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Online Teaching Challenges During Covid-19 Pandemic: Teachers' Perspective From Different Universities In Khyber Pakhtunkhwa, Pakistan

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Abstract

This study aimed at showcasing teachers' viewpoint on the challenges faced by both teachers and students during the online teaching-learning process in the midst of Covid-19 pandemic. The study asked to investigate challenges in the form of resources, institutional & teacher support, technical skill, time, learning environment, and interaction that teachers and students encounter in online learning. The study focused on challenges faced by teachers during delivery of lessons through online mode along with problems faced by students during online mode of learning. The results revealed that teachers were equipped with basic facilities required for online learning, but students residing in far flung areas of Khyber Pakhtunkhwa faced hurdles in the form of electricity breakdown during online classes and poor internet signals. Institutional support was somehow there and it was noticed that online mode is economical than face-to face education system. Teacher support was present though teachers and students were initially deprived of skill in handling online tools. It was also found that the home environment of students was not conducive to learning and distraction was observed from students' side. The teachers accepted that online mode was a better choice during the pandemic, but it could not be considered a substitute for physical classroom. Essentially qualitative in nature, this paper uses the integrated theoretical framework, which the leading researchers in the field of Asynchronous Learning Networks call the Online Interaction Learning Theory.

Keywords: Challenges; institutional support; online education, physical resources; technical support

Introduction

Online learning provides a platform for innovative, flexible and learner centered learning processes. Online learning can occur through synchronous and asynchronous mode with the help of digital devices like mobile phones, laptops and the internet. Both the modes are flexible as students can access learning material from anywhere and can interact with teachers and other classmates (Singh & Thurman, 2019).

Shifting from traditional classroom to online class is a big challenge by itself. In spite of multiple hurdles, a number of university students accepted online modality as an effective mean of

imparting education. The learners showed a positive attitude towards online medium due to its user-friendly quality, abrupt access to learning content and standard of learning material. Online modality succeeded in promotion of communication, interaction and developing sense of community between teacher and student (Kashelkar & Ramgir, 2021). Interruption in internet and weak signals affect students learning and it was concluded that consistent and firm internet connection is essential for quality learning (Singh et al., 2016).

Adelakun and Omolola (2020) pointed out poor internet signals, limited feedback by teacher financial cost, poor technological infrastructure, untrained teachers, absence of user-friendly online platforms and lack of knowledge regarding how to use information technology as the prime hurdles in online education. According to Joshi et al. (2020) teachers also seemed un-satisfied with online teaching due to absence of technical knowledge, shortage of digital infrastructure, disturbance in surrounding and absence of institutional support technically and financially.

Poor internet connection causing communication gaps is encountered by learner. Teachers do not possess sufficient skill of delivering lessons through online mode. Limited technical skill of teacher also leads to time wastage and non-availability of clear voice of teacher is another factor that adversely affects teaching-learning process (Khalil et al., 2020).The result of Hoque et al. (2020) research indicated that 87% learners favoured use of technological tools for imparting education; however, 13% agitate adoption of technological equipment.

Students belonging to low socio-economic backgrounds cannot afford costly internet packages and technological tools required for online class and on hand learning from home may lead learners towards sluggishness and indiscipline. Face-to- face meeting is absent in online classrooms; therefore, interaction among learners and learner and instructor and learner is almost hindered (Kashelkar & Ramgir, 2021).Online social comfort denotes teacher skill to offer an environment that is free from anxiety and the learner can learn comfortably. This type of environment creates sense of community among the learner and they can easily interact with one another without hesitation (Liaw & Huang, 2013).Advancement in technology, motivation, interaction between learner and teachers and formation of sense of community among students has positive effect on online learning (Sun & Chen, 2016).

One of the concerns of faculty members about online mode is absence of real time interaction. The body language and facial expression provide feedback to teachers concerning learners understanding. It is quite difficult to keep an eye on students' activities in live streaming, as they have to pay attention to video recording as well as delivery of lessons. Online class is somehow burdened on faculty, as maintenance of the same position for a long time in online classes causes headache, backache and stress on eye and neck (Deng et al., 2020). Most of the teachers opined that group learning along with interactive videos had a positive impact on learning in the online learning process (Ipek et al., 2021).

According to Eika (2021) limited time, incomplete course also adversely affects online education. Further university building, site, facilities and environment were declared quite important for participation in learning activities, effective learning and establishing community sense in the students wherein learner shares their study related material with their friends and teachers.

Mukhtar et al. (2020) concluded that online mode promotes learner centered learning. As the online learning Programme is a new initiative and is not well developed in Pakistan; hence, it is recommended that training regarding use of online learning programs need to be

arranged. The stakeholders may also be trained in designing lesson plans that contain maximum interactive activities and limited cognitive load.

Theoretical Framework

Dynamic model of online interaction learning theory

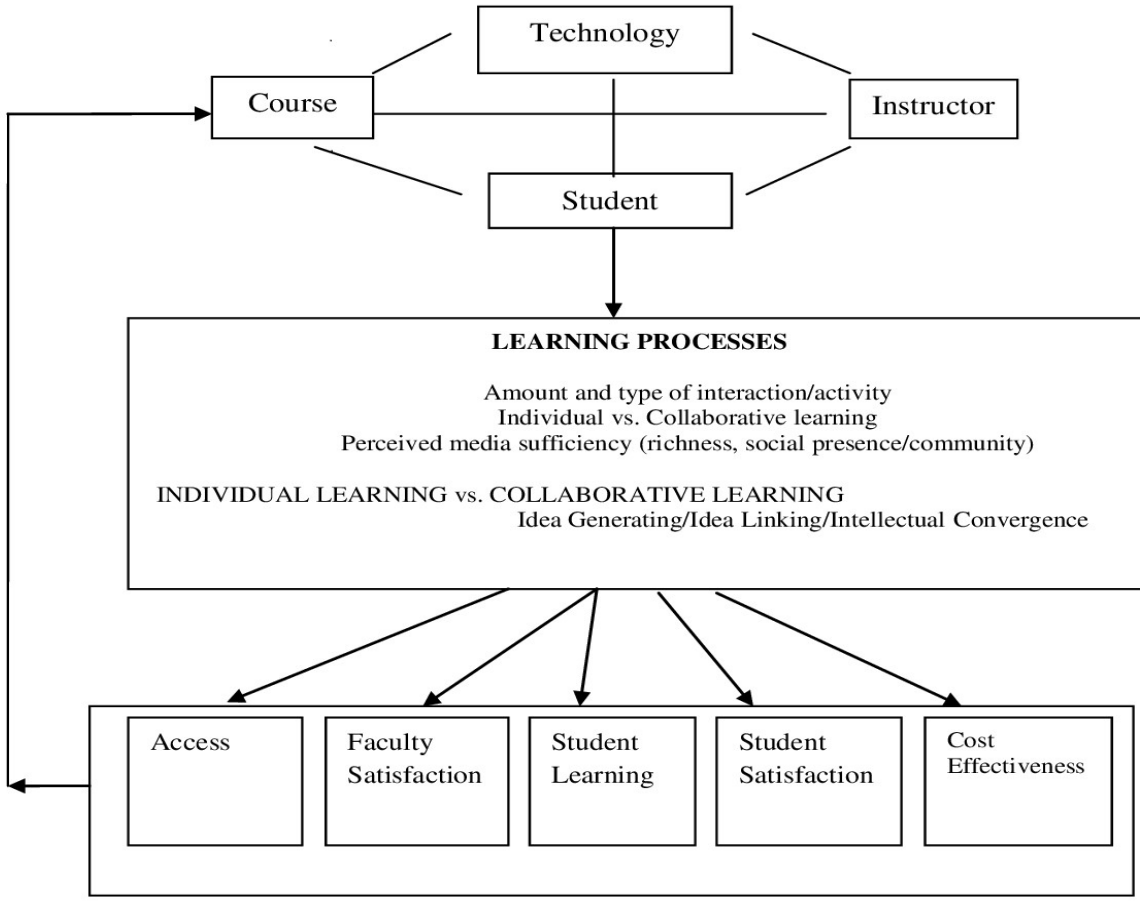

Figure 1: Dynamic Model of Online Interaction Learning Theory

In the input section, which is the first construct, student, instructor, course, and technology are the essential four elements in the dynamic model. Non and/or limited availability of this input hinders the feasibility of the online learning's achievement. The model's second block illustrates the process of learning. Student to student, and student to teacher, and content based interactions occur during an online classroom. Thus, these interactions pave way for effective education. The Model's third construct consists of the following five variables: faculty satisfaction, student-learning, student learning, cost-effectiveness, and access. The mentioned variables easily intermingle with the online learning (Benbunan et al., 2005).

Objective **Dimension** **Challenges**

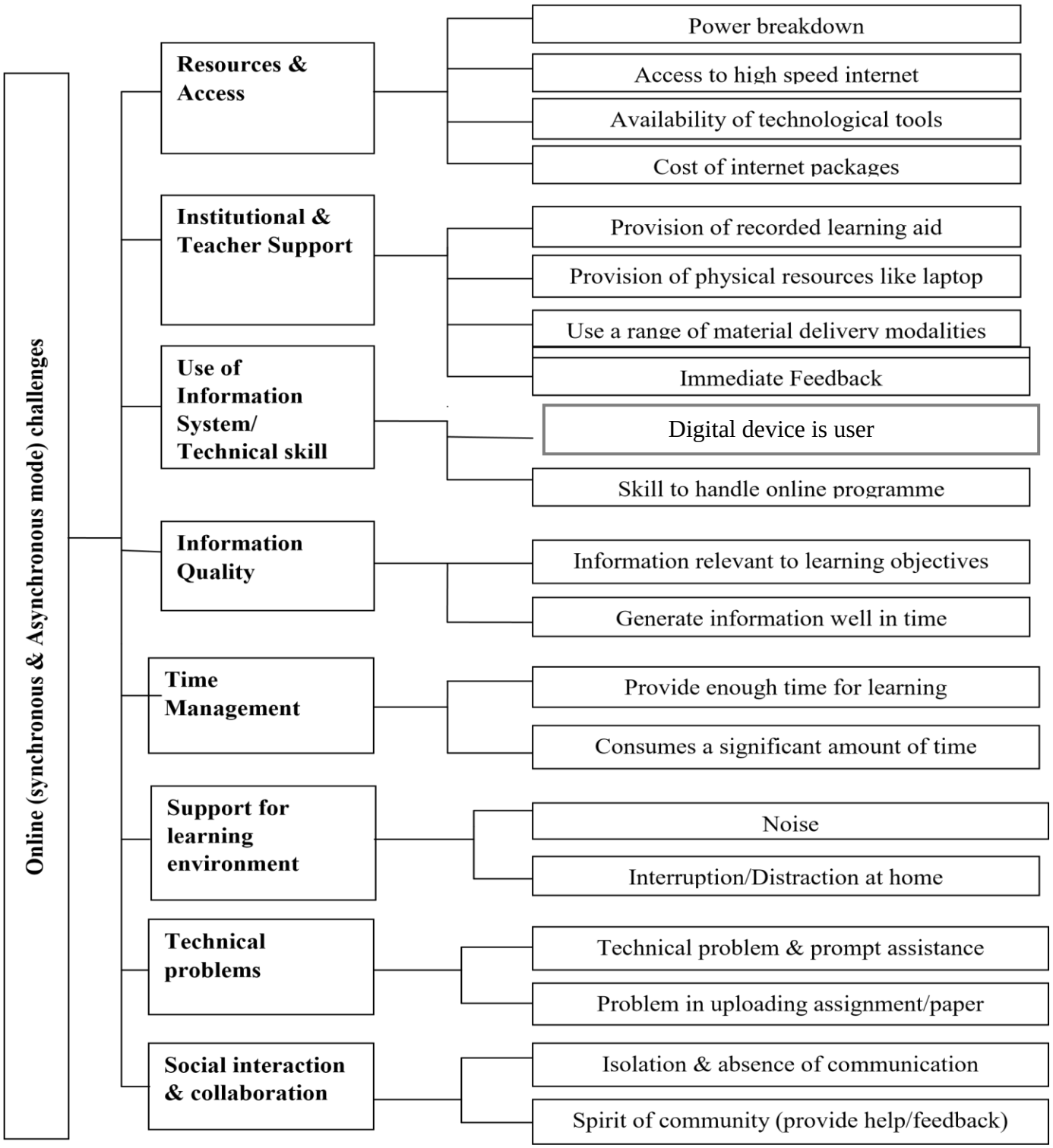

Figure 2: Challenges Encounter during Online Mode of Learning

Objective

The challenges faced by students as well as teachers in online education is what this study aims to identify.

Research Question

What are the challenges that the teachers as well as the students faced during the online teaching particularly in reference to resources, time, teacher and institutional support, and learning environment, technical skill and interaction?

Methodology

The population for this study constitutes the all the students as well as all the teachers of the Department of Education/Institute of Education and Research of these seven universities. Thirty (35) was the total number of faculty members from the concerned departments of these universities. Saturation was required because of the nature of qualitative data, Qualitative data requires 12 respondents for saturation. From the 6 universities, 2 respondents were selected following the technique of Purposive sampling. For this purpose a questionnaire was constructed by the researchers to collect the desired data. The desired data was collected from the participants directly as well as indirectly: through face to face and telephone mediums. Six educational gurus' opinions were taken into consideration for the validity of the material and content.

What are the challenges that you and your students encounter in the form of:

Sub Theme: Physical/ Technological infrastructure (high speed internet & PC/laptop/mobile)

Respondents R1, R2, R4 R5, R6, R8 and R11 expressed that technological infrastructure was available to them. Issues of electricity and internet was the common problem for the students who belonged to far flung areas like tribal areas and Chitral etc. Lack of the availability of Internet and electricity deprived the students of Bajaur, Chitral, Mohmand and Khyber Agency from taking part in online classes. The same facilities were available to almost all the faculty members because most of them resided in the settled/city areas; therefore, they had no problem in taking part in the online classes. In similar line of argument, David et al. (2020) notes that the basic problem in online education/classes is the availability of internet in the underdeveloped countries.

R2 expressed that:

> Students in hilly areas faced issue of internet signal that either may not be available or week enough to attend online class. In order to access online class students moved towards areas where internet signal are comparatively stable such as markets or any other aristocratic area. The variety of sounds in open market is one of the problems faced by students while attending online class that adversely affect learner understanding and performance in online class.

Duly observed and expressed by Respondents R1 and R3 that the online classes was a problem for many students, especially family because of the lack of availability of smart phones, which is an essential and easy-access medium for online education/classes. Resultantly, their online classes suffered due to this. Besides, no internet and/or low signals and/or load shedding were also the main causes of the difficulty in online education.

In addition to these the respondents faced other challenges too that were: limited time, that is 40 min, for a session and then reentry to the same session, low signals, power shortage, and frequent disconnection of internet. These

problems were highlighted by R9. R7 expressed that internet and the frequent disconnection was main hurdle in online classes for the students and even for the teachers at times. He also expressed that students faced problems in uploading papers and assignment to the server. On one occasion, he expressed, a student had to roam around in his locality in his car to get better signals to upload the material. It requires a higher speed internet to upload files to the server. Even, the same student, attempted his online paper in his car parked in a place where he could get strong signals so that he does not miss out on the paper and lose marks.

The above mentioned responses, especially of R7, are duly observed in a study by O'Sullivan et al. (2021), who stated that interruption due to frequent disconnection of internet was one of the main and major issue in online sessions. The same point was supported by Chowdhury et al. (2020) that many students could not attend the entire online session due to internet issues. R 10 notes that though many students had access to technology but problems with internet signals caused problems for them to take the online classes. Similarly, R12 also declared internet signals as the main problem in taking online classes. He stated that it was a problem not for the students but for the teachers too.

Sub Theme: Institutional Support

Institutional Support (provision of learning material by university)

R1, R2, R4 and R11 expressed explicitly that the support for online classes was not properly extended by the concerned institutes and that the same were not aptly ready for this mode of teaching. No proper training was provided to the teachers and students alike for this mode of teaching. It was in a way imposed upon them and that is why it had so many challenges that could have avoided or properly addressed at least. However, R7 and R 8 expressed that somewhat guidance was provided about the Google Meet and not on Learning Management System (LMS). LMS; however, was used for online examination. During examinations, students were given an option of sending their papers to a given email address after scanning them should they fail to upload paper to the LMS portal in the given time. R3, R5, R6,R9, R10 and R12 stated that their universities provided support to the students and teachers alike to try to run the online classes smooth during Corona virus outbreak. They expressed that the services provided by the universities helped in online classes and the results were fruitful. It was argued by Kahu (2013) that the support from the universities/institutes played a vital role in the success of the online education as well as in the motivation of the students to adopt and adapt to the online education system.

R12 expressed his/her appreciation for the support provided to them by their institution. The institute's administration kept a close check on the attendance of the students and the teacher. they ensured that no classes were missed. The teachers were asked to report the students who were absent and the absentees were duly notified and taken care of through the online classes. These efforts were made and steps taken by the universities to ensure imparting quality online teaching; for this they extended full support as well as kept strong check on it.

R5 stated:

> To ensure effectiveness of online learning portal teachers and students were directed to informed university about their problems that they faced during use of online portal while uploading paper or assignment and downloading learning material.

Sub Theme: Cost -Effectiveness

Cost -Effectiveness/ Financial Constraint

Respondents R1, R2, R3, R4, R5, R6, R7, R8,R9,R10, R11 and R12 expressed that online education is less costly than face to face teaching as for the later students had to commute from far flung areas as well as stay in hostels. Travelling and hostel fee along with food expenses would cost them a fortune; therefore, they declared online education as cost-effective. Online classes also allowed universities to save money in the form of low electricity bills and water and gas bills. The only cost that affected the pockets of the students were the internet packages they had to buy for their online classes. However, this cost was nothing as compared to the one spent on travelling, hostels, food and bills. In addition, online education saved time and brought education to the door steps of the students, especially to those who belonged to far flung areas of the country.

Online mode of education save time of students by exempting them from travelling to universities located at far flung areas and it offer opportunity of learning from home without high expenses. Demuyakor (2020), and Martosenjoyo (2021) in a research study revealed that online mode of learning was pretty expensive, and was sort of financial burdened on the part of students. However, Jayachitraand and Jagannarayan (2019) study was in favour of finding of this study and affirmed that online mode was economical, as it cut short the travelling charges of students and teachers..

Sub Theme: Technological Skill

Use of Technology/Skill of using Online Tools

Respondents R1, R2, R4, R6, R7, R8, R10 and R11 expressed the students and faculty found the online session complicated or difficult to handle; as at times, after the lecture, it was noticed that the microphone was off while the lecture was being recorded. It was also found that teachers often made mistakes while handling technicalities of online teaching. It was mainly because they too were not familiar with the technicalities of running online sessions. R7 also highlighted that students alike were unaware of the handling of the Google Meet because it was the first time for them to use it. Chowdhury et al. (2020) argued that such mishandling of the technology and technicalities was the key challenge that faced by students and teachers alike.

R2 expressed that:

> Teachers were never trained for this online mode. Teachers relied on their first-hand skill for communicating through online mode. Initially teachers and students faced problems like sharing screen etc, both teachers and students shared their expertise with one another to polish their technological skills. A number of students and some teachers were unaware how to operate smart phones and the Learning Management System.

A teacher R3 stated:

> Due to restriction in certain family female students were not allowed to use laptop and smart phone, such students faced problem in accessing online classes from home due to lack of basic knowledge and skill required for operating technological gadgets.

R9 expressed that even teachers found it difficult to handle technicalities of online learning because of the lack of skills. However, R5 that both students and teachers were well equipped with skills to positively use online

learning; except the new students. R5 further added that most users had enough knowledge to use online learning and the relevant apps to continue their studies' though those who did not have sufficient knowledge of the use, dropped out of the semester. R12 expressed that the universities provided training sessions to students and faculties before the launch of the online learning medium that helped adequately. As per the study conducted by Hoqueet et al. (2020), availability and use of gadgets, and possession of computer skills had a profound impact on online learning. Similarly, lack of these skills and lack of availability of the gadgets had a drastic negative impact on online learning (Chen & Yuan, 2020; Zhai & Du, 2020). As per the argument presented by Butnaru et al., (2021), it is argued that for effective online learning learner's attitude and computer skills were obligatory.

Sub Theme: Teacher Support

Teacher support (motivation, responding to student's query and assignment well in time making contact after class timing for academic purpose).

Respondents R1, R2, R4, R5, R6, R7, R8, R9, R10, R11 and R12 collectively expressed that the teachers tried their level best to provide multi-dimension support to all the students during an online class. Neither teachers nor students contacted each other after the online class. A teacher only responded when the a student asked. Teachers took the liberty with time and arranged and/or rearranged classes at night times, as per the demand of the students. Teachers even helped students upload the assignments to the server. Teachers even adjusted the sizes of the files for the students so that they may easily upload it to the portals.

> According to respondent R3:
>
> A number of students faced problems in accessing online class and learning material from Learning Management System: therefore, Whatsapp group were created and all students were added in those groups so that they can easily get learning material without encountering hurdles in getting learning material from Learning Management System. Whatsapp group were beneficial as it served as convenient medium for quick correspondence with students and teachers.

The above mentioned finding was evident from the support from the works of two researchers (Lee & Rha, 2009; So & Brush, 2008). They concluded that instructional supported was dependent upon the learner's opinion regarding preparation, response and evaluation. Detailed instructions were necessary. Audio-visual aids were a necessity to elaborate and explained the difficult topics. These aids made it easy and understandable. For online learning, Lee & Rha (2009) and So & Brush (2008) considered instructional support as the most important element.

Sub Theme: Time Management

Time Management

R1, R2, R5, R6, R10 and R11 expressed that online education was more flexible in terms of time. Set by the university, classes were maximum up to 2 hours of duration. However, R4 stated that because of being home, at times it was difficult to keep up with the already set time due to domestic chores.

The timing assigned to online classes may vary from 1 to 2 hours that was whole heatedly followed by teachers and students. The respondent R4 expressed opinion regarding time management by stating that time management

was different task as a number of students would not be available due their engagement in other tasks and usually requested for arrangement of class at some other time.

R3 stated that fixed timings might be suitable for some students but not for all because of the visits paid by guests and/or any other domestic chores. R8 expressed that timings for online were fixed by mutual consultation and consent; therefore, more beneficial. However, R9 suggested that the fixed timings of class often created problems whenever there was an any internet issue or connectivity issue. R9 further added that fixed timings and lack of internet connectivity resulted in loss of time and the class. Additionally, even during the class concentration was lost due to the apprehension that the signals might be lost anytime soon. Thus, the learning outcome was affected. As per the argument presented by Shakeel et al. (2020), learning outcomes was affected negatively by online education and the related problems. In such cases the anxiety level of the users had gone up and the outcome of learning had gone down. Technology and online education's outcome are directly proportional to each other. (Bolatov et al., 2020).

R9 stated that:

> Time was not manageable in online mode, because there was no flexibility in class duration as when time was up, it means time was up.

R12 expressed:

> Online learning programme was hectic and time consuming due to weak internet signal and on-off practice of microphone. This practice consumed most of teaching time of teachers and for this reason some of learning content was left untaught. Upon expiry of online class time the teachers have to left, soon after expiry of one class another class started as per schedule designed by the university.

Eika's (2021) study supported the statement of R12 that the allotment of limited time to online classes adversely affected the quality of online education. The online classes require more time then gace to face classes and that it was more time consuming (Mahyoob 2020).

Sub Theme: Technical Problem

Technical Problem

R1, R2, R3,R4,R5, R6, R7, R8, R9 and R10 expressed that the main issue in online education is load shedding of the electricity as well as the sound issues. Power shortage also caused signals issues in many far flung areas. It was also expressed that anxiety level rose with the power shortage and signal issues among students. 3G was not available at all times in certain areas. Time wastage occurred due to loss of signals and power shortage; this further resulted in lack of concentration and higher level of anxiety. Login issues were also noted due to these factors. As per the findings of Hafez and El-Din (2021), power shortage, internet issues, lack of technical knowledge were the basic and the most common challenges faced by the students in online education. Having said that, R11 and R12 expressed that they did not face any such challenges during their online classes.

Sub Theme: Environment Conducive to Learning at Home

Environment Conducive to Learning at Home

R1, R2, R5 and R6 stated that one other problem that students faced was nuisances that some students created during online classes that

affected their concentration as well as their studies. Some of the students had lack of knowledge of switching off their microphones and that created background noises that affected learning. These problems were only faced in the beginning and it phased out with the passage of time. Joshi et al. (2020) argued, which tallied with the results of this study, that traditional teaching was far better than online teaching because of the fact that in the later there were a lot of interruptions from the family side during the class.

R2, noted:

> Home environment was not supportive towards learning, as at home lying on coach or bed makes you lazy rather than being attentive as it could be in physical setting. Interruption by phone calls and social site notification also affect quality of teaching learning process.

R8, R10, R11and R11 expressed that although their home environment was good for learning but at times it was not satisfactory comparatively. R3 and R4 noted discipline issues in online classes; though they suggested that to varied from time to time and class to class. It was also observed that many students who took their classes in open areas and market places where the signal issues were strong, notice disturbance affect their learning as well as disturbed their other class mates. These opinions and the subsequent results are supported by the study conducted by O'Sullivan et al. (2021). As per the study, disturbance in online classes was more common than face to face classes. Conducive environment at home was the key element in effective learning at home (Darius et al. 2021)

According to respondent R9:

> Home environment was not conducive all time, however, I use to make sure to sit in a room where there was less noise pollution and inform family members not to disturb me, as I am taking an online class.

Sub Theme: System Quality (user-friendly)

System Quality (user-friendly)

The study noted that R3, R4, R8 were not happy and satisfied with the quality iof system whereas, R1, R2, R5, R6, R9, R10, R11 and R12 were happy and satisfied with it. As per the statement of R2:

> Google Meet was good and Learning material was uploaded on the Learning Management System, but the Learning Management System was not accessible to all as the entire university was using it; hence, due to the burdened on the Learning Management System portal it did not perform well. Some students faced multiple problems regarding opening of the Learning Management System portal and therefore learning content was shared through mobile phone.

R7 stated:

> The trial free version of Google Meet get closed after 50 minutes, as 50 minutes was maximum time assigned to free version for class proceeding. Once the session is expired teachers and students have to log in again to continue the teaching learning process, this practice adversely affect the concentration of teachers and

students and has increased their burdened.

As per the study of Delone and McLean (2003) developed system had direct link to the user's performance and satisfaction

Sub Theme: Information Quality (relevant to learning objectives)

Information Quality (relevant to learning objectives)

According to R1, R2, R3, R4, R5, R6,R7, R8, R9, R10, R11 and R12 quality if information was in par with learning objectives. R6 noted that self-study required asynchronous mode. Furthermore, self-study was not possible with the help and guidance of a teacher.

He added:

> Teachers stuck to their topic while delivery of lesson in online class and do not deviate from their teaching line due to fear of accountability that was maintained through monitoring of online classes by university administration. In physical classroom it is practiced that teachers discuss unnecessary issues in the class.

This finding was supported by the study conducted by Goshtasbpour (2020) that a total of 65.9 percent of the teachers were found committed to their task of online teaching as well as their profession. It was observed that information/system quality was directly proportional to student satisfaction (Lin & Wang, 2012; Raspopovic and Jankulovic (2016). Similarly, user satisfaction was also related to higher level of information quality.

Sub Theme: Remedial Solution for Challenges

How do you and your students overcome those challenges as stated above?

R1, R2, R5, R6, R7, R8, R9, R10, and R11 informed the students to go to places where internet was available. Students followed the request and made themselves available at the places where they had access to high speed internet or good quality internet signals. Recorded lectures were uploaded to the portal as study materials for the later use of the students. This was useful for students who had internet issues because they were able to listen to the lectures any given time and availability of internet. Thos who could not submit online papers alternative options were given to them. they could submit their papers in hard form too. As per the statement of R3 students were allowed by the university to submit the paper in hard form by sending them to the university through postal services. This was allowed to students who either had internet issues or had problems logging into LMS portal. Watsapp groups were also created for the facilitation of the students.

R10 expressed that he was able to resolve the issue of background noises in the following way:

> Students were asked to choose quiet and uninterrupted place to attend online class. In case of unacceptable circumstances their microphone were muted to maintain the decorum and sustainability of learning environment.

R12 expressed that for the facilitation of the students who had internet issues to take online class, they were asked to download the study material already downloaded to the LMS portal by visiting a nearby area where they could get signals.

Discussion

The study's finding elicited that high speed internet was available to teachers; however the same teachers expressed that the students did not have this facility; thus crated problems in online learning/teaching. Power shortage, lack of technical skills and lack of availability of internet created major problems in online learning. The teacher-respondents of this study expressed that home environment was not suitable for online education; though they did manage to minimize the noise disturbance with the passage of time. They were of the opinion that online learning from home was not conducive for students. The study Camara et al. (2021) supported this finding and demonstrated that internet signals, and non availably of proper learning/teaching places deeply affected the online learning/teaching.

According to the study conducted by Rabbi et sl. (2020), those students who belonged to far flung areas and had internet problems were badly affected by online education. Power shortage also played a major role adversely. Most of teachers seemed satisfied from system quality and according to them information quality (learning material) was substantial and was consistent to learning objective, this finding was supported by Wickramaarachchi et al. (2021) wherein they stated that teachers favored online learning for the reason that seemed satisfied of system/information quality.

Conclusions

In the COVID 19 pandemic, Online teaching/learning became the only medium of education. Online education was a medium that most of the educational institutes were not ready for; therefore, initially, they struggled and faced challenges. The main objective behind the present study was to explore the perspective of teachers regarding online education. research questions were set accordingly. The main challenges that the universities faced during online education were: power shortage, internet problems, weak signals, students' residences in far flung areas, lack of technical and institutional support, non-availability of conducive learning environments, and problems in communications. In addition the online medium did not satisfied the needs of the students. It was time consuming as compared to traditional classes. On the contrary, the positive side of online education was that it was less costly and more student friendly; provided the institutional services/facilities/support. It brought education to the door-step of the students. Last but not the least, online education cut down the expenditures of the universities in the form of low electricity and gas bills and transportation expenditures, and other related funds required for face to face education.

Recommendations

1. Improvement of Educational infrastructure, that is, technology and related support requires proper attention. Government attention is required for the provision of digital resources. The government may take initiative and steps to ensure the availability of the related technological gadgets and the subsequent trainings in imparting online education.
2. Interested free loans and/or installments plan may be provided to the students for the purchase relevant gadgets required for online teaching.
3. The proper use of these related gadgets may demonstrated to these students in trainings and workshops prior to the launch of online medium of education. In addition, the trainings and workshops may be arranged on regular basis keeping in view the needs of the students and teachers alike. to the students and teachers.

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