Rise of Online Education during Covid-19 Pandemic in Nepal – A Students' centric Perspective

Milan Regmi

PG Scholar, Lord Buddha Education Foundation, Kathmandu, Nepal

Abstract

Online education is gaining popularity all over the world these days. Only few educational institutions practice the online education in Nepal before the Covid-19 pandemic. Most of the educational institute follows traditional face to face classes in Nepal before the pandemic. Now people have realized that online education can be the best alternative for traditional face to face class. Schools and colleges are the place where large number of people gathered, and it is dangerous for the Covid-19 as the disease transfer from one person to another. But online education helps to minimize the spread of virus and break the chain of virus. So, educational institutes are shifting towards the online education. There are lots of asynchronous online learning platforms which are used by students and colleges for the online courses to develop the skills of students. Though online education is gaining popularity among the students and teachers, there are also some challenges faced by the students while taking online classes provided by colleges. There are different types of online learning system in Nepal and different asynchronous online learning platforms collaborating with different top universities are used by many students. Online education is rising and gaining popularity in Nepal.

Keywords: Covid-19, Online Education, Pandemic and E-learning.

1 INTRODUCTION

The whole world is in big trouble because of Corona virus. Different countries have done lockdown to break the chain of Covid-19 and so do Nepal. Almost all industries and business are closed during the time of Covid-19. It has adversely affected people from many sectors. It has created anxiety and depression among many peoples because they have nothing to do. Educational sector is one which is very badly affected by Covid-19. Many students academic career is delayed by some months. This Covid-19 pandemic has created huge disruption in the history of Education system (Paudel, 2021). Colleges and Universities were not closed for such a long period of time all over the world before. Covid-19 pandemic has forced most of the universities, schools, and colleges to run the online classes. And it has also forced Students to adopt the e-learning because there are no other options. Several colleges, schools and universities started online classes to create the learning environment and provide some extra courses in which the students have interests. But there are different challenges in e-learning because the developing countries do not have the proper infrastructures to run the online classes efficiently (Almaiah, Al-Khasawneh, & Althunibat, 2020).

1.1 Online Education

Education using Internet is called online education or e-learning. Distance education is not a new term it is in practice from long time. Distance education came in Practice when students and teachers from different locations connected to each other by exchanging letters. Later with the development of radio and television, distance learning gets more popular. Later different universities provide graduates and undergraduate's online courses. Learning can be synchronous or asynchronous in online education (Serhan, 2020). Synchronous and Asynchronous Learning is described below:

1.1.1 Synchronous Learning

In Synchronous learning, teachers, students can communicate with each other just like in the

physical class. Learning happens in real time in this type. Lectures takes the attendance of students as they do in the face-to-face classes. Video conferencing, live streamed classes are some examples of synchronous learning. The main advantage of synchronous learning is, this type of learning can have different classroom activities like discussions with teachers, communication with friends and instant feedback. There are some limitations of synchronous learning as well, it is completely dependent on technologies. So, unavailable of technical infrastructure and lack of technical skills would cause difficulty in joining classes.

1.1.2   Asynchronous Learning

Asynchronous learning happens in students own time. Students are provided the reading materials, video lectures, and assignment and exam questions. Students can access those materials in his/her convenience but in the expected deadline. The main advantages in this type of learning is, it provides flexibility to the students.

Similarly, students can re-watch the lecture video if he/she has confusion about the contents. And students can also learn the lectures offline once it is downloaded. But the classes are not interactive as students join the classes in their own schedule. If students get hard or difficult to understand the lecture it may takes more time to get connected with the teachers. Some of the asynchronous online learning platforms provided in collaboration with different universities over the years are courser, edX, Khan Academy and so on.

1.1.3   Online Education during Covid-19 in Nepal

Earlier schools and colleges in Nepal used face to face learning with using textbooks, blackboard, and chalk as the materials for learning. Slowly with the evolution of technologies teachers in the classroom started using computers and projectors for teaching. And similarly, students also start using laptops, cell phones, Internet and so on for learning. In this way Nepalese education system was slowly adopting the latest technology and going towards the e-learning. So, the concept of online education in Nepal is not new. Many colleges are providing online courses to the students which helps to develop their skills from years. Similarly different companies also provide online courses to develop the skills of employees which is needed in their business. Besides, some of the students also uses lectures provided in YouTube for the self-learning. But e-learning has rapidly increased during Covid-19 in Nepal. Because of the lockdown in the country, schools, colleges, and universities are forced to organize e-learning classes to their students. The move of schools and colleges to move to remote learning from face-to-face learning creates several challenges among lectures and the students including learning technologies in a very short period, preparing the teaching materials and being familiar with the new assessment techniques.

During the first two three months of lockdown students finds online classes more boring and less interactive and not fruitful. But slowly different changes and improvements in online classes are made by the concern parties. Internet is very essential thing to join the online classes, but remote part of Nepal does not have proper Internet facilities. So, Internet Service Providers (ISP) like NTC and Ncell provide educational data packs for the students in the cheaper rate which helps to increase the participation of Students in the online classes (Gupta, Shrestha, Shrestha, Acharya, & Pandey, 2020). The most popular tools used to conduct online classes in Nepal are: Zoom, Microsoft Teams, and Google Meet. Besides other several tools were used for online exams, labs, and assignment submission. Some of the universities has asked to organize online classes compulsory to their affiliated colleges and upgrade students as per the performance done in the online classes, online exams, and assignments. This helps to increase the participation of students in online classes but there are still some modification and updates regarding online classes are needed to increase the participation of the students.

1.1.4   Challenges faced by Nepalese Students adopting Online Education during Covid-19

Though online educations provide opportunities and some benefits to the students, it has some challenges or problems which students have faced during the online classes. Some the issues faced by students are discussed below:

1. Technical skills of Student

   Basic technical skills of students are required to join online classes, but some students find difficulty to use the different tools that is used in online classes and colleges and universities do not provide any trainings on how to use the different tools required in e-learning.

2. Lack of Infrastructure

   Technical devices like mobiles, laptops and internet and electricity are the basic things required for online classes. But some students have difficulty in managing the devices and similarly they also have problem joining the classes because of the slow internet and frequent disturbance in electricity.

3. Lack of Interaction in classroom

   Some students found online classes more boring because it lacks the interaction like in the face-to-face classes. Similarly, the sound quality is very poor when many people interact at the same time. Sometimes voice of the lecturer is not clear because of slow internet and students have difficulty understanding the content.

4. Technical Skills of Teacher

   Some teachers also have issues with the technical skills, they face issue while preparing the teaching materials that need to be shared to students in the online classes. Similarly, they also find difficulty using the technologies. So, students do not get the proper knowledge from the teacher because of the technical skills of teacher.

5. Difficult to understand practical subjects

   Students find difficulty understanding the technical and practical subjects. Some faculty like nursing, engineering and IT has more practical subjects. College do not provide online lab facility and for some faculty like nursing physical presence in hospital is mandatory for the labs and practical.

Article	Reference	Main Research Question/Objectives	Main Results/Issues	Why is this paper Relevant?	Other Remarks
1.	(Tanveer, Bhaumik, Hassan, & Haq, 2020)	What is the effect and impact of Covid-19 in educational sector of Saudi Arabia?	Majority of students are affected adversely because of the shutdown of the colleges and universities. Different campaigns were conducted to increase the	This paper has discussed about the impact of Covid-19 pandemic in Saudi Arabia and highlights the different issues faced by students during online classes.	Different tools used for online classes are not discussed. More focused on financial aspect, stress, and pressure of students rather than technological aspect.

			participation of students in online class, but it did not work. Most of the international students loses their jobs and it became difficult for them to survive and pay the university fees. Several students do not have computer, laptop, mobile device and the internet access which cause difficulty in joining classes.		
2.	(Gupta, Shrestha, Shrestha, Acharya, & Pandey, 2020)	What is the perception of dental students towards online learning?	Most of students were enrolled in online learning system for the first time during the Covid-19 pandemic. And they found e-learning not effective and informative. Frequent disturbance in electricity and slow internet makes difficulty in joining classes.	This paper has discussed about the perception of students towards online learning. It mainly focusses on whether students are satisfied with the online classes or not, different technical issues faced by students and whether online exam and assignments were effective or not.	This research is limited to only the students of dental collages of Kathmandu Valley which are affiliated to Kathmandu University.
3.	(Tuladhar, Pradhan, Parajuli, Manandhar, & Subedi, 2020)	How online class can be made more effective, and can it be continued after Covid-19 pandemic?	- Most of the students found online classes more effective and fruitful. But student prefer to choose physical	This research paper has covered the effectiveness of online classes compare it with the physical class.	- This study is limited to only the single college. - Has not covered the effectiveness of online exams,

		classes compared to online classes when the situation is normal.		tests, and assignments.
4.	(Dianito, Espinosa, Duran, & Tus, 2021)	What is the experience of disabled students towards e-learning during Covid-19 pandemic? What are the different challenges or problems faced by disabled students in online education during pandemic?	The interaction in class is very low and students also do not have proper knowledge to use different tools that is required for e-learning.	This research paper has discussed about the participation of physically disabled students of Philippines in virtual learning. And discussed about their experience and problems during the online classes.	- The survey is conducted with the very few number of disabled students. - Has not discussed about the techniques that needs to be adopted by universities to increase the participation of disabled students in virtual learning.
5.	(Sharma & Bhatta, 2018)	To know whether the teachers and students have enough knowledge of technologies required for the virtual learning To find out the major problems that could be faced while implementing virtual classes.	The major problems implementing e-learning includes lack of technical skills in both teacher and students, electricity and internet issues and lack of devices like laptops and computers.	Though this research paper was prepared before the Covid-19 pandemic it has discussed about the skills required for e-learning and the perception of the students and teachers towards online classes and physical classes.	-The survey was limited to only one school of far western region of Nepal. - Has not discussed about how the technical skills of teachers and students required for e-learning can be increased. - Has not discussed about the different steps that school management and government should take to develop the e-learning infrastructures and make it

					access to students.
6.	(Almaiah, Al-Khasawneh, & Althunibat, 2020)	What are the main challenges faced in e-learning during Covid 19 pandemic? What are the major factors that affect e-learning during Covid 19 pandemic?	Barriers in effective e-learning system are: - Lack of technical support - No awareness - Lack of quality course content - IT skills of faculty members and students. - Lack of Technological infrastructures	This paper has discussed and explained in detail about the different factors that affect the e-learning and different solutions to overcome those problems are also suggested.	The participation in the interview is very few i.e., 30 students, 25 faculty members, 4 IT experts and 2 policy makers. So, this sample size of the research may not satisfy answer of the research question.
7.	(Adnan & Anwar, 2020)	-To know the higher secondary school's student's perspective about the effective online education in Pakistan. -To know the challenges and problems faced by higher education students of Pakistan.	Results: - Face to face classes as a revision is needed because online classes are not effective. - Labs, assignments, and tests are difficult to manage in e-learning. - Lack of proper technological infrastructure needed for e-learning.	The perspective of higher education students of Pakistan about e-learning is explained in this research highlighting the different issues faced by them during e-learning.	-The result is based on the higher ranked, top universities of Pakistan. So, analyzing the data of lower ranked universities might create different result. -Not discussed the solutions of different problems faced by students to make e-learning more effective.
8.	(Al-Azawei, Parslow, & Lundqvist, 2016)	What are the different challenges faced by teachers and students in the adaptation of online learning in public universities of Iraq?	The different challenges faced by faculty members and students are categorized as Internal and External challenges. External challenges include	This paper has discussed the challenges faced by students, faculty members and university while conducting online classes and suggested some recommendations.	Recommendation given to universities to overcome challenges are based on the view of students and teachers. Involvement of IT experts could have been more fruitful to make

			Technological, Financial and other issues related to plan and policies whereas internal challenges include lack of motivation, interest and awareness of students towards learning.		the plan and policies in the efficient ways.
9.	(Subedi, Nayaju, Subedi, & Shah, 2020)	-To know the benefits of online learning among nursing students and teachers. - To find out different problems or issues faced by students during online classes.	- Students feel glad and take online class as the opportunity that they get the chance to update themselves with the new technologies. - The main problem for students and teachers during online class is electricity and internet.	This research paper surveyed students and some faculty members from Nursing colleges of Nepal about the online classes and discussed about their perspectives along with the opportunities and challenges.	-The courses like Nursing have different practical's and labs but this paper has not discusses about how practical classes were handled during online classes. - Students and teachers' technical skills, student's financial condition to manage necessary devices required for online classes are not discussed properly in this research.
10	(Dutta, 2020)	- What are the different popular social media platforms that could be used by different educational institution during Covid 19 pandemic? - Do social media helps to increase the	-Popular social media platforms like Facebook, tweeter, WhatsApp and Instagram are used only for collecting notes, lecture slides and exchanging	This paper has discussed about the different social media platforms or tools and techniques that is used as alternative learning in India along with the efficiency created	This paper has not covered the different challenges or problems faced by students and teacher while using social media platforms for learning.

		efficiency and interactivity between faculty members and students? - What are the advantages of using social media platform as the alternative e-learning method?	information about the lectures. - Students find YouTube more significant tool for self-learning. - Video conferencing tools such as Teams, Zoom, Skype, Whereby and Hangouts are mostly used by students in India to get connected with friends and teachers for learning purpose.	and benefits of using those platforms.	
11.	(Paudel, 2021)	To know the perspective of teachers and students about the challenges and benefits of shifting from traditional face to face teaching method to online learning.	- Adopting e-leaning by different schools, colleges and universities and increasing as this is one of the best ways for learning during Covid-19. - Teacher and students found more freedom in online classes. -Online classes can be used as the alternative of traditional face to face classes after Covid 19 also.	This paper has discussed about the perspective of students and teachers of top 5 universities of Nepal on implementing e-learning as an alternative of face-to-face classes highlighting the different benefits challenges. Also discussed about the current ICT plans and policies of Nepal.	-This research paper reflects only teachers and students perspective, learners performance are not highlighted by this research paper. - This research suggested some points that needs to be improved by policy makers but has not include the perspective of policy makers.
12.	(Khan, Vivek, Nabi, & Khojah, 2021)	To know the importance of online education. To study the benefit of online learning from the view of student. To analyze student's perspective about	The main benefits of e-learning are flexibility in time and space, quick share of educational materials and accommodates with different	This paper has discussed about perspective of Indian students along with benefits of online learning.	Different challenges such as technical, financial, and psychological challenges are not discussed by this paper. The survey is

		the online education during Covid-19 pandemic.	learning techniques. Students are heavily inclined towards e-learning and online education are accepted by the students of India because there are no face-to-face classes during pandemic.		limited to very few numbers of students.
13.	(Serhan, 2020)	What are the attitude of students while using Zoom in online classes? What do students prefer face to face classes or Zoom classes? What are the advantages and disadvantages of Zoom to students while learning?	The main advantage of using Zoom is it is simple to use with different multimedia and communication features. There are more distractions, and communication is very slow because students are muted most of the times. So, Zoom cannot replace face to face class.	Zoom is the most popular tools in Nepal for online education. This paper has discussed about the efficiency of Zoom along with its advantages and disadvantages.	There are other popular tools like Teams, Google Meet etc. But this research is limited only in Zoom.
14	(Donga, Cao, & Li, 2020)	What is experience of young students towards online education during Covid 19? What are the attitude and belief of Parents towards online education during Covid 19 in China?	Parents believes e-learning lacks learning atmosphere. There is no interaction between teachers and younger children as a result the outcome of online learning is very poor. Children are found unfocused,	This research paper has discussed about the effectiveness of online classes among the young children's highlighting the perception of their parents.	-Has not discussed about the possible ways to make class more effective for the young children. -Teacher's perception could have included to validate and cross check the results.

			not interested and inactive during online classes. Children's need parent's support to join the class, So parent's having more than one child faced some difficulty in managing time.		
15	(Onyema, et al., 2020)	To find the impact of Covid-19 on education. To investigate different challenges that may occur continuing online classes during Covid-19.	The effect of Covid-19 in educational sector are loses interest on learning, different people working on educational sector loses their job, difficult to provide laboratories facilities to students. Poor internet, lack of technical skills and infrastructure are some problems arise during online classes.	This research paper has discussed about the effect of corona virus to students and how it hampers their study also highlights the different issues faced by them during online classes.	Highlighted the problems during online classes bit has not recommend the possible solutions for those problems. Has not include the effectiveness of online classes towards students during Covid-19.

2 Relevant Theory

Based on the above-mentioned papers, Technology Acceptance Model (TAM) is more applicable for the e-learning in Nepal. TAM is the model that defines how technology is used and accepted by the users (Almaiah, Al-Khasawneh, & Althunibat, 2020). Different e-learning platforms and technologies make e-learning simpler and more feasible. E-learning requires technologies such as laptops, computers, mobile devices, internet, and different software's. Perceived usefulness in TAM means whether using different technologies improves the performances of students in the online classes and perceived ease means how easily students and teachers can use the technology.

3 Conclusion

Because of Covid-19 country has done lockdown to break the chain of virus. So, all the educational

institution are closed. Later educational institutions started teaching via online. Though many students experience online classes for the first time during Covid-19, e-learning is not the new concept in Nepal as many educational institutes are using it from the long period of time. Now e-learning platforms and online classes are gotten popularity because of its various benefits such as flexibility, wider access and so on. However Nepalese students also face different challenges during online classes. Some of the major problems they had are technical skills, lack of infrastructure, disturbance in internet and electricity and so on.

Though the research has covered the challenges faced by the students, this research paper has not covered the possible solutions on those challenges. Similarly, it has not discussed about the security aspect of the online classes. And this research is prepared based on the literatures listed above, no surveys and interviews are done during the preparation of this research.

References

Adnan, M., & Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. Journal of Pedagogical Sociology and Psychology, 2(1), 7.

Al-Azawei, A., Parslow, P., & Lundqvist, K. (2016). Barriers and Opportunities of E-Learning Implementation in Iraq: A Case of Public Universities. International Review of Research in Open and Distributed Learning, 17(5), 21.

Almaiah, M. A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors. Education and Information Technologies, 25(6), 20.

Dianito, A. J., Espinosa, J., Duran, J., & Tus, J. (2021). A Glimpse into the Lived Experiences and Challenges Faced of PWD Students towards Online Learning in the Philippines Amidst COVID-19 Pandemic. International Journal of Advance Research And Innovative Ideas In Education, 7(1), 25.

Donga, C., Cao, S., & Li, H. (2020). Young children's online learning during COVID-19 pandemic: Chinese parents' beliefs and attitudes. Children and Youth Services Review, 10.

Dutta, D. A. (2020). Impact of Digital social media on Indian Higher Education: Alternative Approaches of Online Learning during COVID-19 Pandemic Crisis. International Journal of Scientific and Research Publications, 10(5), 8.

Gupta, D. A., Shrestha, D. R., Shrestha, D. S., Acharya, D. A., & Pandey, D. N. (2020). Perception of BDS students of Kathmandu University on online learning during COVID-19 pandemic. Orthodontic Journal of Nepal, 10(2), 9.

Khan, M. A., Vivek, Nabi, M. K., & Khojah, M. (2021). Students' Perception towards E-Learning during COVID-19 Pandemic in India: An Empirical Study. Sustainability, 13(57), 14.

Onyema, E. M., Eucheria, D. N., Sen, S., Atonye, F. G., Sharma, D. A., & Alsayed, A. O. (2020). Impact of Coronavirus Pandemic on Education. Journal of Education and Practice, 11(13), 14.

Paudel, P. (2021). Online Education: Benefits, Challenges and Strategies During and After COVID-19 in Higher Education. International Journal on Studies in Education, 3(2), 17.

Serhan, D. (2020). Transitioning from Face-to-Face to Remote Learning: Students' Attitudes and Perceptions of using Zoom during COVID-19 Pandemic. The International Journal of Technology in Education and Science Derar Serhan, 4(4), 9.

Reyana, A., Kautish, S., Vibith, A. S., & Goyal, S. B. (2021). EGMM video surveillance for monitoring urban traffic scenario. International Journal of Intelligent Unmanned Systems.

Sharma, G., & Bhatta, M. P. (2018). Implementing E-Learning in Far Western Region of Nepal. Advances in Computer Sciences, 1(3), 11.

Sandhya Sharma, Sheifali Gupta, Deepali Gupta, Sapna Juneja, Gaurav Singal, Gaurav Dhiman, Sandeep Kautish, "Recognition of Gurmukhi Handwritten City Names Using Deep Learning and Cloud

Computing", Scientific Programming, vol. 2022, Article ID 5945117, 16 pages, 2022. https://doi.org/10.1155/2022/5945117

Subedi, S., Nayaju, S., Subedi, S., & Shah, S. K. (2020). Impact of E-learning during COVID-19 Pandemic among Nursing Students and Teachers of Nepal. International Journal of Science and Healthcare Research, 5(3), 10.

Tanveer, M., Bhaumik, A., Hassan, S., & Haq, I. U. (2020). COVID-19 PANDEMIC, OUTBREAK EDUCATIONAL SECTOR AND STUDENTS ONLINE LEARNING IN SAUDI ARABIA. Journal of Entrepreneurship Education, 23(3), 14.

Sapna Juneja, Abhinav Juneja, Gaurav Dhiman, Shashank Jain, Anu Dhankhar, Sandeep Kautish, "Computer Vision-Enabled Character Recognition of Hand Gestures for Patients with Hearing and Speaking Disability", Mobile Information Systems, vol. 2021, Article ID 4912486, 10 pages, 2021. https://doi.org/10.1155/2021/4912486

Yasser Alharbi, Ali Alferaidi, Kusum Yadav, Gaurav Dhiman, Sandeep Kautish, "Denial-of-Service Attack Detection over IPv6 Network Based on KNN Algorithm", Wireless Communications and Mobile Computing, vol. 2021, Article ID 8000869, 6 pages, 2021. https://doi.org/10.1155/2021/8000869

Tuladhar, D. S., Pradhan, D. D., Parajuli, D. U., Manandhar, D. P., & Subedi, D. N. (2020). Study on the effectiveness of online classes for undergraduate medical and dental students of Gandaki Medical College during COVID 19 pandemic period in Nepal. Orthodontic Journal of Nepal, 10(2), 5.