning? What are the possible enhancements that could be made to the new educational trend? These are the few points that this paper will discuss.

### **Research Methodology and Methods**

In this Research Paper, we investigated the impact that this Covid-19 pandemic has had on online education in India. We wanted to establish what was the effect of online education on students. For this, we required both qualitative and quantitative data. We collected primary data by conducting a survey which was filled out by 200 students.

We believed that a survey was the most appropriate approach to answering our research question as the survey inquired about how students' education has been affected and

introspected about their mental and physical health in the pandemic. The survey gave us an insight to what the majority students felt regarding a certain element of online education and how does it impact their lives.

- **Quantitative methods**

Our method of research was to conduct a survey. We designed the questions to understand how students are dealing with the online education brought on by the Covid-19 pandemic. Our questions were multiple choice questions. Our main focus was to conduct a survey for university students and majority of the people who filled our survey, are from universities. We conducted the survey by creating a form online and circulating it around to people we knew. Our sample size was of 200 students and we got a response from 200 people. Before the analysis, the gathered data was prepared. The questionnaire was checked thoroughly for missing possible questions. The data then recorded was analyzed using Google's statistical software.

- **Qualitative methods**

In order to gain a better insight into the possibilities for improvement of the product range, the survey was conducted primarily focused on the university students, We spent around 8 days conducting this survey. The form was circulated to people we knew and they then circulated it to people who were involved in this online education.

The survey was thematically analyzed which involved reviewing every response and identifying a key theme of commonality. Each theme was then examined to gain an understanding of participants' perceptions and motivations.

Surveys are one of the best ways to find out the perceptions and understandings of the sample group regarding a particular issue. Surveys help us understand what the majority of people are experiencing with a certain scenario. Therefore, we believed conducting a survey would give us the best results.

## **II. UNIFORM AND EFFECTIVE ONLINE EDUCATION IN INDIA—WHAT IS BEING DONE AND WHAT MORE IS POSSIBLE?**

There is universal recognition of the necessity for inclusive education policies during the pandemic. To make online education more effective, inexpensive, and safe, the Indian government has created a number of online tools, training programs, and schemes for students, teachers, and educational institutions. The Discussion Forum of Online Teaching (DFOT) is a countrywide informal and volunteer network of teachers dedicated to debating various elements of online teaching and establishing resource libraries.

The internet and digital infrastructure, which have a high penetration rate, are a boon to education. The Pradhan Mantri e-Vidya Programme was started in May to help accelerate the migration to the internet.

In May, the top 100 colleges in the country were given permission to begin offering online courses without first seeking approval from education officials. Karnataka, for example, has established its own initiatives to make online education more accessible.

Artificial intelligence (AI) and other cutting-edge technology can open up new avenues for creative and individualized learning approaches that appeal to a wide range of learning capacities. IIT Kharagpur collaborated with Amazon Web Services to develop the National AI Resource Platform (NAIRP), which would be able to track eye movement, mobility, and other factors for improved teaching and learning. Google has also claimed that in the future, it will assist AI-based education in India.

### **III. CHALLENGES FACED**

With schools closed due to the COVID-19 pandemic, the government encouraged online education to achieve academic continuity. Although most high-end private and public institutions have successfully transitioned to online platforms such as Zoom, Google Classrooms, Microsoft Teams, and others, many others are still finding it a herculean challenge. The difficulties of online education are numerous. It is past time for us, as a nation, to grasp the complexities of online education – in India, for India.

Learning something new through online education is beyond the norm. A learner has access to unlimited topics and global niche subject experts—something otherwise not affordable or imaginable to many. Online programs allow a wide age group to learn at their own pace, without inhibitions, and without compromising on other responsibilities.

With COVID-19 emerging and spreading in India, online education has trickled down to the most basic level—schools and colleges! Probably, students find it a welcome change from strict schedules and long-distance commutes to classes. For some others, intimidating learning in large classes, this may be a less stressful option. Many teachers make the best of this by exploring new teaching and assessment methods.

This is encouraging. But the moment online education moves from an optional to the only form of learning, and that too long term, the bad and the ugly slowly become evident. India is beginning to get a taste of this now. While it is popular to use the internet for entertainment, using it for online lessons is a major challenge. Teachers may lack experience in creating digital

content and effectively communicating it online. It's unreasonable to ask them to update, and students, to change all of a sudden.

In an online class, body language and eye contact, which are significant instructor signals, are difficult to detect. Many people agree that cell phones can be very distracting. In addition, to supplement theoretical research, science and technology activities often include hands-on laboratory sessions, dissertation projects, and field trips. In online education, this aspect of learning is severely restricted.

Education entails not only subject knowledge but also the development of social skills and sportsmanship among students over time. Children's holistic growth will be hampered if they depend exclusively on online education, and many may underperform later in their professional and personal lives.

Though India has a diverse geographic and cultural landscape, it also has a significant socioeconomic divide. At the moment, only a small portion of India's population has access to online education. Power outages, poor or non-existent internet access, and the inability to purchase required devices are all major concerns.

To address issues with internet access and computer availability, many teachers are sharing videos with students through WhatsApp or YouTube so that they can watch them whenever they want. However, this, too, is associated with difficulties in comprehending the lessons and encourages rote learning. Pre-recorded sessions broadcast on television (e.g., Swayam Prabha DTH channels) and radio (audio lessons, via All India Radio) serve the same purpose, but they appeal to a larger student population who cannot attend live online classes. But that's not it. When a family's income is limited, the girls are frequently the first ones to suffer.

*“Students with disabilities are among the most dependent on in-person education and hence least likely to benefit from distance learning.*

*A survey by Swabhiman (an NGO working mainly in Odisha), in association with the National Centre for Promotion of Employment for Disabled People, indicated*

*that 73% of the students with disabilities had concerns regarding the availability of study material in appropriate formats. Also, 79% of their teachers were apprehensive about teaching effectively without use of touch to students with learning disorders, autism and low vision. The lack of effective education may further aggravate the high dropout rates of these children from schools (nearly 50% pre-COVID) in developing countries.” [Today, 2021]*

#### **IV. DATA ANALYSIS**

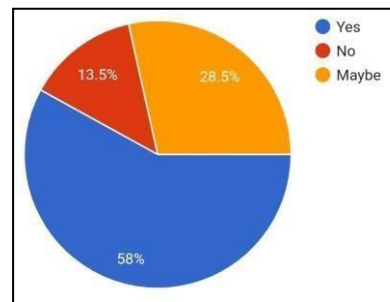
We prepared a questionnaire with 20 questions related to online education during the Covid-19 pandemic. A student had to respond to each statement from the three options, yes, no, and maybe. The questions were related to the teaching-learning process in general, content delivery, professor-student interaction, assessment and health and social impact of online education. We examined the correlations and covariances among various facets of online education. We also constructed a model to examine the influence of different aspects of online learning on social issues related to online education. We received responses from 200 students.

##### **General Issues**

With COVID-19 the structure and mode of education have seen drastic changes, we have aimed to analyze the student's perspective. We asked the students if in their opinion does the learning process take place better in physical classrooms than through online education. 86.5% of the students claimed that they do think the learning process take place better in physical classrooms than through online education, while 9% of the students doesn't think that learning is better in classrooms and 4.5% of the students are not sure.

While online education is getting more prevalent owing to COVID-19 lockdowns, but even pre- COVID there were many institutions and platforms where online education was used. This was to help people with walks of life get a chance at education. These institutions and platforms already have a developed interface and methods. Due to this we asked the students if in their opinion online classes better than enrolling in online courses (E.g., Coursera)? 48% of the students refused that these platforms are better than online classes, 25% of the students said that they are better than online classes and 27% of the students were not sure.

Online Education have changed the teaching methods to a lot of extent, to examine the change in teaching efforts and the problems faced on the teacher's part, we asked the students if professors improved their online teaching skills since the beginning of the COVID-19 pandemic? As a result, 58% of the students think that their teachers have improved to suit the current situations, 13.5% doesn't agree with it and 28.5% of the students are not sure (as shown in Figure 1). We further analyzed the opinion of the students whether if the online education a viable alternative during the COVID- 19 pandemic? 66% agreed that it is a viable alternative, 12% disagreed and 22% were not sure of their opinion.



**Figure 1**

*Survey analysis for whether teaching skills had improved online Content Delivery*

The content delivery refers to the understanding of students in the class. It is a general fact that in classroom education it was easier to navigate for the teachers as well to see if the students were understanding and the students too had to concentrate due to lack of distractions, unlike the online classes' situation. With the online classes the teachers have opted for different methods to make sure that the students are concentrated and their attention is not distracted.

We in our survey enquired if the students think that adequate amount of study material is available online? 64.3% of the students agreed that there is enough material. 21.1% refused that there was enough material there on internet. 14.6% were not sure about it. We asked the students if they thought that the slideshows made lectures more informative? 57.8% of the students agreed that the slideshows made classes more informative, 22.1% of the students refused the statement and 20.1% of the students were not sure.

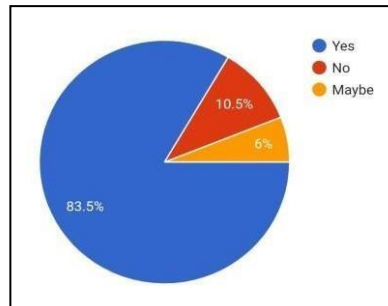
### **Interaction**

Sustained interactions between students and instructors are the cornerstone of effective online learning. Students participate in the learning in the learning process by contributing to online discussions, requesting and sharing course materials, and sending course-related questions to the instructor. Social interaction in online learning allows students to share their ideas on various subjects with each other. Student-led online discussions typically motivate deeper understanding as well as yield interesting personal applications of course concepts and theories. Online education has created disturbances among the interactions between people; professors and the students, interaction among peers.

To analyze this from the student's perspective, we asked them questions regarding the same. We asked the students if in their opinion the professor-student interaction take place better in physical classrooms than through online platforms? 83.5% of the students agreed that it did, 10.5% of the students didn't agree with the question and 6% of the students were not sure about their opinion (as shown in fig. 2). We further asked the students if in their opinion does the use



of a digital pen make the lecture more interactive? 47.5% of the students agreed with the question while 26.5% of the students disagreed and 26% of the students wasn't sure.

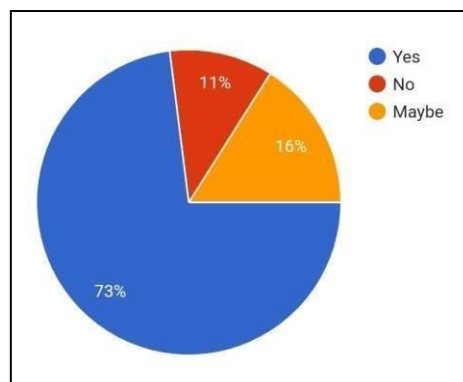


**Figure 2**

*Survey analysis on whether student interaction was better in online medium*

Next, they were asked if in their experience if the professor and students show their faces, does the lecture become more interesting? 58.5% of the students said that it does become interesting and 22,5% of the students disagreed while 19% of the students were not sure and fine with anything. We also asked them if the professor has allowed the students to post comments in the chat-box during a lecture, does it become more interactive? 69% of the students said it does become interactive 15% of them said it doesn't become any more interactive and 16% of the students said that it doesn't matter. Education isn't just specific to academics, development of social skills, networking and social bonding too plays an important role in development of career as well as personality of students. The importance of this is different in school and college students but significant all the same. In this regard the next survey question dealt with interaction between peers where the students were asked if the lack of interaction with peers been a hindrance in their academics. 73% of the students blamed the lack of interaction with peers as a cause of hinderance in their academics, while 11% of the students denied co-relation between academics and peer interaction and 16% of the students were not sure about the co-relation between their academics and peer interaction (as shown in fig. 3).

**Figure 3** *Survey Analysis on whether peer interaction had been hindered in the online education*



Nevertheless, the traditional teaching methods provide one solid advantage and that is to ability to personally interact with the teachers. In any student's life a mentor is very much needed for guidance, it is necessary to examine the effect of the recent trend of online education in this aspect as well. When asked to the students if in their experience has online teaching made a difference in their personal interaction with professors. 74.5% of the students voted affirmatively, claiming that the student-teacher interaction in online classes have been lesser than that of classroom teaching. This is a cause of concern, even more so with school students who require guidance and mentorship of their teachers. 11.5% of the students did not feel changes in the student-teacher interaction and 14% of the students were not sure if the online student- teacher interaction is any different from that of the classroom.

### **Assessment**

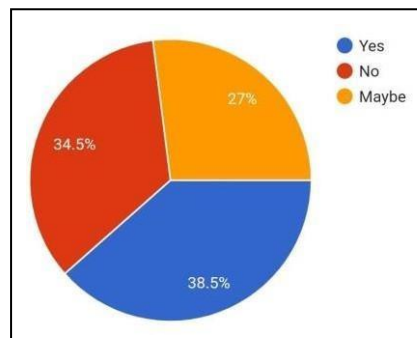
While it has been a popular opinion in couple of decades, especially in regard to Indian Education system that the Assessment of the knowledge of the students should not be based on yearly exams, Assessment still continues to play an important role in education. The methods however have changed from that of pre-COVID times. This effort of change in the methods is done keeping in mind the rigid non-student friendly ways of the traditional methods and to make assessment easier for the institutions online. Projects, Class Activities, Quizzes etc. are a few examples of this new trend of assessment of students of all levels. It is important to analyze the student perspective on this as well.

Therefore, we asked students questions related to the assessment changes in their institutions. They were asked whether in their experience online tests and quizzes effectively evaluate the knowledge of students. 63.5% of the students denied that the new methods of online assessment effectively evaluate the knowledge of the students, 15.5% of the students were satisfied with the current mode of evaluation and 21% of the students were not sure if the current system of assessment is more effective or not. With further research, we concluded that many students are not satisfied in the current mode of evaluation owing to the scope of unfair practices.

Assessment sure is one of the most traditional practices for the mentors and the institution to check the knowledge and level of understanding of the student. It is however also a crucial part of self-assessment as well. The students get an opportunity to realize their mistakes and further improve them with the guidance of their teachers. In the new trend of online education, the frequency of tests and projects have been increased so as to make up for the lack of student-teacher interaction. Hence to examine this change from the student's perspective we included a question in our survey.

We asked the students if they think that the weekly assignments and tests help in the learning process. To which we received a rather mixed response, 38.5% of the students think that the weekly assignments and test have helped them in their learning process, while 34.5% of the students believe that the frequent assessments do not help them in any way to enhance their learning and 27% of the students were not sure about the co-relation between the two (as shown in fig. 4).

Figure 4



*Survey Analysis on whether students are satisfied with the current assessment pattern*

### Health Issues

Teenage years and youth years are considered as the prime of one's life, whether or not it is applicable to all in different aspects, it is very crucial for physical and mental development. Health is extremely important and should not be over-looked. The online classes do seem to have an effect on mental health of the students owing to the isolation and lack of interaction, unlike that of the classroom experience. Henceforth, we have analyzed the effect of online education on health of the students. The first question asked was if in the opinion of the students, is online education leading to the phobia of losing internet connectivity? 53% of the students voted affirmatively, assuring that phobia of losing internet connectivity is increasing and have an impact on them because of online classes. 22% of the students were not affected by the fear of losing internet connectivity and 25% of the students did not have an opinion on whether or not they have a fear of losing connectivity or if it has an impact on them.

The increase in use of digital technologies have only increased in the last few years and the impact it is having on the newer generation have been alarming. Even in pre-COVID times, the increase in over use of technology by the new generation has been a cause of concern, the online classes on the top of that have just added to the already existing problem. Over use of technology in children have shown to have side-effects such as weak vision, anxiety, depression and much more. We asked the students if they think that online education is leading to overuse of digital technologies. 67% of the students claimed that it was in fact leading to over-use of

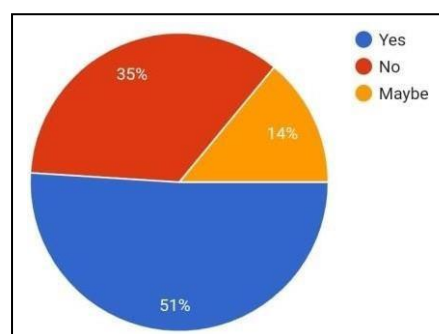
technology. 19% of the students did not think that it was leading to over use and 14% were not sure about the impact.

We further asked the students if they thought that the excessive screen time is causing stress and affecting sleep. Interestingly 86% of the students voted for excessive screen time affecting their sleep. 5.5% of the students said that it did not affect their sleep and 8.5% of the students said that they were not sure of its impact.

We also asked if in their opinion online assessment create more anxiety than traditional forms of assessment? 51% of the students claimed that it did create more anxiety in them. 35% of the students refused and 14% of the students were not sure about their opinions (as shown in fig. 5).

Figure 5

*Survey Analysis on students' perceptions on anxiety about assessments.*



## Social Issues

As discussed earlier, education is not solely about academics, it is also about personal development and social bonding which the current online education system fails to deliver to the students. The lack of interaction inside of the homes due to lockdown and further drifting apart of the peer interaction which used to be so common in classroom learning have a perverted impact on the students leading to many mental health problems in many students. COVID-19 have been a hard time for a lot of students and frequent assessment and lack of interaction in the social circles haven't been easy. Therefore, we have analyzed the effect of online classes and the social issues emerging from it. We asked the students whether in their opinion, the online education affecting the daily lives of students. 84% of the students said that it was affecting the daily lives of the students while 7% refused the same and claimed that it did not affect their daily lives and the rest 9% claimed that they were not sure if their daily lives were affected or not. We further examined the aspect of digital divide and its impact. The students were asked if in their opinion the online education exposing the digital divide among students.

67% of the students believed, that it was exposing digital divide among the students, 11% refused and 22% were not sure.

Table 1

## Survey Questionnaire

Sr.No.	Questions	Yes	No	Maybe
1	In your opinion does the learning process take place better in physical classrooms than through online education?	86.50%	9%	4.50%
2	In your opinion are online classes better than enrolling in online courses?	25%	48%	27%
3	In your opinion have professors improved their online teaching skills since the beginning of the COVID-19 pandemic?	58%	13.50%	28.50%
4	In your opinion is online education a viable alternative during the COVID-19 pandemic?	66%	12%	22%
5	Do you think adequate amount of study material is available online?	64%	21.10%	14.60%
6	Do you think slideshows make lectures more informative?	57.80%	22.10%	20.10%
7	In your experience, does the professor-student interaction take place better in physical classrooms than through online platforms?	83.50%	10.50%	6%
8	In your opinion does the use of a digital pen make the lecture more interactive?	47.50%	22.50%	19%
9	In your experience, if the professor and students show their faces, does the lecture become more interesting?	58.50%	22.50%	19%
10	In your experience, if the professor and students show their faces, does the lecture become more interesting?	69%	15%	16%
11	In your experience has the lack of interaction with peers been a hindrance in your academics?	73%	11%	16%

<b>12</b>	In your experience has online teaching made a difference in your personal interaction with professors?	<b>74.50%</b>	<b>11.50%</b>	<b>14%</b>
<b>13</b>	Do you think online tests and quizzes effectively evaluate the knowledge of students?	<b>15.50%</b>	<b>63.50%</b>	<b>21%</b>
<b>14</b>	Do you think weekly assignments and tests help in the learning processes?	<b>38.50%</b>	<b>34.50%</b>	<b>27%</b>
<b>15</b>	In your opinion is online education leading to the phobia of losing internet connectivity?	<b>58%</b>	<b>22%</b>	<b>25%</b>
<b>16</b>	Do you think online education is leading to overuse of digital technologies?	<b>67%</b>	<b>19%</b>	<b>14%</b>
<b>17</b>	Do you think excessive screen time is causing stress and affecting sleep?	<b>86%</b>	<b>5.50%</b>	<b>8.50%</b>
<b>18</b>	In your opinion does online assessment create more anxiety than traditional forms of assessment?	<b>51%</b>	<b>35%</b>	<b>14%</b>
<b>19</b>	In your opinion is online education affecting the daily lives of students?	<b>84%</b>	<b>7%</b>	<b>9%</b>
<b>20</b>	In your opinion is online education exposing the digital divide among students?	<b>67%</b>	<b>11%</b>	<b>22%</b>

## V. DISCUSSION AND FINDINGS

Our study's objective is to examine the student population's perceptions and opinions from a variety of angles. The COVID-19 pandemic has not been easy on anyone, and despite the fear and loss, what remains of normal life continues. There have been requests from students across the country for exam and curriculum postponements and cancellations in order to demonstrate empathy for their current situation. The researchers' goal is to provide that perspective and contribute to the literature, so that the student perspective can be considered and necessary steps taken to assist them with their difficulties.

While many are dissatisfied with the new trend in education, others applaud it for making learning a remote process. This has been a significant change, for better or worse, in the Indian education system, which is rather conservative and resistant to new methods. There are two

sides to the coin; while some believe that online education has increased access to education, others argue that this new trend has limited learning opportunities to the privileged. In any case, the major research question remains as to what students' reactions and perspectives are on the new changes, as they are ultimately the ones bearing the brunt and should be the ones to decide whether or not this trend continues post COVID -19.

The survey found that, while students prefer classroom instruction over online education, they believe that online education is a viable alternative to MOOCs. Additionally, it is observed that students struggle with a lack of interaction, which has a detrimental effect on their development, but they commend their professors for their efforts and encourage the use of ppt and other tools that make learning more interesting. While there has always been controversy surrounding the post-COVID-19 traditional method of assessment, the research indicates that the new online method is not considered a viable option either, implying the need for another method.

While online education is viewed as a viable alternative, students are dissatisfied with its health and social implications. According to the study, students believe that online education has caused them anxiety, stress, and depression; they also claim to feel the digital divide created by the same and fear the growing phobias associated with internet connectivity.

Taking everything, we've learned into consideration, there is undeniably room to improve the current trend in education. India is a country of enormous diversity; appalling the majority is a near-impossible task, but education is a fundamental right that must remain accessible to all. There are numerous ways to improve the new trends, including investment in virtual laboratories, increased interaction, increased accessibility to the internet and technology, and the development of new effective assessment methods. There is still a long way to go, but in order to maximise the benefits of adaptation to new educational trends, development must be made to determine whether or not these trends will persist.

## **VI. PREDICTIONS REGARDING THE FUTURE OF THE ONLINE SCHOOLING SYSTEM**

Online Education has seen a boost during this pandemic. There were provisions for online education before but the pandemic has forced students to move to online sources as the schools have been shut. Though, there has been a dynamic boost in this industry, there have been speculations regarding its performance in the post-covid period.

i. *“According to data from the paper Online Education Market in India 2020-21, the online education market in India is set to grow by USD 14.33 billion during the period 2020-24, growing at a Compound Annual Growth Rate (CAGR) of 21% during the forecast period.”*  
[Karyala & Kamat, 2021]

ii. *“Slowly and steadily, digital education is spreading and reaching out to the rural population of the country and we could see a high jump in online courses and students. Technavio’s market research analyst predicts that the Indian online education market will grow at a CAGR of about 20% by 2020, which will be worth about 18 billion U.S. dollars.”* [Srivastava & Srivastava, 2021]

iii. *“The number of users enrolling in online education may indeed touch 9.6 million users by 2021, from 1.6 million users in 2016. Estimates point out that the eLearning market worldwide will grow massively, presumably more than 243 billion U.S. dollars by 2022.”*

As schools were forced to close due to the pandemic, Ed Tech was one of the biggest winners. The technology was there, but it had never been employed to such an extent before, and now it was their time to shine. Learning new courses was fashionable, and online learning platforms grew in popularity. Experts believe that, even if the pandemic is eventually eradicated, digitally assisted learning will continue to exist.

Zishaan Hayath, CEO and Founder, Toppr, feels that this is just the beginning of a market hitherto unexplored. *“This year has not only changed education as we know it, but it has also coerced all stakeholders of education to find better learning solutions. The changes EdTech has brought will continue to influence classroom teaching even after schools reopen. As a result, more schools will be using technology in their day-to-day classes. After-school market: coaching and tuitions will be completely reimaged. Since students are now more open to learning online, EdTech players will now have a bigger share of that pie and will start to consolidate. Currently, India has about 70 million students who are paying for after-school learning, we predict, over the next 2-3 years, about 20 million paying subscribers from this segment will migrate to digital learning.”* [Kanika Khurana, 2021]

Mr. Rohit Maglik, CEO, EduGorilla, feels similarly bullish around the trend. *“With the acceleration in digitization, the year 2020 brought a new dawn in the ed-tech segment. Amid the suspension of classroom teaching due to the pandemic, online learning emerged as the panacea to sustain the momentum. The ed-tech segment continued to be under investors’ radar and exemplified resilience despite the pandemic. We foresee the momentum to sustain in 2021 as will with the implementation of the AI mission as envisaged in National Education Policy. We foresee gamification and cloud technology to drive engagement and boost the user experience in e- learning. Tier 2 and Tier 3 cities will emerge as sunrise destinations for the ed-tech players and account for a substantial ed-tech demand,”* he says.



## **VII. SUGGESTIONS**

### **i. Online Pedagogies:**

Unlike traditional classrooms, online classrooms require teachers to use instructional tactics such as pre- and post-class activities through a Learning Management System (LMS) to ensure active student engagement. To make lessons more engaging, teachers should embrace online pedagogies such as Team Based Learning (TBL), discussion forums, and Open Education Resources such as Swayam and NPTEL courses.

### **ii. Interaction in class:**

Teachers must devote a significant amount of time and effort to creating compelling presentations and in-class activities for online classes. Teachers must be trained in how to use online resources to deliver excellent online instruction.

We believe that there is a growing need for instructors to be trained in the use of technology and online delivery of academic content, as well as in the development of structured evaluation systems that place a greater emphasis on continuous evaluation. Perhaps more emphasis on formative evaluation and less on summative evaluation will be required.

### **iii. Invest in virtual laboratories:**

Online teaching presents significantly greater obstacles for teachers in disciplines with skill-oriented courses than for teachers in other courses. The majority of these courses need them to explain concepts using software and simulations. To provide students with training, it is necessary to invest in remote laboratories and virtual laboratories.

### **iv. Invest in technology upgrades:**

HEIs will need to invest significantly in technology upgrades and online delivery platforms. Classrooms and lecture halls will need to be redesigned to make them compatible with online delivery and to make these sessions interactive. It will be necessary to provide them with recording equipment in order to provide students with later access to these sessions.

### **v. Increase access to internet:**

For most students, finding an unbroken internet connection to access online classes has been a struggle. Despite the fact that India's internet penetration rate is over 50%, certain rural areas still lack access to the internet.

### **vi. Assessment Pattern:**

The survey conducted showed that the majority of students aren't happy or satisfied with the

current assessment patterns. Students are facing physical and mental difficulties while appearing for their examinations. There rises a need for new methods of assessment to be added in place of the existing ones so as to ensure that students retain much of their knowledge and also don't have to compromise a lot while giving the exams.

## **VIII. CONCLUSION**

The Covid-19 pandemic and subsequent lockdowns have wreaked havoc on India's educational system. Due to the months-long shutdown of schools and the loss of revenue for school owners and trustees, individuals are turning to digital learning platforms. With the introduction of a new set of laws by the Indian government in 2020, we may predict that digital learning and education will become the standard. However, as already stated before, this will be fraught with difficulties.

At least half of India's population lives in rural areas and lacks access to basic necessities such as power, water, and shelter. If we wish to educate that segment of the population, we must first provide them with basic requirements. Only if the government takes steps to provide them with proper shelter and 24-hour access to electricity will the new NEP guidelines have any impact on that sector of our society; otherwise, only the upper classes will benefit from it, while the rest of the population will continue to live in darkness and illiteracy.

The government must use modern technology to reach out to every village and provide people with basic requirements such as water, housing, and education.

Online education will become a part of everyone's life in the near future, and we must be prepared for the changes. It's no longer a choice; it's a necessity.

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