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A Literature Review on Post Covid-19 Pandemic on Teaching and Learning

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Abstract: The COVID-19 pandemic has created the largest disruption of education systems in human history, affecting nearly 1.6 billion learners in more than 200 countries. Closures of schools, institutions and other learning spaces have impacted more than 94% of the world's student population. This has brought far-reaching changes in all aspects of our lives. Social distancing and restrictive movement policies have significantly disturbed traditional educational practices. Reopening of schools after relaxation of restriction is another challenge with many new standard operating procedures put in place. Within a short period of the COVID-19 pandemic, several schools, colleges and universities have discontinued face-to-face teachings. There is a fear of losing 2020 academic year or even more in the coming future. The need of the hour is to innovate and implement another educational system and assessment strategies. The COVID-19 pandemic has provided us with an opportunity to pave the way for introducing digital learning. This article aims to provide a comprehensive report on the impact of the COVID-19 pandemic on online teaching and learning of various papers and indicate the way forward.

Keywords: Coronavirus, Distance Learning, Education System, Impacts of COVID-19

1.1 Introduction

The global outbreak of the COVID-19 pandemic has spread worldwide, affecting almost all countries and territories. The outbreak was first identified in December 2019 in Wuhan, China. The countries around the world cautioned the public to take responsive care. The public care strategies have included hand washing, wearing face masks, physical distancing, and avoiding mass gathering and assemblies. Lockdown and staying home strategies have been put in place as the needed action to flatten the curve and control the transmission of the disease.

Bhutan first declared closing of schools and institutions and reduction of business hours during the second week of March 2020. The complete nationwide lockdown was implemented from 1 August 2020. In between, movements were allowed, offices began functioning, schools and college reopened for selected levels and continued with online class for others. More than 170,000 children in Bhutan from classes PP–XII are, today, affected by the



school closure. The impact is far reaching and has affected learning during this academic year or even more in the coming days. Several schools, colleges and universities have discontinued face-to-face teaching. There is a pressing need to innovate and implement alternative educational and assessment strategies. The COVID-19 pandemic has provided us with an opportunity to pave the way for introducing digital learning.

This article highlights certain dearth such as the weakness of online teaching infrastructure, the limited exposure of teachers to online teaching, the information gap, non-conducive environment for learning at home, equity and academic excellence in terms of higher education. This article evaluates the impact of the COVID-19 pandemic on teaching and learning process across the world. The challenges and opportunities of online and continuing education during the COVID-19 pandemic is summarized and way forward suggested.

2.1 Pedagogy for Continuing Education through Online

Lockdown and social distancing measures due to the COVID-19 pandemic have led to closures of schools, training institutes and higher education facilities in most countries. There is a paradigm shift in the way educators deliver quality education through various online platforms. The online learning, distance and continuing education have become a panacea for this unprecedented global pandemic, despite the challenges posed to both educators and the learners. Transitioning from traditional face-to-face learning to online learning can be an entirely different experience for the learners and the educators, which they must adapt to with little or no other alternatives available. The education system and the educators have adopted “Education in Emergency” through various online platforms and are compelled to adopt a system that they are not prepared for.

E-learning tools have played a crucial role during this pandemic, helping schools and universities facilitate student learning during the closure of universities and schools. While adapting to the new changes, staff and student readiness needs to be gauged and supported accordingly. The learners with a fixed mindset find it difficult to adapt and adjust, whereas the learners with a growth mindset quickly adapt to a new learning environment. There is no one-size-fits-all pedagogy for online learning. There are a variety of subjects with varying needs. Different subjects and age groups require different approaches to online learning. Online learning also allows physically challenged students with more freedom to participate in learning in the virtual environment, requiring limited movement.

As schools have been closed to cope with the global pandemic, students, parents and educators around the globe have felt the unexpected ripple effect of the COVID-19 pandemic. While governments, frontline workers and health officials are doing their best slowing down the outbreak, education systems are trying to continue imparting quality education for all during these difficult times. Many students at home/living space have undergone psychological and emotional distress and have been unable to engage productively. The best practices for online homeschooling are yet to be explored.

The use of suitable and relevant pedagogy for online education may depend on the expertise and exposure to information and communications technology (ICT) for both educators and the learners. Some of the online platforms used so far include unified communication and collaboration platforms such as Microsoft Teams, Google Classroom, Canvas and Blackboard, which allow the teachers to create educational courses, training and skill development programmes. They include options of workplace chat, video meeting and file storage that keep classes organized and easy to work. They usually support the sharing of a variety of content like Word, PDF, Excel file, audio, videos and many more. These also allow the tracking of student learning and assessment by using quizzes and the rubric-based assessment of submitted assignments.

The flipped classroom is a simple strategy for providing learning resources such as articles, pre-recorded videos and YouTube links before the class. The online classroom time is then used to deepen understanding through



discussion with faculty and peers. This is a very effective way of encouraging skills such as problem-solving, critical thinking and self-directed learning. The virtual classroom platforms like videoconferencing (Google Hangouts Meet, Zoom, Slack, Cisco, WebEx) and customizable cloud-based learning management platforms such as Elias, Moodle, Big Blue Button and Skype are increasingly being used.

2.2 Challenges in Teaching and Learning

With the availability of a sea of platforms and online educational tools, the users both educators and learners face frequent hiccups while using it or referring to these tools. Some of the challenges identified and highlighted by many researchers are summarized as follows:

Arunaz Kumar, et. al (2021) summarizes the protocol describes the study, which will be widely implemented over the various courses in Health Professional Education and Biomedical Science. It will evaluate how students and teachers engage with the online delivery of the curriculum, student performance, and resources used to implement these changes. It also aims to evaluate longitudinal outcome of student learning attributes and impact on graduate outcomes, which is poorly reported in educational literature.

Murgatrot, 2020, he says that broadly identified challenges with e-learning are accessibility, affordability, flexibility, learning pedagogy, life-long learning and educational policy. Many countries have substantial issues with a reliable Internet connection and access to digital devices. While, in many developing countries, the economically backward children are unable to afford online learning devices, the online education poses a risk of exposure to increased screen time for the learner. Therefore, it has become essential for students to engage in offline activities and self-exploratory learning. Lack of parental guidance, especially for young learners, is another challenge, as both parents are working. There are practical issues around physical workspaces conducive to different ways of learning.

The innately motivated learners are relatively unaffected in their learning as they need minimum supervision and guidance, while the vulnerable groups consisting of students who are weak in learning face difficulties. Some academically competent learners from economically disadvantaged background are unable to access and afford online learning.

Sintema, 2020., has found that the level of academic performance of the students is likely to drop for the classes held for both year-end examination and internal examination due to reduced contact hour for learners and lack of consultation with teachers when facing difficulties in learning/understanding.

United Nations, 2020., said that student assessments are carried out online, with a lot of trial and error, uncertainty and confusion among the teachers, students and parents. The approach adopted to conduct online examination varies as per the convenience and expertise among the educators and the compatibility of the learners. Appropriate measures to check plagiarism is yet to be put in place in many schools and institutions mainly due to the large number of student population. The lockdown of schools and colleges has not only affected internal assessments and examinations for the main public qualifications like General Certificate of Secondary Educations (GCSE), but levels have also been cancelled for the entire cohort in the UK. Depending on the duration of the lockdown, postponement or cancellation of the entire examination assessment might be a grim possibility. Various state-level board exams, recruitment exams, university-level exams and entrance exams have been postponed across India due to the COVID-19 outbreak and national lockdown. Various entrance examinations (such as BITSAT 2020, NATA 2020, CLAT 2020, MAT 2020, ATMA 2020) have also been postponed/rescheduled. The education system in schools, colleges and universities across the country has been severely impacted due to the ongoing situation.

Maurin & McNally, 2008., has carried out it is also possible that some students' careers might benefit from the interruptions. For example, in Norway, it has been decided that all 10th grade students will be awarded a high-



school degree. A study carried out in France shows that the 1968 abandoning of the normal examination procedures in France, following the student riots, led to positive long-term labour market consequences for the affected cohort.

School time also raises social skills and awareness besides being fun for the children. There are economic, social and psychological repercussions on the life of students while they are away from the normal schedule of schools. Many of these students have now taken online classes, spending additional time on virtual platforms, which have left children vulnerable to online exploitation. Increased and unstructured time spent on online learning has exposed children to potentially harmful and violent content as well as greater risk of cyber bullying. School closures and strict containment measures mean more families have been relying on technology and digital solutions to keep children engaged in learning, entertained and connected to the outside world, but not all children have the necessary knowledge, skills and resources to keep themselves safe online.

In the case of online learning in Bhutan, majority of the learners are from rural villages where parents are mostly illiterate farmers. Students are engaged in assisting parents in farm activities such as agriculture, tending to cattle and household chores. Some students even requested to postpone exam time towards the afternoon since they had to work on the fields during morning hours.

Some students expressed that they had to attend to their ailing parents/grandparents/family members and take them to hospitals. By evening, when they are back to home, it becomes difficult for them to keep abreast with the lessons. Parents whose children are in lower grades feel that it would be better to let the children repeat the next academic year. Majority of students do not have access to smart phones or TV at home in addition to poor Internet connectivity. There is no or less income for huge population due to closure of business and offices. The data package (costs) is comparatively high against average income earned, and continuous access to Internet is a costly business for the farming community. Online face-to-face classes (video) are encouraged by most; however, some students (economically disadvantaged) have expressed that the face-to-face online class consumes more data packages. The teachers are in dilemma as to whom to listen to and which tools to adopt. Some think pre-recorded videos could help; however, this would restrict interactions. It is difficult to design a proper system to fit the learning needs and convenience of all students.

2.3 Opportunities for Teaching and Learning

Although there have been overwhelming challenges for educators, schools, institutes and the government regarding online education from a different angle, there are several opportunities created by the COVID-19 pandemic for the unprepared and the distant plans of implementing e- learning system.

It has forged a strong connection between teachers and parents than ever before. The homeschooling requires parents to support the students' learning academically and economically. Children with disabilities need additional and special support during this ongoing emergency. The use of online platforms such as Google Classroom, Zoom, virtual learning environment and social media and various group forums like Telegram, Messenger, WhatsApp and WeChat are explored and tried for teaching and learning for the first time ever to continue education. This can be explored further even after face-to-face teaching resumes and these platforms can provide additional resources and coaching to the learners.

Teachers are obliged to develop creative initiatives that assist to overcome the limitations of virtual teaching. Teachers are actively collaborating with one another at a local level to improve online teaching methods. There are incomparable opportunities for cooperation, creative solutions and willingness to learn from others and try new tools as educators, parents and students share similar experiences. Many educational organizations are offering their tools and solutions for free to help and support teaching and learning in a more interactive and engaging environment.



Online learning has provided the opportunity to teach and learn in innovative ways unlike the teaching and learning experiences in the normal classroom setting.

2.4 Education System Post-COVID-19

The researchers, curriculum designers, education officers, and educational institutions work together to transform the education system during the closures. Educational institutions should design curriculums, prepare learning strategies and techniques for post-COVID-19, and transform the education system itself. During closures curriculum design, collaborations, skill development, and educational institutions should focus on advancing the education system. After COVID-19, the school's design strategies and methods to recover lost learning ensure children return to school when schools reopen, preparing students, parents, and teachers, and to scale distance learning accessibility. School teachers in collaboration with education officers need to give awareness for parents and students to make sure that children are safe at home during school closures and trying to learn and read books as much as possible.

There is inequality among urban and rural students; students from low-income or high-income and literate or illiterate parents. So that the education system should design and implement some evidence-based actions that aim to facilitate the recovery of the lost portion when schools are reopened. Because of the lack of required support during the school closures, it could take a very long time for children from illiterate and low-income parents to recover their missed portion when they return to school. Some students from low-income parents may decide to work as daily laborers to support their families financially and may never return to school when schools reopen. Parents from rural areas may be unwilling to send their children back to school because they may prefer their children to continue to support them in cattle herding and farming. The schools should trace those students who do not return to school and also even if the countries recover from COVID-19, parents may fear to send their children back to school so that design strategies to encourage parents to send their children back to school. The education system needs strategies on how to prepare teachers and students to respond effectively and efficiently during and after COVID-19. Teachers may not teach all the time in a face-to-face classroom; students may not learn in the face-to-face class all the time. When the COVID-19 pandemic is over, the education system needs to prepare everyone to be flexible and adapt quickly to various learning platforms during a time of crisis. The global community may need to support the educational systems in developing countries in their efforts to prepare schools, teachers, students, and parents for the future.

3.1 Conclusion

The impact of the COVID-19 pandemic on teaching and learning across the world concludes that although various articles have been carried out, in the case of developing countries, suitable pedagogy and platform for different class levels of higher secondary, middle and primary education need to be explored further.

Internet bandwidth is relatively low with lesser access points, and data packages are costly in comparison to the income of the people in many developing countries, thus making accessibility and affordability inadequate. Policy-level intervention is required to improve this situation. Further exploration and investigation on effective pedagogy for online teaching and learning is an area for research. Need for developing tools for authentic assessments and timely feedback is found to be another area of article. The affordability and accessibility for all the learners of varied economic background is identified as a challenge, for which the educational tools developer could focus on customization. The policy level intervention is also vital. Education system across the world including Bhutan and many other countries needs to invest on the professional development of teachers, especially on information and communications technology (ICT) and effective pedagogy, considering the present scenario. Making online teaching creative, innovative and interactive through user-friendly tools is the other area of research and development. This would assist and prepare the education system for such uncertainties in the future.



The article learnt from the COVID-19 pandemic is that teachers and students/learners should be oriented on use of different online educational tools. After the COVID-19 pandemic when the normal classes resume, teachers and learners should be encouraged to continue using such online tools to enhance teaching and learning.

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