

# Online Learning: Changing the world of education and its overall impact on students' lives

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## Acknowledgement

Firstly, we are extremely thankful to our teacher, Dr. Monika Seth, Assistant Professor, Department Of Humanities, RCOEM , Nagpur for her invaluable advice, support, and guidance without which writing this paper wouldn't have been possible. We would also like to thank our parents for their continuous encouragement and motivation throughout.

### ▪ Abstract:

The education system of the world was forced to transform due to the sudden outbreak of the Covid-19 pandemic in 2020. Most of the governments worldwide imposed a complete lockdown due to which schools and colleges were completely shut and an alternative method of teaching was adopted for their entire academic activity either through live teaching or websites/applications having education content, called as "Online Learning" or "E-learning". Many online education platforms have witnessed a significant increase in the no. of users for online courses and thus gained a lot of profit from it. But there have been many instances where the students and teachers are facing difficulties adapting to the online mode of teaching. Problems of mental, physical and social health are continuously rising.

▪ Keywords: Covid-19 pandemic, lockdown, E-learning

### ▪ Introduction:

Education is the process to gain knowledge and learn new experiences. It is one of the branches that leads to fruits of success. Learning is the process of constantly updating the stack of memory (Brain). Education enhances the quality of life by not just technical aspects but also behavioural changes.

Education can be classified into two modes: **offline** and **online** education.

- **Offline education** is provided at specific institutions, schools and colleges. We have seen this education right from the gurukuls in "Ramayana"; where education would be provided under open sky. With offline learning, it's easier to ensure students are paying attention to the training. Classroom studying provides an opportunity for students to engage in live discussions where they can better utilise their critical thinking skills to voice opinions or involve in an argument.
- **Online education** is now the new normal due to pandemic. However, it has no time, location restrictions. Online education can occur on any corner of the globe if equipped with proper resources. Some of the best examples of online education platforms are Coursera, Edx, Udemy, BYJU's etc.

### Types of online learning are:

Asynchronous training – It can be considered as a traditional type of learning. It involves self-learning, Internet-based, CD, DVD, or network-based.

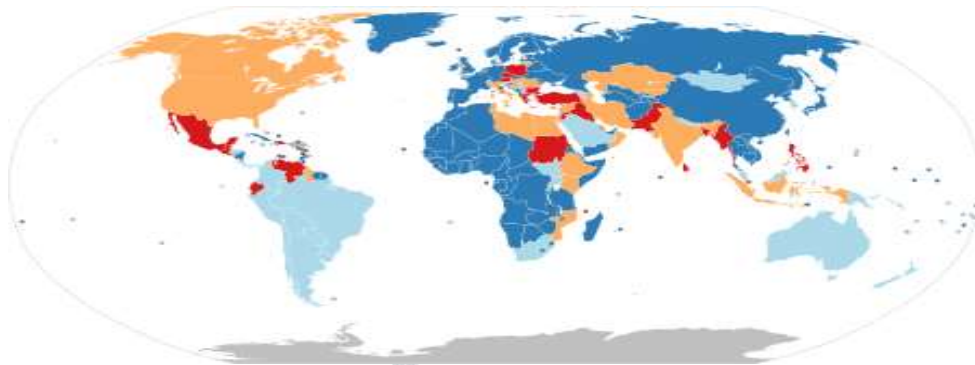
Synchronous training – It is a more structured form of training, where the students come online at a specific time and can communicate directly with the instructor and with each other via audio or video-conferencing in a classroom example Unacademy, Byjus, etc.

Knowledge databases - the most basic form of E-learning. These are reasonable, implying that one can either type in a word to search the database, or make a choice from a list organised alphabetically.

Online support – Its form of E-learning and functions similar to educational databases but relatively more engaging. Online support is in the form of chat rooms, e-mail, online boards, or instant chat.

### Closure of educational institutions due to COVID 19 pandemic:

The ongoing covid-19 pandemic has had a deep impact on the education systems worldwide. Most of the governments of the world have decided for almost complete closure of the education institutions as the corona virus is highly infectious and it can spread among the students easily in these institutions. Till 12th January 2021, approximately 825 million students are currently affected due to closures of educational institutions due to the covid-19 pandemic.



Source: Wikipedia, the free encyclopedia

Learners affected by school closures caused by COVID-19 as of 12 January 2021

Country-wide school closures

Partial school closures

No school closures

Academic break

The closure of such institutions has just not affected the learners but also teachers and the families of the staff members who are directly dependent on such institutions for their livelihood. The economic and social effects due to closure of schools and colleges are far severe as it not only affected learning but also gave rise to problems like student debt, homelessness, food insecurity, internet connectivity issues for digital learning particularly for children from weaker economic backgrounds.

Due to school closures, UNESCO recommended the use of distance learning programmes and open educational platforms and platforms that schools and teachers can use to reach learners remotely so that educational activity can continue.

#### ▪ Discussion:

#### **The Rise of E-learning platforms:**

Due to the advent of COVID-19 Pandemic, the world of education has changed drastically and the rise of e-learning has been the most significant and noticeable change. In E-learning, teaching and learning takes place on digital platforms either in the form of live classes or through pre-recorded lectures.

Though the Covid-19 infection and mortality rates vary in different countries worldwide, approximately 825 million students have been affected due the closure of schools and colleges due the lockdowns imposed by the governments of respective countries. In most of the countries, there is a paradigm shift from physical classroom learning to online learning for a long part of the year 2020.

Be it schools, colleges, Institutes providing coaching for different competitive exams like GRE, GMAT, SAT, TOEFL & IELTS, LSAT, MCAT, CAT, JEE, NEET, etc to name a few, have completely adopted online mode of learning for their respective courses.

Online courses program market will be worth \$243 billion in 2022, prediction by Statista. April was the biggest month for all the MOOC providers. At its peak, the MOOC platform received almost three times the February 2020 traffic.

Here are Some of the statistics which shows the growth of such online education platforms:

1.) EdX: The non-profit venture created by MIT and Harvard University in 2012, has reached a milestone of 100 million unique enrolments, after an increase of 20 million during the pandemic time. the education movement for restless learners, today announced a significant milestone in their growth in 2020. edX grew from 81 million total global enrolments in 2019, to over 110 million global enrolments in 2020, a record 29 million increase. The number of new registered users grew even faster at 161% year-over-year, to 35 million total individual users. Individual courses offered passed 3,000.

2.) Coursera: Coursera registered 10 million new users from mid-March to mid-May

3.)Byju’s: BYJU’s is the world’s highest valued EdTech company. Byju's made content on its learning app free for all students. It also introduced live classes to further student engagement. This probably got Byju’s a new wave of users enabling it to add further 13.5 million consumers in March and April, according to analysts. Byju’s doubled its revenue from Rs 1430 crore to Rs 2800 crore in FY 19-20. The Covid-19 pandemic helped Byju’s become a decacorn, cross \$10.5 bn valuation

4.)Edraak, the non-profit Arabic MOOC platform backed by Queen Rania Foundation received 1 million new learners in 2020.

5.) Thai MOOC, the official MOOC platform of Thailand received 286k new learners in 2020. The total registered user base is 570k. The platform launched in 2016.

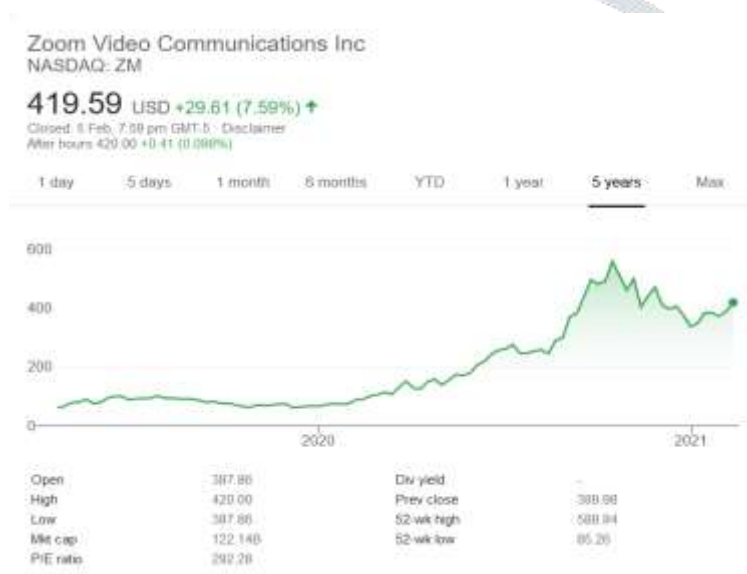
6) Tencent classroom, meanwhile, has been used extensively since mid-February after the Chinese government instructed a quarter of a billion full-time students to resume their studies through online platforms. This resulted in the largest “online movement” in the history of education with approximately 730,000 or 81% of K-12 students, attending classes via the Tencent K-12 Online School in Wuhan.

Newly registered users in Website	2019	2020	Total
Coursera	8M	20M	65M
Edx	5M	8M	32M
Future Learn	1.3M	4M	13.5M
Class Central	350k	700k	2.2M

**Share graph of Zoom Video Communications and Google’s Parent Company, Alphabet Inc.**

(Source Google)

**1. Zoom Video Communications Inc. , of 5 year timeline**



## 2. Alphabet Inc. , of 5 year timeline



### Physical, Mental and Social Impact of online education on Students

As higher education adapts to teaching and learning at a distance, the workload and the learning load of adopting a new mode of education is taking a huge impact on the lives of those in higher education. This is a problem that is growing day by day. Faculty members are feeling the huge mental stress of remaking their classes into effective online forms. The added load on teachers leads to burnout.

Too often we separated the term of mental health from physical health. These two are interrelated. The mental and emotional pressures teachers and students may be facing can be expressed in decreasing physical health. Anxiety and stress can reduce immunity, resulting in making people ill. People with high levels of self-reported distress are found to be 32 percent more likely to die of cancer. As depression leads to heart disease.

Many students are feeling the eye strain. Those unaccustomed to squinting at poorly adjusted computer screens in sub-optimum ambient lighting are subjected to eyestrain that can have long-lasting effects on one's eyes. Doctors recommend that for every 20 minutes spent using a screen, you should try to look away at something that is 20 feet away from you for a total of 20 seconds to avoid eye strain.

Supporting the mental health needs of online students is an important mission for each university. This change in lifestyle can feed loneliness, anxiety, and even lead to depression. Faculty members are now the one that should take the responsibility for identifying emotional and mental health issues. No one else is monitoring the students in most scenarios. They are living in a room with no one to interact. The COVID-19 pandemic is taking a heavy toll.

As Howard Aldrich, Kenan Professor of Sociology at UNC Chapel Hill, writes:

Remember to be flexible and empathetic. As one commentator noted, "College students taking classes this fall are likely to be unusually vulnerable and will need lots of support as they navigate financial, health, and safety concerns." The students who were most disadvantaged before COVID are also most likely the students who have been disproportionately impacted by COVID-related deaths and illnesses, financial challenges, and other stresses due to unfolding political events.

Do your faculty members know what to look for in identifying emotionally struggling students, especially, do they know how to connect these students to help? Is there an enhanced institution wide atmosphere of generosity, support, tolerance and grace in this COVID time? What are you doing to help address this slowly unfolding crisis?

Human beings are social animals and love to interact and work with people. Working and socializing with people helps a person to reduce stress and anxiety. The lack of face-to-face interaction leads to a state of isolation and is a major drawback of online education. Students experience increased screen time, poor time management and lack of motivation. The walk from the lecture hall or classroom can often be a good way for the brain to take a break and relax before the next lesson, and online lessons don't facilitate that kind of downtime because you have classes lined up without any break. Staring at the screen for hours is decreasing the interest of students. With every pop-up notification on social media, you are distracted and reduce concentration levels. The eating habits have drastically changed and students fail to maintain a proper diet. Sleeping habits are changed and early to bed and early to rise is just a myth for youngsters. We are today more concerned about our looks in camera and what we speak than in any part of our life.

"Zoom fatigue" is real – video chats make it harder for our brains to process "non-verbal clues like facial expressions, the tone and pitch of the voice, and body language," according to one BBC article. Reading and retaining information from the screen is more challenging than from a textbook. We are now so dependent on technology for education that even some delay in sending the link



for class makes the student full of stress and anxiety. The long wait for the classes to start forces us to spend more and more time on social media that drains our energy. The students may find it difficult to receive the extra education support and guidance of teachers they need to succeed. During video meet, our brain works harder to pick-up on the facial expression; to interpret the information that it's receiving.

Research shows that the school environment is critical for fostering academic motivation and social development, and many students rely on school for mental health care. Among adolescents who received mental health services between 2012 and 2015, 35% received these services exclusively from school settings, according to data from the National Survey on Drug Use and Health (Ali, M. M., et al., *Journal of School Health*, Vol. 89, No. 5, 2019)

A dearth of one-on-one interactions with teachers and peers is also likely to have an impact because those interactions help students develop fundamental social emotional skills. While the two hours virtual school day may have structure, students are still stuck in their home environment, which can destabilize them and may even prevent them from experiencing the benefits of the structured school day.

After the five and a half hours of video calls, students have homework, which is largely online as well, and most teen's social life and entertainment, especially when in lockdown, is based online as well. However, scientific articles, polls, and many students at Northern show that mental health, along with fatigue and digital eye strain, are not something to be taken lightly during a pandemic which places the importance on physical health.

#### ▪ **Research Methodology:**

The problem statement of this research work is to identify what are the pros and cons and the experience of online mode of teaching, of the students from various schools and colleges based in India. For this, we have undertaken an online survey. As we, the authors of this research paper are currently pursuing our engineering degree from RCOEM, Nagpur, Maharashtra; thus most of the responses we got were from the city of Nagpur and also some from cities of Mumbai, Hyderabad, Aurangabad, Pune, Vadodara. A convenient sample size of 200 students were finalized by us with students from various schools and colleges. Our focus wasn't on segregating and analysing male and female students' responses, neither on the different age groups but the student community as a whole.

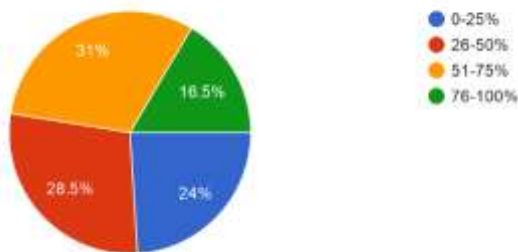
Following steps were taken for undertaking the survey:-

- We decided to reach out to the students studying in various schools and colleges for our survey and not targeting a particular age group.
- We created a Google form for our survey.
- We identified some common problems that we ourselves faced as students during online mode of teaching and also some advantages of the same and added those as questions in our survey. We also asked about the honest opinion on online education from the students.
- After the google form was created, we used various online sources like WhatsApp, Twitter, Telegram, Instagram, LinkedIn for reaching out to the students for responses.
- After collecting the responses, we analysed the data with the help of pie charts, line, graphs, etc. which are some features provided by Google forms.

**Result of survey:**

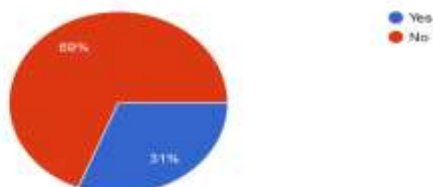
How much are you able to understand the concepts during online classes?

200 responses



Are you able to prepare your notes properly?

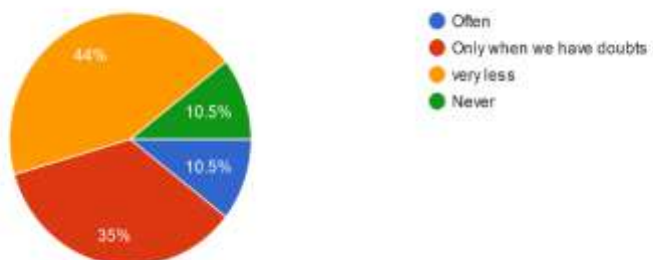
200 responses



We got a mixed response from this question which explains only 16.5% of students can understand every concept and 28.5% think that they can grasp only half of the concepts. Around 69% said they cannot prepare notes properly.

How often do you interact with your teachers personally?

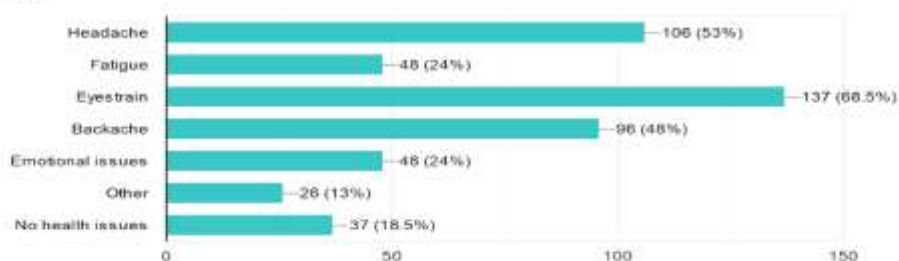
200 responses



44% of the students said that they interact very less with their teachers personally. 35% said that they only speak when they have doubts, 10.5% said they never interact and 10.5% said that they interact very often.

What are the health issues are you facing?

200 responses



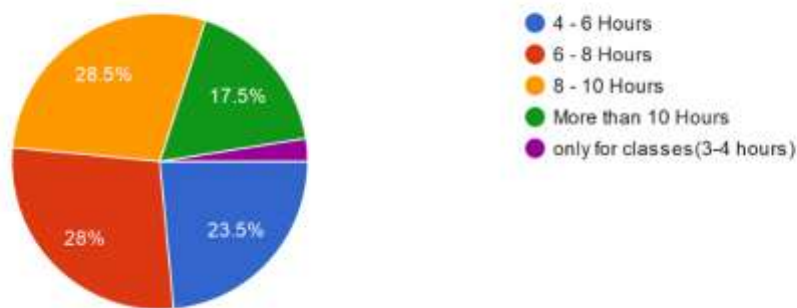
Due to continuous exposure to screen for prolonged periods, nearly 69% of the students are facing regular Eyestrain and vast majority are also facing issues like:-

- Headache (about 53%)
- Backache (about 48%)

As the online learning environment also reduces social interaction, about 24% of the students are facing Emotional issues, which not only hinders the normal life but also affects the grasping skills.

How much time do you spend on average in front of your mobile/laptop/PC screen, per day?

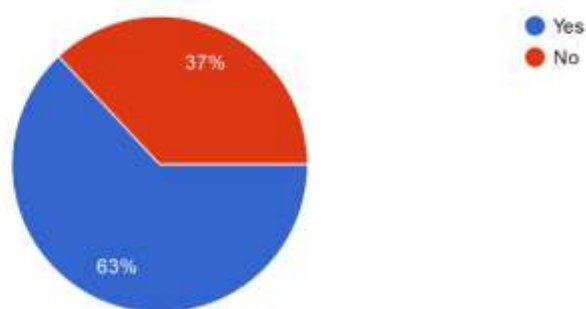
200 responses



Due to technological advancement, the technology nowadays is cheap. Almost every person in this generation has a habit of using devices like Mobile phones, PCs, Laptops etc. Now due to online learning most of them are glued to screen for more hours than usual, which is really affecting their health. Only about 2% use these types of devices for classes only.

Do you feel that the time for traveling to your school/college is being saved due to online classes?

200 responses



Due to total reduction in waste of time like for travelling to destination, students are able to save a lot of time, almost 63% agree that due to online classes their time is being saved.

In extra time given almost 2/3rd of students i.e. 68% of students use e-learning sites like Edx, Coursera etc for learning extra courses, developing skills etc (from survey). This is not only promoting Extra-curricular activities but also giving them a chance to explore different fields, and pursue their interests.

#### **Inference:**

A survey was conducted via Google Forms and about 200 people participated in this survey. It is safe to say that the majority of students are not able to grasp concepts via online learning, even though the study material provided was above satisfactory level as said by the students, the platform itself is not suitable for learning. Online teaching is also causing many health issues like Eye Strain, back pain, tiredness etc due to prolonged exposure to screens. There is a significant drop in "energy" of students, leading to procrastination and delay in tasks given. As the social interaction is less, many students are not able to overcome their comfort zone and their traits like extraversion, agreeableness are decreasing. Therefore from survey it is safe to conclude that the online learning is only a feasible option due to pandemic and cannot be converted to permanent option, at least not with current technology and methods.

#### ▪ **Conclusion:**

The aim of education is to educate individuals so that they can distinguish between the good and the bad, understanding the importance of contributing something for the society and the country, inculcating moral values and being prepared for different life experiences to come and to have a broader perspective towards things. As of the twenty-first century, with the tremendous popularity and accessibility of the Internet to every household, new methods of gaining this knowledge have emerged.

In recent times, people have realized the importance of e-learning. With the sudden advent of the Covid-19 pandemic, the E-learning industry has grown by multiple folds. Though, before the outbreak of Covid-19 pandemic, E-learning was already a huge industry worldwide of approximately 19 billion US dollars, the post-pandemic era has completely changed the educational industry. E-learning industry is expected to grow up to 243 billion US dollars in 2022. With most of the governments imposing a lockdown to prevent the spread of coronavirus in 2020 and even in 2021 in some parts of the world, almost all the educational institutes adopted online methods of teaching.

The online survey conducted by us which aimed at identifying what are the pros and cons of online teaching for the student community, we found out that the majority of the students were not available to grasp concepts well as they would in offline mode of teaching. Though the majority of the students agreed that, being able to attend online classes from their homes saved a considerable amount of time for travelling to their schools/colleges, online classes also gave rise to many health issues. Due to continuous exposure to the screen for quite a few hours in a day, problems like eye-strain, backache, headache were quite common among the students. Thus the research aimed at identifying how online learning has changed the face of education and its considerable mental, physical and social impacts on the students worldwide.

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