

Repercussions of COVID-19 on higher education: surveys, challenges and promising solutions

Nidhi Chahal

Assistant Professor, Bennett University, Greater Noida, Uttar Pradesh, India

Abstract

The professors, academic staff, students reside at university and college campuses in vicinity of each other. The unique ecosystem of higher education is greatly affected by sudden and rapid spread of the disease of Corona virus. The students and researchers studying abroad are advised to complete the studies by returning to their locations. It is hard to examine the future scenario if this pandemic will result in prolonged suspension of conventional process of higher education system. A survey has been conducted among the students of Computer Science & Engineering department of my university in India related to several effects of the pandemic on their education and mental status. Based on which and various other genuine sources such as QS survey, twenty countries' higher education intra-period digital pedagogy responses, significant consequences have been discussed and possible solutions are proposed to deal with the situation of COVID-19 in education field.

Keywords: QS survey, covid-19, mentor-mentee, daad

Introduction

Across the world, the campuses are closed ^[1] to avoid unnecessary spread of this disease and everyone's safety. The institutions in United States have cancelled trips during spring breaks ^[2] and adopted classes in online learning mode. Like many countries, the schools, colleges, and universities in India have adopted online learning mode for the continuation of studies and research. To adapt in this new environment of online learning, constant internet availability and many other factors come into picture which are discussed here. As a result of this crisis, universities and colleges are struggling with many troubles such as students' admissions in new session, communication with students and staff, consistent course delivery, conducting practicals and lab experiments. The work pressure on academic and non-academic staff has been elevated. The biggest challenge the universities handle is during examinations. It is hard to adopt robust and flawless examination system in online mode. Some of the problems faced by professors are internet issues in exam duration, copying among the students from internet sources and friends, preparing

appropriate question papers while taking care of possible situations. In this paper, apart from responses collected from my students, data has shown from some valid online resources such as QS survey ^[11], twenty countries' higher education intra-period digital pedagogy responses ^[10] to conclude the discussion of the pandemic consequences. To start with, few statistics have been provided below in form of graphs to show the current situation of new cases in India and USA. The data sources have been mentioned with the figure titles. The data was collected from mentioned websites on May 09, 2021. In Fig. 1, the data for new cases of COVID-19 in India has been shown where May 8, 2021 shows the highest peak with new cases of 4,03,405. In India, the graph is showing increment in cases these days which is affecting the education sector badly. Even the death rates are increasing much, keeping this and people's health issues in mind, few universities have paused the process of online teaching for few days. In Fig. 2, new cases in USA (United States of America) have been shown where Jan 8, 2021 shows the highest peak with new cases of 3,00,669. The graph is showing declining cases these days there.

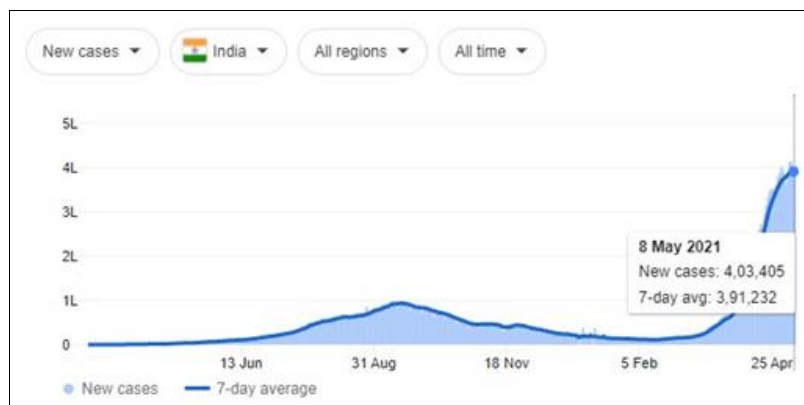


Fig 1: Data on May 9, 2021: India. May 8, 2021 shows the highest peak with new cases: 4,03,405. Each day shows new cases reported since previous day. Source JHU CSSE COVID-19 Data ^[7]. About this data ^[8]

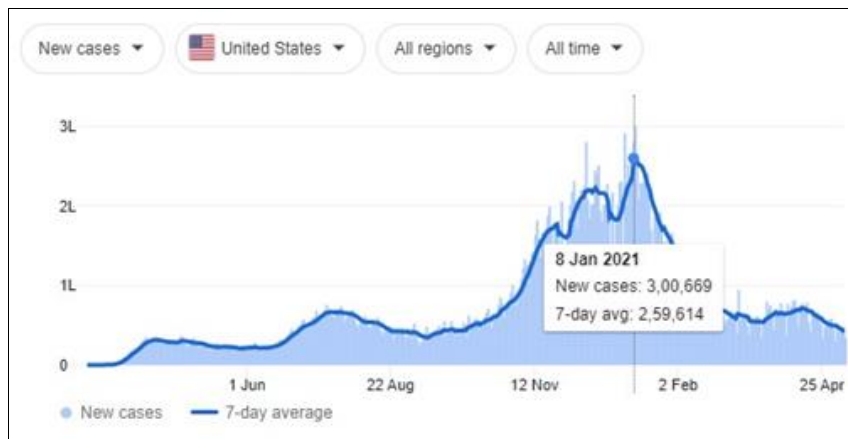


Fig 2: Data on May 9, 2021: United States. Jan 8, 2021 shows the highest peak with new cases: 3,00,669. Last updated: 14 hours ago. Source The New York Times [9]. About this data [8]

Repercussions on Higher Education and Suggestions

The academic activities in higher education institutes are highly affected due to pandemic COVID-19 (Corona Virus Disease 2019) all over the world, including India. Some of its consequences these institutes are facing have been mentioned below.

1. Online teaching-learning

The campuses have been instructed to shut down in year 2020 by the Indian government and many other countries as well. After a staff member of The University of Washington infected [1] by this disease, offline classes have been banned. Other universities [1] including Stanford University, Princeton University in New Jersey, Seattle university and most of the Indian Universities have adopted virtual mode of teaching and learning. The parents and students, especially from colleges and universities were concerned about continuation of studies. Initially, it seemed almost impossible to fulfil the requirements of education process smoothly by sitting at homes. The university students are technologically savvy enough and capable of handling the challenges of online work. Now days, the online technology tools such as Integrated Environments, visual paradigm, video conferencing apps such as Microsoft Teams, Zoom, Webex, Google Meet have become the replacements of campus teaching and educators have started utilizing the online resources on large scale worldwide. Even though, there are many concerns associated with this process such as increased screen time for both students and educators, attendance issues, internet connectivity and many more.

2. Rural areas: Internet issues

The students who belong to rural areas usually deal with issues such as internet connectivity, insufficient bandwidth. Due to this, they can miss some online lectures, labs, missed attendance, problems while attending the online quizzes. Even it can affect some students drastically during their examination time. They can panic if internet issues arise due to examination hours. Even though, it has the solution that they can inform the instructor by email or WhatsApp messaging or call about the issue during that time, but still, it can waste their time or disturb them. The educators/professors can also face the internet issues sometimes if residing at local places where internet connection is a problem. They can try to solve the problem by rescheduling the classes if they are not able to conduct in

scheduled timings.

3. Practical Implementation: Challenges

In many courses of Science and Engineering, there are requirements of practical implementation of theory lessons. There can be Chemistry practical where students are supposed to use the chemicals in labs and perform experiments or analog/digital implementations where they learn to use the digital devices in labs. But all these things are not possible due to shut down of university campuses and labs. For many courses in universities, the instructors are finding their ways to overcome these problems by using many online practical lab tools such as Google Colab, visual paradigm, GitHub repositories, IDE (Integrated Development Environment) and submitting lab assignments on LMS (Learning Management System). Python lessons can be given to the students online to perform coding for software programs.

4. Quality of Education

The professors at universities try hard to make the online teaching process successful by adopting alternatives for almost all the teaching and assessment components. But sometimes students cannot concentrate on online lectures or sometimes they intentionally do not listen to the teacher. The problem can be solved by instructing them to turn their videos on whole time during classes, but it is expensive for them bandwidth wise. Other solutions can be adopted such as constant interaction with them during class or surprise quiz or providing marks for their class participation. As compared to offline mode, the quality of education and assessment is declined in this new methodology of learning. We can only hope that the situation gets better by the end of the year and academic activities are resumed in conventional way.

5. Economic Impact

The number of International students contribute the national higher education markets in adequate amount which cannot be ignored. The students from China comprise of 33.7% of the foreign student's population in United States alone whereas Indian students make up 18.4% [3]. Around 830 number of Chinese students have been restricted to return to US institutions for their studies according to a survey by Institute of International Education [4]. The question arises: how educational systems should adopt better teaching and learning techniques to maintain courses' enrolment and provide accessibility to the foreign students because same

situation due to this virus can sustain for longer period.

QS (Quacquarelli Symonds) Survey

QS is the world’s leading provider of analytics and services to the higher education sector globally. In exclusive QS

survey data [11], it discloses how higher education institutions and international students respond to the global health emergency. The survey considers the effect of this pandemic on online learning offerings, campus management, recruitment of students.

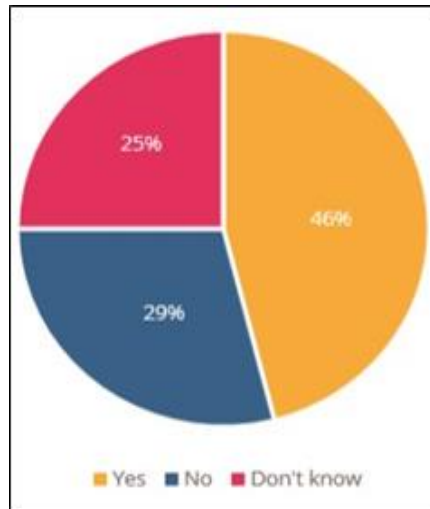


Fig 3: QS survey [11]: Impact of pandemic on study plans abroad

In the international surveys, respondents have been asked about the effect on their plans to study abroad due to undesirable situation. In Fig. 3, the change in responses were examined each week as the catastrophe expanded. In another survey, the respondents were asked to respond whether they no longer planned to study overseas, study in different country, postponed entry to next year or none of the mentioned, shown in Fig. 4. Further, QS enquired about the interest of students in studying online and only 58%

students showed their interest in online courses as of March 26, 2020. Latest QS surveys related to COVID-19 Impact on International Higher Education: Studies & Forecasts can be found out on DAAD website [12]. DAAD: Deutscher Akademischer Austauschdienst German Academic Exchange Service which provides comprehensive overview of current state of COVID-19 research and expertise in the field of international higher education.

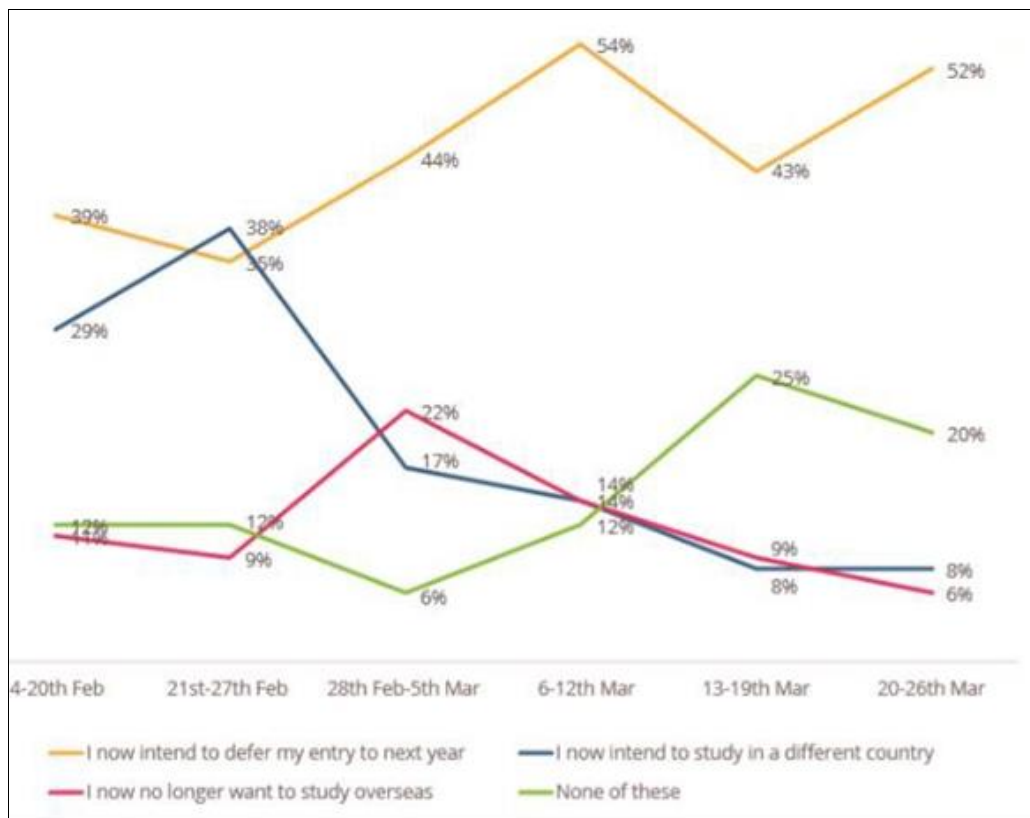


Fig 4: QS survey [11], year 2020: Effect of Covid-19 on higher education

Covid-19: 20 Countries' Higher Education Intra-period Digital Pedagogy Responses ^[10]

Across all six World Health Organization regions, the synthesis and analysis of twenty countries is done related to higher education and COVID-19 ^[10], which highlights certain trends globally. They found that responses provided by higher education sources globally are diverse from having no response to social isolation strategies on campus and rapid curriculum redevelopment for fully online offerings. A desktop analysis approach is adopted by them and 172 sources have been used for transparency.

Mentor-Mentee Program

In our university, Computer Science and Engineering department, there is program named as Mentor-Mentee program in which mentor (professor) is assigned with his/her mentees (students) to resolve the general queries and issues faced by mentees. In offline mode, we used to conduct the sessions with our mentees face to face in physical meetings. But after this unusual situation, when all academic activities have been converted to online mode, this program is also being conducted through Microsoft Teams and WhatsApp group. In sessions with my mentees (year 2020, 2021), we had the discussions related to the impact of Corona Virus Disease, COVID-19 on their education and mental status. The mentees participated in the discussions with full enthusiasm and shared their viewpoints about this new mode of online learning. Few questions and their responses are mentioned below.

▪ Campus should be re-open?

Few students are interested in re-opening of the campus as they miss their campus life, hostel, friends, university clubs and co-curricular activities. But they are aware of the criticality of the situation and fine with campus closed.

▪ How mentees feel about online learning?

Most of the students are now adapted with this new way of teaching and learning and even research (Ph.D research scholars). But few students face the problems of internet connection, online quizzes, increased screen time which is the problem for mentees who use the specs for reading.

As mentors, we address the issues of mentees in best possible ways after listening to them. This program helps us to solve their problems with higher success rate. This type of survey and constant communication with students can lead the education system and universities towards improvements and priorities can be set to reassure them about their future success.

The universities and colleges can follow some measures to adapt to this new normal. Some universities are already adopting the few and others should. Switch the scheduled courses online, constantly collecting feedback from students and staff, flexible assessment submission deadlines for students, strong and effective university leadership, explicit communication from administrators and leadership are some suggestions. The students should have uninterrupted internet connection at residences to avoid missing classes online. They should avoid making excuses and involve in studies and research sincerely. They can consider it as great opportunity in which they can utilize the time saved from travelling, work from home while enjoying the home food

and no home sickness.

Conclusion

As the pandemic of COVID-19 continues, it is the responsibility of education institutions to improve their management strategies in crisis, adopt new initiatives to survive and grow in this new normal by constantly reviewing the progress. A survey has been conducted related to consequences of this pandemic on higher education through mentor-mentee program in which responses from various mentees/students have been collected. Various types of questions have been asked from them and their comments have been considered to conclude the discussions in this article. Also, we have discussed the QS survey and digital pedagogy responses from twenty countries, both conducted in 2020 and reached to significant conclusions. Delivering high quality and effective teaching online, providing various study resources on teaching portal, utilizing latest technological tools, and solving students' concerns time to time are few ways by which universities can maintain the standards in this uncertain and crucial time. Also, cooperation and hard work from students, parents and their guardians are required to achieve the goals uninterrupted and follow the process smoothly. The flexibility of education institutions and students to adapt the crisis conditions quickly will help them grow in coming time. For future work, we have collected the Twitter responses of the people's sentiments, how they are dealing with this pandemic. Their sentiments such as anger, sorrow, fear, anticipation have been analysed using sentiment analysis algorithm.

References

1. <https://www.usnews.com/news/education-news/articles/2020-03-09/coronavirus-takes-toll-on-k-12-and-higher-education>
2. <https://www.chicagotribune.com/coronavirus/ct-coronavirus-illinois-northwestern-spring-break-nu-20200304-zh7iqkidnja7zodq6vz25foqwm-story.html>
3. <https://edition.cnn.com/2020/03/07/health/universities-coronavirus-impact/index.html>
4. <https://www.iie.org/Connect/COVID-19>
5. Shazia R, Sunishtha Y. Impact of Covid-19 Pandemic on Higher Education and Research. Indian Journal of Human Development, 2020, 1-4.
6. Bob B, Adam M. COVID and the Impact on Higher Education: The Essential Role of Integrity and Accountability. Administrative Theory & Praxis, 2020;42(3):404-423.
7. <https://github.com/CSSEGISandData/COVID-19>
8. https://support.google.com/websearch/answer/9814707?p=cvd19_statistics&hl=en&visit_id=637480092358007835-1499181293&rd=1
9. <https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html>
10. Joseph et. al. COVID-19: 20 countries' higher education intra-period digital pedagogy responses. Journal of Applied Learning & Teaching, 2020;3(1):9-28.
11. Exclusive QS survey data: The Impact of The Coronavirus on Global Higher Education. <https://info.qs.com/rs/335-VIN-535/images/The-Impact-of-the-Coronavirus-on-Global-Higher-Education.pdf>

12. <https://www.daad.de/en/information-services-for-higher-education-institutions/centre-of-competence/covid-19-impact-on-international-higher-education-studies-and-forecasts/>.