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# Online Class Experiences of Nepali Students and Teachers

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#### **Abstract**

This research paper presents a case study analysis of the experiences of master's degree students during online classes amidst the COVID-19 pandemic, focusing on participants from Butwal, Nepal and various other regions. The study involved interviews with ten students and five teachers who actively engaged in online learning during this period. The findings reveal that the COVID-19 pandemic had a profound impact, leading to widespread disruptions, including significant economic challenges that continue to affect many nations. The pandemic altered nearly every aspect of human life, bringing about substantial changes in people's lifestyles. The study highlights that a majority of students encountered difficulties related to internet connectivity, which hindered their ability to participate in classes effectively and grasp key concepts. Moreover, many students reported lack of adequate knowledge of online learning tools, further complicating their educational experience. Similarly, teachers reported facing challenges in managing online classes, primarily due to issues with internet connectivity. The insights gained from this study underscore the need for enhancing teachers' technical proficiency and call for improved regulation of internet and electricity services to better support online education in future crises.

**Keywords**: digital divide, virtual class, technophobia, e-learning, connectivity problems

#### INTRODUCTION

The first case of COVID-19 was identified in Wuhan, China in December 2019. The situation rapidly escalated, and by January 2020, it was declared a global public health emergency. By March 2020, the World Health Organization (WHO) officially recognized it as a global pandemic (WHO, 2021) which significantly impacted public health and safety, and badly affected the educational systems everywhere around the globe. To prevent further spread of the virus, many educational institutions, including those in Nepal, started lock down which automatically suspended face-to-face teaching. Given the technological advancements and the need to develop new millennium skills and capabilities, it was already crucial for educational systems globally to transition from traditional classroom settings to virtual synchronous and

asynchronous teaching methods. The COVID-19 pandemic created an urgent chance for many countries and Bangladesh as well, to explore education beyond conventional face to face methods (Li & Lalani, 2020). As a result, higher education in Bangladesh and many other countries like Nepal experienced an emergency shift from in-person to fully online learning. This abrupt and largely unplanned transition posed significant challenges for the teachers and students around the globe. Public university students, in particular, have faced considerable difficulties due to this rapid transition from traditional face to face mode to online class teaching and learning situation (Naomee, 2022).

In the critical situations, the primary focus is generally on the life or the survival of the people and let the education system go as usual which may seem like a waste of time and energy. However, maintaining educational activities during such times is crucial, as it can help all the students and teachers start thinking away from the critical situation, thereby fostering mental well-being (Nicolai, 2003). Emergency Remote Teaching (ERT) is a quick, sudden, and mainly unplanned temporary shift in the lesson or content delivery methods to an alternative virtual mode due to pandemic situation (Hodge et al., 2020; Chattaraj & Vijayaraghavan, 2021). ERT involves fully remote teaching and learning for all aspects of education, regardless of whether the previous mode was face-to-face, blended, or hybrid (Hodge et al., 2020). It is not about reshaping the educational system of a country or institution; rather, it provides minimal support to continue education with the aim of returning to regular methods once the crisis is over (Means & Neisler, 2020). Due to the rapid spread of a particularly dangerous virus, humanity found itself in an unprecedented predicament, marked by anxiety about the future. With no prior experience, all sections of society faced the challenge of coping with this unprecedented trauma in the best way possible. The academic sector, without exception, had to quickly adjust to the new circumstances and resume its work immediately (Schleicher, 2020; Weeden & Cornwell, 2020). Most nations swiftly transitioned education online (UNESCO, 2020a; Weeden & Cornwell, 2020), and the Bangladeshi educational system was suddenly confronted with online education, though many instructors lacked the necessary skills.

This situation highlights the significant adjustments required by both students and educators in response to the global shift to online education during the epidemic. For students, the shift meant adapting to new methods of receiving and engaging with their coursework, which often led to increased feelings of worry, sadness, and loneliness. These emotional responses were

compounded by a reduction in social activities and engagement, as indicated by research findings from various studies (Cao et al., 2020; Sundarasen et al., 2019; Killan, 2020; Means & Neisler, 2020; Quacquarelli Symonds, 2020). For educators, the challenge was to ensure the continuity and effectiveness of the learning process in a completely digital environment. This required not only mastering new technologies but also finding innovative ways to keep students engaged and motivated under unprecedented circumstances. The successful adaptation to these new educational delivery modalities was crucial to avoid the disruption of the academic calendar and ensure students could continue their education without significant delays (IESALC, 2020; Ministry of Education in Bangladesh, 2020)

The rapid and widespread adoption of online teaching in higher education has fundamentally transformed educational practices worldwide. Although online lectures share some similarities with traditional face-to-face instruction, there are significant differences in their didactical features. This shift requires both 'e-teachers' and 'e-students' to adapt to new methods and techniques to achieve comparable learning outcomes. The quality of online teaching, including its methods and techniques, plays a crucial role in determining the effectiveness and appeal of the educational experience. The COVID-19 pandemic in Spring 2020 forced many educational systems, including Croatia's, to quickly transition from in-person to online teaching. This sudden shift posed significant challenges, as courses originally designed for face-to-face delivery had to be rapidly adapted for an online format without prior planning. Educators and students had to rely heavily on their existing information and communication skills and their ability to quickly learn and adjust to the new environment. In Bangladesh, the pandemic also accelerated the transition to online education, a shift that aligns with the broader 21st-century trend towards digital learning. Typically, a well-planned transition from face-to-face to online education requires six to nine months of preparation (Hodges, 2020). However, Bangladesh, like many other countries, had to implement emergency remote teaching with little preparation time. Despite the challenges, this experience is providing valuable insights into the advantages and disadvantages of online learning. The students and educators are now gaining a better understanding of the potential of online education, which could inform more structured and deliberate approaches to e-learning in the future. This ongoing adaptation could enhance the flexibility and accessibility of education, making it a viable and potentially superior alternative to traditional classroom-based instruction.

This period presents an excellent opportunity to gather students' opinions about online learning and incorporate their feedback into future education plans. The 21st century heavily relies on modern technology, and various educational institutions are adopting this technology to advance higher education. For instance, Australia transitioned to online learning in higher education long ago, thanks to the development of modern communication technology (Stone, 2019). In contrast, Georgia typically follows a traditional education system where students are accustomed to face-to-face classes. However, the global spread of the corona virus prompted Georgia to suspend its conventional education system and recommend that universities and colleges shift to online learning (Basilaia et al., 2020; Basilaia and Kvavadze, 2020). Similarly, countries like India and China have implemented various techniques to continue higher education, placing significant emphasis on online learning. Teachers and students in these countries have started participating in online learning through smart phones and computers to maintain their educational programs (Bao, 2020; Kapasia et al., 2020).

In this situation Nepal also could not continue with its traditional face to face teaching modes and the whole nation was locked. Nobody could come out of their houses and due to fear of the pandemic people even did not like to talk to the neighbouring persons. Schools were closed, colleges were closed, most of the shops were closed, and vehicles were too less due to fear of the virus and no passengers to carry to and from different destinations. Only police vehicles were on the road to control unnecessary movement of people and the only active office to run busier were the hospitals which had to be very busy those days. For some time nobody could think of what to do and people were expecting that the situation would not go long. But as the pandemic got worse there were voices for searching alternative ways of continuing teaching and the local governments and schools as well as colleges started practising different techniques for alternative teaching modalities. Some schools sent the teachers to different clusters where there were some students and the teachers started to give them some instructions related to their health and studies. Some schools started teaching through the local FM radio stations at certain times and after some days there were news about zoom application which many of us thought was like extended version of messenger video calls. In fact it was free initially and easy to handle. Students of different classes and levels were contacted through the social media and requested to join the online classes. It was soon very popular and there were other applications for online classes in use. Tribhuvan University Nepal subscribed Microsoft Teams application

for running the classes of bachelors and master degrees by training the faculty members to use this. The classes started going smoothly for some time and Pokhara University even conducted its board examination using zoom application. Everything was running different ways due to the pandemic that time. Many had to suffer due to the lack of technical knowledge to cope with the time.

The comparison of face to face and online higher education usually shows typical advantages of each of them. In face to face teaching students have a possibility for richer interaction and communication with each other and with teachers, and they increase their learning both consciously or subconsciously (Gray & DiLoreto, 2016). In face to face environment there are more oral discussions, feedback is both verbal and non-verbal, immediate reactions to feedback are possible, group dynamics is more evident, and it is not so easy for students to ignore the teacher (Castro & Tumibay, 2019). On the other hand, advantages of online learning in higher education comprise the following: it is flexible considering space and time, information are easily available, dialogue forums are simple to access, written discussions are traceable (Castro &Tumibay, 2019), there are no travel expenses, and some types of online learning allow students to choose the pace of progress and adoption of content (Marc, 2001). The disadvantages of online education can be summarized as follows: technical and financial problems (Adnan & Anwar, 2020), lower quality collaboration and interactions (Dumford & Miller, 2018), and a lack of motivation to participate in the educational process (Muilenburg & Berge, 2005). Online courses must involve participants in regular, significant activities to help keep them focused. The importance of regular communication in creating effective online classes was highlighted by Hung et al. (2010). However, a lack of immediacy in getting answers to queries has been identified as a challenge in online education (Muthuprasad et al., 2021). This issue has also been reported by Hartley and Bendixen (2001), Petrides (2002), and Vonderwell (2003). Therefore, it is crucial for instructors to respond promptly to learners' questions. Researchers have used self-efficacy instruments in various academic and technology-related courses and found that self-efficacy positively influences students' achievement and persistence in specific tasks (Mishra, 2009). Additionally, findings reveal that lockdowns, social distancing, and selfisolation requirements are stressful and detrimental for many individuals (Nurunnabi et al., 2020). The tendency towards stress is a serious concern among university students and can impact educational achievement both positively and negatively (Hossain et al., 2019a).

The rapid transition to online education necessitated by the pandemic has brought to light numerous benefits that make a compelling case for the future of education being rooted in online learning. Josep (2021) identifies five key reasons why online education is advantageous and likely to continue growing in prominence: Flexibility, online education allows students to learn at their own pace and schedule, accommodating different learning styles and personal commitments. This flexibility can lead to better retention and understanding of material as students can review content as needed. Variety of Subjects, online platforms offer a wide range of subjects, from niche topics to comprehensive courses in performance art and quantum physics. This vast array of options provides students with the opportunity to pursue their interests and broaden their knowledge base in ways that might not be possible in a traditional classroom setting. Time and Cost Efficiency, online education eliminates the need for commuting, saving both time and money for students and teachers. The reduction in travel expenses and time spent commuting can make education more accessible and less stressful, allowing for a better focus on learning. Customized Learning Experience, online learning platforms often provide more opportunities for personalized instruction. One-on-one interactions between teachers and students can be facilitated through various digital tools, allowing teachers to address individual students' needs more effectively. Study materials are often provided as e-books and video lectures, and discussion forums enable peer engagement and deeper understanding of the subject matter. And affordability, online education tends to be more affordable than traditional education. With resources and materials shared electronically, costs associated with physical textbooks, infrastructure, and commuting are significantly reduced. This cost efficiency makes education more accessible to a broader audience. In summary, the shift to online education, although initially challenging, has revealed significant benefits that suggest a promising future for this mode of learning. The flexibility, variety of subjects, time and cost savings, customized learning experiences, and overall affordability make online education a compelling alternative to traditional classroom-based education. As institutions and individuals continue to adapt to and refine online learning practices, these advantages are likely to become even more pronounced and widely recognized.

# RESEARCH METHODS

With all the changes in the situation of teaching and learning, the teachers and students who were not updated with new ICT technologies suffered most and they had to work very hard for continuing their jobs and studies. Many took the situation as an opportunity to get updated with time and many took it as an extra burden in their work. So this study was designed basically to explore and analyse the online class experiences of the students and teachers of higher education during corona pandemic.

This paper is based on the case study analysis of the ten master degree students who took online classes in their bachelor degrees and five teachers who were involved in teaching online classes. The purposive sampling for finding the students who passed bachelor degree with online classes during COVID19 pandemic and the university teachers who were involved in teaching online classes during that time were selected for the information gathering. With the help of an interview guideline for the ten students and another for five teachers there was an interview in proper situation and the recordings of the interview were transcribed, translated and processed to come to some findings, conclusions and recommendations for the preparation for similar difficult situations.

# RESULT AND DISCUSSION

After the collection of the necessary information from the interviews, the information was categorized in different themes and after theme building the analysis and interpretation was done. The findings of the study were categorized and presented in the following themes.

## Feeling of teachers and students with the online classes

The students and teachers in the present study were found to have a non positive attitude towards online classes as they thought that the online classes were not as effective s the face to face classes. The teachers were in the view that the movement of the teachers in the classes and evaluating the activities of the students in different corners of the classes would be really effective in making the class live. Not only this most of the students in the actual classes would be attentive and very few of them may not be careful there which is normal. The teachers' feedback in the actual classes can be very effective and the students become careful there which can be important for increasing their understanding of the subject matter. On the other hand the online classes cannot be effective in Nepali context as the students and teachers are not habituated for using such technology. The teachers were in the view that the students join the

classes initially and they disappear muting themselves. Some students were called in the class but never answered and when his friend phoned him he was sleeping after joining the class. There is no interaction in the class and the students cannot be carefully watched and evaluated in the online classes.

On the other hand, the students were also found to be not much positive towards online classes in general though they found some positive changes after learning to take online classes. They reported that the online classes were not as effective as the actual classes mainly due to the fact that the students in Nepal need more care in the class to study well which is not possible in the online classes. The students cannot show their home works and class works and cannot practice well in the online classes. They were in the view that the online classes cannot supplement the real classes.

#### **Problems of online classes**

The teachers and students complained of the varieties of problems related to internet connections and online classes as well as the skills of teaching and learning during the online classes. The gathered data were processed and analysed describing these in mind that most of the problems they faced were not in their control. The problems faced by the teachers and the students are presented in the table no 1 below.

Problem	No of students	No of teachers	Remarks
Lack of proper knowledge	10	5	
Electric Connection problems	7	2	
Devices for online classes	5	3	
Data/Internet availability	9	4	
Technophobia	10	4	
Poor learning environment and infrastructure	7	3	
Communication problems	6	4	

Table 1. Problems of online classes:

The table no 1 shows different kinds of problems the teachers and the students faced during the online classes. The problem faced by all the teachers and students was that they did not have proper knowledge about using Zoom like applications for teaching and learning. The

lack of knowledge of using internet facilities was also common in students as there were three students who reported that they even did not have their email accounts. The teachers also were not much proficient though they also were not very much familiar with sending and receiving the emails as well. So the lack of knowledge in the teachers and students was the major problem of online classes running during the COVID-19 pandemic.

Another serious problem was the electricity connection which is never static in Nepal and the devices like router or internet cannot work and the students cannot connect to the online classes and the teachers cannot conduct classes. Among the informants seven students reported that they had to suffer much due to electricity line cut and related problems They said that sometimes their line cut was for a long time that the students had to miss the whole class and sometimes it used to be for short time that the needed to reconnect or rejoin the online classes and miss the contents. Two teacher informants also reported that they were compelled to telephone the students that the class would not continue due to lack of electricity in their areas. Such line cuts hamper the online classes time and again.

In the same way, the lack of devices for proper online classes was also the problem for many teachers and students. I know that one of the teachers in my locality used to request for the tablet from a person living in his house till he had to teach online class. The use of proper devices for either conducting online classes or taking classes is also very important. In this study as well five student informants reported that they had to suffer taking the online classes due to the lack of appropriate devices. Three teachers out of five were in the view that they felt difficulty to conduct class properly due to the lack of proper device. A teacher reported that he had not used the smart phone before he was compelled to take the online classes and this made him feel difficult to learn to use the device as well as the system of taking online classes. In the same way another teacher complained that the camera of his phone stopped working well and he was compelled to take classes without his video on and the online classes must have been not much effective.

The most affecting problem for the online classes is the internet connectivity which is still not much reliable in Nepal. During COVID-19 period as well the teachers and students had to suffer much. The main sources for internet in Nepal are the mobile data and the use of wireless connectivity and both of which are not good in Nepal. Some students during that time were in such places that their internet connection by using the mobile data was also not possible

as they had to move to different hilltops to telephone somebody as the mobile network was weak in their places. In such situation there were some photographs posted in the face book where the student was on a big tree taking online classes. Not only this, the students had to suffer buying the mobile data for taking classes which was an extra economic burden for them and this also did not work properly during the online classes. In the present study as well nine students out of ten and four teachers out of five complained that they had to face many problems due to unstable internet connectivity as well as buying the mobile data for online classes. A teacher in this study reported that he had to go to his neighbor's house to conduct online classes as he did not have internet connectivity in his house. Nepal telecom had given special discount for buying the mobile data for the students to take online classes but not for the teachers to use mobile data, nor the government and school authorities thought about it for the teachers to get internet connection to take online classes.

Technophobia is the fear for using the technology. It is the human nature that when we have to use new technology we have many kinds of fear that there may be mistake in using the technology. The same was found in conduction online classes as well. I myself was very much afraid of using the Zoom application after learning some tips from one of my friends and so I have practiced many times for running online classes without the students and finally gave the link for them to join the classes. It was really difficult to handle different kinds of problems during the online classes mainly because of the fear that there may be more serious problem if I tried some other way. In the present study also the all the students reported that they had varieties of kinds of fearful situations when they were informed to be prepared to take online classes through Zoom or MS Teams applications. In the same way, four teachers out of five also reported that they were fearful of taking online classes. Thus technophobia was also a major problem for conducting online classes.

The poor teaching and learning environment and the poor infrastructure for online classes is also another serious problem of ineffective online classes. The teachers are habituated to conduct the classes in the classrooms well set for teaching. The white boards, podium, benches and desks and the students in the class create the teaching learning environment. But during the COVID-19 pandemic situation the teachers and the students were compelled to take classes from their homes where there are their family members, children and aged persons and they may want to talk to you time and again while the teachers are teaching the online classes

and during that time they are compelled to be disturbed. In the same way the students have to sometimes go to other's houses or hilltops to get mobile network and thus get internet connection to take classes. The students who stay on a bench in the class with the friends and study listening and watching the teacher in front of them feel different while taking online class staying alone in the room or somewhere else in front of the mobile device or laptop. Seven students and three teachers reported that they were remarkably disturbed due to the lack of good teaching and learning environment. A student in the study said that because of the small size of his phone's screen, his eyes became fatigued whenever he had to view the lesson. Such varieties of kinds of problems made the online classes ineffective.

The communication problems during the online classes were also the major causes of ineffective online classes. The communication between the teacher and students in the online classes were much limited and rare during online classes. During the classes the teachers only used to teach with their videos on and the students were instructed to mute and switch off the videos. When the teachers and students cannot see themselves each other the communication cannot be effective. Not only this, the students were not able to listen properly due to the quality network or the mobile devices they used for taking the online classes. A teacher complained that he did not get response from 90% of the students when he asked any questions to them individually. It may be due to the fact that the students just joined the online class and went somewhere away from the device or they could not listen to the teacher asking them the questions or the students were muted and they answered the teacher without unmuting the system. In the study six student informants and four teacher informants reported that the communication system hindered the effectiveness of the online classes during COVID-19 pandemic.

### **New opportunities of online classes**

The online classes started in a very difficult situation of COVID-19 pandemic lock down when nobody was allowed to move outside and the gathering of the people was almost banned. In such situation the schools and colleges were closed unexpectedly and all the students were scattered to their houses far away from the schools and colleges. Fortunately some colleges have created the face book messenger groups of the students and it was easy for them to contact the students for online classes and give instructions for downloading and starting Zoom like applications and gradually run the online classes. It was really difficult for the teachers and

students initially to use such applications and learn new technology. Many teachers and students have expressed their concerns about the benefits of such situation that the COVID-19 Lockdown provided many opportunities for learning many new things for life in difficult situations. In fact the COVID-19 pandemic taught the human beings many things for their survival in the hard days. All five teachers told that they have learnt many new things about using technology in teaching due to the lockdown period when they were compelled to learn to teach online by using the Zoom like apps and also they were compelled to develop slides to teach and incorporate audio and video with their slides. They were in the view that they would never be thinking of using such technology if they were not compelled by the situation. Not only this, three teachers said that the online teaching was really beneficial for them as they were free to work at their homes and support the family in household works. All of them were in the view that they got chance to live with their families at home after a very long time only because of the pandemic. On the other hand, the students were also feeling well with the online classes especially in matters of being able to take classes staying at home and without investing money and time to go to the college and come back home, though there were also some communication and socialization problems of online classes. A student said that she was a housewife and she could not go to the college regularly and the online classes were the great opportunity for her to be able to take the classes working at her home, staying with her children, and husband. Two students who were working as marketing job and had to go to different places in place of going to college also said that they could take classes from anywhere they go. Almost all the students were in the view that the lockdown period and the online classes opened the gate for them to have the opportunity to view the world of academia and learn about the e-resources available for free in their hands in the cell phones once they are connected to the internet. A student said that he had some financial problem for going to and from the college but the online classes helped him to take classes regularly by going to a friend's house for using internet. In this way the online classes paved the new ways of learning specially the varieties of kinds of online resources.

# **Technical aspects of online classes**

Running online classes requires the technical support in the part of the students and teachers. The devices and the technology for teaching and learning need some special attention so that the teaching and learning gets effective. There are various issues related to electricity

and internet connectivity and the devices for online classes. During that time some photographs were viral in the Face book and other social media which were satirical for the internet connectivity and the devices the teachers and students use for online classes like the picture of the students taking classes staying on a tree or rooftop and the teacher's photograph of teaching with a cell phone hooking it on a stick and teaching standing in front of the phone because he did not have a laptop to teach. There were many teachers who wrote on the copy and take a photograph and use it to teach math and science due to the lack of technical knowledge and proper devices. A teacher among five informant teachers said that he had many difficulties related to the technology and he had to depend on his daughter studying in grade eight for technical support to teach using Zoom application. The online classes are easy to take for the students once the students become familiar to the technology and have proper devices. The teachers can teach from anywhere if there is internet and students in different corners, far away from the teachers also can take classes. The only thing to be properly cared is the technical knowledge, availability of internet connectivity and an appropriate device to take the class.

#### **CONCLUSION**

The online classes in Nepal were started with the worldwide COVID-19 pandemic situation when the risk to life and death was equal. In such problematic situation of worldwide lockdown and inability for movement, the education sector decided many ways for the continuation of the study of the children and the youths as the situation of school closure was uncertain. In this situation online classes were the only hope for continuing the education in Nepal and everywhere. There were varieties of kinds of problems with the online classes and many students and teachers found this situation as the opportunity for getting new ideas and learning new technology as it opened the door for vast ocean of knowledge in the online resources. Mainly some of the factors were responsible for ineffective online classes in Nepal and other developing countries which include the digital divide which is the gap between the learners who have proper access to Internet and computers and those who do not have such facilities, another cause may be the data limit or insufficient data pack to access the materials that are given by the teachers and to attend the class with video which consume larger data that can be difficult to afford for many of the learners, another problematic issue can be the poor connectivity or interrupted internet supply that makes the learners difficult to learn, issues with the device to

the applications used for online classes, poor learning environment as they have to take classes from home or outside, technophobia or the fear of using new technologies, one way communications etc as Rouf et al (2021) present. Whatever the situation is these can be improved through proper training of the teachers to make them digitally literate and this can be beneficial to the students as well.

#### **REFERENCES**

- Adnan, M. and Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology*, (2:1).
- Bao, W. (2020), "COVID-19 and online teaching in higher education: a case study of Peking University", *Human Behavior and Emerging Technologies*, (2:2).
- Basilaia, G., & Kvavadze, D. (2020). Transition to online education in schools during a SARSCoV- 2 coronavirus (COVID-19) pandemic in Georgia. *Pedagogical Research*, (5:4).
- Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J. and Zheng, J. (2020). The psychological impact of the Covid-19 epidemic on college students in China. *Psychiatry Research*, 287:12934.
- Castro, M.D.B. and Tumibay,G.M.2019). A literature review: efficacy of online learning courses for higher education institution using meta-analysis, *Education and Information Technologies*, <a href="https://doi.org/10.1007/s10639-019-10027-z">https://doi.org/10.1007/s10639-019-10027-z</a>
- Chattaraj, D., & Vijayaraghavan, A. P. (2021). Why learning space matters: a script approach to the phenomena of learning in the emergency remote learning scenario. Journal of Computers in Education, (1-22).
- Dumford, D.A. and Miller, A. L. (2018). Online learning in higher education: exploring advantages and disadvantages for engagement. *Journal of Computing in Higher Education*, (30:3).
- J. A. Gray, J.A. and M. DiLoreto, M. (2016). The effects of student engagement, student satisfaction, and perceived learning in online learning environments. *International Journal of Educational Leadership Preparation*,(11:1).
- Hartley, K. and Bendixen, L.D. (2001). Educational research in the Internet age: examining the role of individual characteristics. *Educational Researcher*, (30:9).

- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review*, 27, 1–12.
- Hossain, S.F.A., Mohammad Nurunnabi, M., Hussain, K. and Saha, S.K. (2019). Effects of variety seeking intention by mobile phone usage on university students' academic performance. *Cogent Education*, (6:1).
- Hung, M.L., Chou, C., Chen, C.H. and Own, Z.Y. (2010). Learner readiness for online learning: scale development and student perceptions. *Computers and Education*, (55:3).
- Josep, G. (2021). Five reasons why online learning is the future of education. <a href="https://www.educations.com/articles-and-advice/5-reasons-online-learning-is-future-ofeducation-17146">https://www.educations.com/articles-and-advice/5-reasons-online-learning-is-future-ofeducation-17146</a>
- IESALC, (2020).Covid-19 and higher education: today and tomorrow: impact analysis, policy responses and recommendations. [e-book] Available at: <a href="http://www.iesalc.unesco.org/en/wp-ontent/uploads/2020/04/COVID-19-EN-090420-2.pdf">http://www.iesalc.unesco.org/en/wp-ontent/uploads/2020/04/COVID-19-EN-090420-2.pdf</a>.
- Kapasia, N., Paul, P., Roy, A., Saha, J., Zaveri, A., Mallick, R., Barman, B., Das, P. & Chauhan, P. (2020). Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India. *Child Youth Serv. Rev.*, 116. https://doi.org/10.1016/j.childyouth.2020.105194
- Killian, J., (2020). College students, professors adjust to Covid-19 life. [online] NC Policy Watch. <a href="http://www.ncpolicywatch.com/2020/04/01/college-students-professors-adjust-to-covid-19-life/">http://www.ncpolicywatch.com/2020/04/01/college-students-professors-adjust-to-covid-19-life/>.
- Li, C. & Lalani, F. (2020). The Covid-19 Pandemic has changed the World Forever. *World Economic Forum*. <a href="https://www.weforum.org/agenda/2020/04/coronaviruseducation-global-covid19-online-digital-learning/">https://www.weforum.org/agenda/2020/04/coronaviruseducation-global-covid19-online-digital-learning/</a>
- Marc, R. J. (2001). *E-learning: Strategies for delivering knowledge in the digital age*. McGraw-Hill Int, Enterprises Inc.
- Means, B. & Neisler, J. (2020). Suddenly online: a national survey of undergraduates during the COVID-19 pandemic. San Mateo, CA.
- Mishra, S.(2009). E-learning in India. *International Journal on E-Learning*, (8:4).
- Ministry of Education in Bangladesh,(2020). Briefing of the deputy minister of education on distance education in universities.[online] <a href="https://www.minedu.gov.gr/news/44365-17-">https://www.minedu.gov.gr/news/44365-17-</a>

- 03-20-enimerosi-tou-yfypourgoy-paideiasthriskevmaton-gia-tin-eks-apostaseos-ekpaidefsi-sta-aei-2>.
- Muilenburg, L.Y. and Berge, Z.L.(2005). Student barriers to online learning: A factor analytic study. *Distance education*, (26: 1).
- Muthuprasad, T., Aiswarya, S., Aditya, K.S. and Jha, G.K. (2021). Students' perception and preference for online education in India during COVID -19 pandemic. *Social Sciences and Humanities Open*,(3:1).
- Naomee, I. (2022). Students' perception of online education during Covid-19: a study on the students of University of Dhaka. *Teacher's World: Journal of Education and Research*, 48 (2). **Doi:** <a href="https://doi.org/10.3329/twjer.v48i2.67550">https://doi.org/10.3329/twjer.v48i2.67550</a>
- Nicolai, S. (2003). Education in Emergencies: A tool kit for starting and managing education in emergencies. Save the Children, London.
- Nurunnabi, M., Almusharraf, N. and Aldeghaither, D. (2020). Mental health and well-being during the
  - COVID-19 pandemic in higher education: evidence from G20 countries, *Journal of Public Health*
  - Research (9: 1). doi: 10.4081/jphr.2020.2010.
- Petrides, L.A. (2002). Web-based technologies for distributed (or distance) learning: creating learning centered educational experiences in the higher education classroom. *International Journal of* 
  - Instructional Media, (29:1).
- Quacquarelli, Symonds, (2020). The Impact of the corona virus on global higher education: exclusive QS survey data reveals how prospective international students and higher education institutions are responding to this global health emergency. [e-book] <a href="https://info.qs.com/rs/335-VIN-535/images/The-Impact-of-the-Coronavirus-on-Global-Higher-Education.pdf">https://info.qs.com/rs/335-VIN-535/images/The-Impact-of-the-Coronavirus-on-Global-Higher-Education.pdf</a>.
- Rouf et al (2021). Online classes for higher education in Bangladesh during the COVID-19 pandemic: a perception-based study. *PSU Research Review*. Emerald Publishing Limited 2399-1747 DOI 10.1108/PRR-05-2021-0026

- Schleicher, A.,(2020). The impact of Covid-19 on education -insights from education at a glance. [ebook] OECD. <a href="https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf">https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf</a>
- Stone, C. (2019). Online learning in Australian higher education: Opportunities, challenges and transformations. Student Success, (10:2). doi: 10.5204/ssj.v10i2.1299
- Sundarasen, S., Chinna, K., Kamaludin, K., Nurunnabi, M., Baloch, G., Khoshaim, H., Hossain, S. and Sukayt, A.,(2020). Psychological impact of Covid-19 and lockdown among university students in Malaysia: implications and policy recommendations. *International Journal of Environmental Research and Public Health*, (17:17).
- UNESCO, 2020.National learning platforms and tools. [online] <a href="https://en.unesco.org/covid19/">https://en.unesco.org/covid19/</a> education response/national responses>.
- Vonderwell, S. (2003), "An examination of asynchronous communication experiences and perspectives
  - of students in an online course: a case study", The Internet and Higher Education, (6:1).
- Weeden, K. and Cornwell, B., 2020. The small-world network of college classes: implications for epidemic spread on a university campus. Sociological Science, 7.
- World Health Organization (WHO).(2021). WHO-convened global study of origins of SARS-CoV-2: China Part. https://www.who.int/publications/i/item/who-convenedglobal-study-of-origins-of-sars-cov-2-China-part