Teaching and Learning through e-mode in Higher Educational Institutions during Lockdown Period of Covid-19 Outbreak

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Abstract

The lockdown imposed due to outbreak of COVID-19 [novel coronavirus disease 2019], the entire educational system, from primary to higher level, has collapsed and this impact was not only in india but across the world. The present work embarks on the online teaching-learning models adopted for the teaching-learning process in university especially during the lockdown period. The present paper depicts an interesting and appreciable opportunity for academicians to take any decision especially in the adverse conditions as in case of Covid-19 pandemic. The aim of the present article is to showcase the essential factors to be covered for online teaching-learning system in education in view of the COVID-19 pandemic, as well as how the resources of existing educational institutions especially Higher Education Institutions (HEI) can effectively transform class room teaching into online education involving virtual classes and other critical online tools in this ever-changing educational setup. In the present work, a quantitative and qualitative approach has been employed to find out the teachers' and students' perceptions of online teaching-learning models as well as the implementation process of the same. The purpose of present work is to present a comprehensive crystal clear picture of online teaching-learning activities during the lockdown period, including establishment of a strong bond among the teacher, students and online teaching-learning setup in the education system during the COVID-19 outbreak, with an aim to alleviate the persisting academic disruption and, as a result, the resumption of educational activities were observed up to a greater extent.

Keywords: COVID-19 outbreak, online teaching-learning modes, Lockdown period.

INTRODUCTION

The teaching-learning system has been benefited because of technological advancements (Raja and Nagasubramani, 2018). As a result of technological advancements, professors' teaching methods in higher education have changed (Belt and Lowenthal, 2020). Students can obtain notes and e-contents on topics discussed in online classes by uploading recorded lectures online, uploading notes to the Google Classroom app, and accessing online YouTube channels (Singh et al., 2021). On the other hand, lecture-based teaching, also known as offline classroom teaching, treats students primarily as information consumers, leaving little room for student creativity or interaction (Üstündağ et al., 2022).

The use of smart technology for students with special needs has been around for a long time. For example, brail machines have been used to assist visually impaired students (Kiyota et al., 2022). In addition, technology-based advancements are used to improve learning in special-needs programmes for children with autism (Islam et al., 2022). By incorporating technology into higher education, educators hope to address fundamental issues that affect students with special needs. Finally, technology can be seen as an important tool and catalyst

for change in the higher education system (Bakers et al., 2022).

Inventions based on technology have a positive impact on higher education. (Jamil and Shah, 2011). For example, The video conferencing tool, which was previously only used in the corporate world for web-based conferences, seminars, and meetings, has now become an integral part of higher education (Sife et al., 2007). Web-based conferences were routinely organized frequently during the COVID-19 pandemic. (Kaware, 2022). In addition to the teaching and learning process, educational institutions have placed a greater emphasis on ERP systems, examination modules, fee modules, library modules, and functional and dynamic websites. These types of educational technological interventions have had a significant positive impact on the system of higher education (Sharma and Chauhan, 2021).

Technology is used to improve the efficiency of the teaching and learning processsince previous time. (Ezziane, 2007). As a result of the use of technology, teachers and students can expect greater efficiency and effectiveness in subject learning. (Alawamleh et al., 2022). Technology can also assist in the implementation of pedagogical change and the resolution of issues that affect learning, teaching, and social structure (Agélii et al., 2019). As a result, technology can be thought of as a tool for better learning as well as a catalyst for change (Matzen and Edmunds, 2007). To benefit from technology, students must embrace it, and teachers must be willing to incorporate it into the classroom in order to improve and innovate their teaching methods. (Roehl et al., 2013).

Because education is fundamentally a social enterprise, pedagogical experts have proposed that teachers be given the authority to use technology to engage students in advanced learning. (Shum and Ferguson, 2012).Interventions of technology in pedagogy generally enhances the output of teaching, learning and adaptations. Support and training for teachers in the use of remote learning technologies, as well as pedagogical adaptations, are critical for better content delivery. (Dalipi et al., 2022). Multiple modes of subject content delivery viz. offline, online, or blended is more likely to be beneficial when pedagogy is given priority over technology (Peimani and Kamalipour, 2021). Simply making content available is no longer sufficient as parents and caregivers become an important point of engagement with students (Tawfik et al., 2021). The expectation among parents and caregivers is that teacher-provided content, as well as e-contents, will be able to meet their children's educational needs (Rajammal, 2021). Parents must be involved as partners in the learning process as well as responsible actors in a blended learning environment (Prahmana et al., 2021).

Technology-enabled learning can be an effective tool if the lessons are designed using instructional design principles. Furthermore, there are no time or location constraints with online training (Yates et al., 2021).

Over the last few years, the learning and development model has evolved dramatically. Students are taught differently today than they were a few years ago (Rodríguez-García et al., 2021). As a result of technological advancements, the way education is delivered and received has changed. It is well known that during the COVID-19 period, the entire educational system was derailed and completely reliant on technology-based learning (Veluvali and Surisetti, 2022).

It has been observed that technology has a significant impact on learning and teaching methodologies, ranging from self-learning to the flipped classroom approach (Alsancak Sirakaya and Ozdemir, 2018.).

Digital learning has become an important part of the educational system due to its numerous advantages (Dhawan, 2020). In contemporary times, Universities are attempting to implement cutting-edge educational technology in order to improve teaching and learning (Elmahdi et al., 2018).

In terms of direct benefits of technology interventions on learning and growth, there will be a tectonic shift in the way students and corporate learners learn in 2020. As work-from-home and education-from-home became

the general practice during covid times, many corporations and institutions adopted digital learning as the primary mode of higher education learning. While some were hesitant to accept this new reality, others embraced advanced digital learning options. Many people are realising that virtual training is here to stay, that it helps standardise learning, reach a larger audience, and close previously unnoticed gaps. In-person training, for example, makes it impossible for facilitators to pay attention to everyone; in a classroom setting, some learners are more active, and they get all of the attention. Even in group activities, some people dominate and perform all of the tasks, leaving the average behind (Vladova et al., 2021).

The base of any unique training program is that it is planned, designed and delivered for all learners and not only limited for top performers. Every learner should be able to apply something they learned in class to their job. Digital learning is a fantastic enabler for making this a reality, but it requires the use of specific technologies to be successful. These said factors conclude that technology plays an important role in learning and in promoting both intellectual and financial development (Castro and Tumibay, 2021).

The challenges being faced by today's higher education system can be solved with the intervention of technology (Palvia et al., 2020). The most up-to-date technologies and tools along with their combination is beneficial for enriching and revitalizing today's higher education system and better preparing students for the twenty-first century. Among the technologies available in relation with online teaching and learning, computerised grading, E-textbooks, Simulation Technology, involvement of games, Flipped Classrooms, Active Learning Classrooms, Massive Open Online Courses (MOOCs), Collaborative Distance Learning Environments, the Active Learning ForumTM platform, and Learning Management Systems (LMSs) are important and considered worldwide. Government of India initiatives such as Swayamprabha, Swayam, and the National Programme on Teaching Enhanced Learning are the most

effective learning tools available in the current era. (Zalat et al., 2021).

Education and cutting-edge technology have always progressed in lockstep, and this will continue in the future. Higher education has the potential to benefit from new technologies. They're up to the task of dealing with the many challenges that students and educators face today. As an academician, we will only be able to educate and train today's students to become tomorrow's leaders if we take a holistic approach (Núñez-Canal et al., 2022).

While research supports the efficacy of several of these technologies in improving student learning and achievement, we must consider that the majority of them have not been fully evaluated and as flaws are discovered and new challenges arise, it will almost certainly need to be refined iteratively. The author also recognizes that educators must be fully trained in the use of new technologies (Mastan et al., 2022).

There are some challenges in implementing the COVID-19-related education system change process; these challenges are related to the novel perspectives of online education and its technological complexities (Waheeb, 2022). Prior to the pandemic, very few universities were thought to provide online education in India. However, in the COVID-19-induced time, online teaching-learning has become a massive challenge to deal with, and stakeholders are not technologically competent to deal with the current situation, making them unfit to adjust to the sudden educational change. As a result, the implications of change must be addressed in order to successfully implement educational change i.e., the shift from traditional teaching-learning to online teaching-learning methods (Azevedo and Almeida, 2021).

The journey to e-learning implementation begins with a shared vision of the University Grants Commission (UGC) and the Ministry of Human Resource and Development (MHRD), universities and other colleges, and various academic departments with an aim of implementing online teaching and learning

process in the education system (Malhotra and Bhatia, 2021). Due to COVID-19, the education systems emphasized on fact that teachers and students should be motivated to adapt online teaching-learning platforms to meet current essential educational needs (Talosa et al., 2021). Everyone, whether teachers or students, was friendly and skilled in using social media apps such as WhatsApp, Facebook, Twitter, and Instagram, which facilitated the use of online educational platforms such as Google-hangout, Google Meet, Cisco WebEx, ZOOM and others as an indication of positive learning (Vilas et al., 2021). There are also some useful educational apps that can be downloaded for free and are very easy to use, such as Google Classroom and video conferencing app like Zoom etc (Dash et al., 2021). Thus, there appears to be no need to be panic about getting new technology all of a sudden, as some of the apps are already embedded in our higher education institutes. The majority of students and teachers had smartphones, with only a small percentage having laptops, which are required resources for implementing online teaching and learning (Mella-Norambuena et al., 2021).

Keeping in mind the need of the hour, the state governments and central government with UGC unanimously agreed to implement online education all over the country. Various national, state and university-level teachers' and students' groups, unions and associations as well supported the vision of online teaching-learning modes with a mixed bag of opinions as a result of their curiosity to try new technology and a new mode of teaching-learning process in the education system (Maity et al., 2021). The action plan was created with readiness for online teaching mode, the need for change in this pandemic, and the resources available to implement online teaching mode in mind. Teachers prepared and trained themselves independently to be accustomed to the technology required for using online teaching modes to go along with the action plan. System administrators and Information and Communication Technology (ICT) experts at the University level assisted teachers, students and managed the changed process. However,

while many studies have been conducted on the effectiveness of online teaching and learning, no such studies have been conducted during the COVID-19 lockdown period and the present research paper is first time report on the same issues. (Hasin and Nasir, 2021).

As a result, the researcher conducted the undertaken study with the following objectives-:

1.   To emphasize on the numerous types of online teaching-learning strategies used during the COVID-19 pandemic (First Objective).

2.   To investigate teachers' and students' perspectives on online teaching-learning during the COVID-19 pandemic (Second Objective).

3.   To find out the difficulties teachers and students faced in adapting to the online teaching-learning process during the COVID-19 pandemic (Third Objective).

Method

During the lockdown period, the researcher used both quantitative and qualitative methodologies to investigate stakeholders' perceptions of the e-learning process in higher education institutions (Khan et al., 2020). The scope of this research is limited to IFTM University only.

Population and sample

The participants for the undertaken study were all faculty members of IFTM University and students. For the quantitative analysis, disproportional stratified sampling method (stratified sampling procedure) was used to select three teachers (one professor, one associate professor and one assistant professor) and 8 students (4 studying in post-graduate programmes and 4 research scholars) from various department. 5 schools were chosen for the study out of 11, with the availability of all three types of teaching staff in one school which included professor, associate professor, and assistant professor). As a result, 56 faculty members and 300 students were chosen for the

study, and they participated in the survey to assess their attitudes toward online teaching and learning.

Furthermore, 16 teachers (8 males and 8 females) and 16 students (8 males and 8 females) were selected for semi-structured interviews using a nested concurrent sample method to collect qualitative data about their perceptions of the online teaching-learning process. It is pertinent to mention that nested concurrent sample method is the method in which the participants chosen for one phase are a subset of those chosen for the other phase (nested), and data are collected at roughly the same time (concurrently). All of the responding teachers are permanent on-campus and off-campus teaching personnel of Indian origin. Similarly, all of the student participants in the study are of Indian origin and live on and off campus at the IFTM University.

Data Collection Procedure

For quantitative analysis, the researchers created two questionnaires to investigate the perceptions of teachers and students in the online teaching-learning mode independently. During the lockdown period, a semi-structured interview schedule was prepared to obtain opinions and specific information from teachers and students.

For qualitative analysis, their experiences, perceptions and thoughts on the ongoing online teaching-learning process were collected.

In the initial step of data collection, the directors of 5 different schools gave the necessary information on their online teaching-learning methodology adopted. The second phase entailed gathering teachers' and students' perspectives on the advantages and disadvantages of online teaching and learning. In the third step of data collection, the researcher used semi-structured interviews to obtain required important information. All the sample respondents gave their full cooperation by answering to the questionnaire. During the interviewing process, valuable input and suggestions were gathered. Data was analyzed using statistical tools for quantitative analysis and content analysis for qualitative data acquired from diverse sources. The university's ethical committee constituted in IFTM University to approved the research related aspects.

Results

This section shows the results of the percentage analysis and content analysis for each objective.

Results (Findings of first objective)

Researchers conducted a survey study in which percentage analyses were performed in order to reveal the different types of online teaching-learning modes used by teachers and students during the lockdown period in get concluding remarks.

Figure 1 and Figure 2 depicts the details of the various online teaching and learning methods used by teachers and students during the COVID-19 outbreak lockdown period. Despite the availability of a variety of digital teaching-learning methods, almost all teachers and students free used WhatsApp, Telegram, and email for educational interactions, assignment submission, clarification of doubts, and conducting class tests. Teachers used Google Classroom 35% of the time and the Google Meet/Cisco WebEx/Zoom 65% of the time to take online classes, but recipient students used only 30% and 20% of the time. 40% of teachers used webinars as a form of online instruction, and 50% of students attended university webinars.
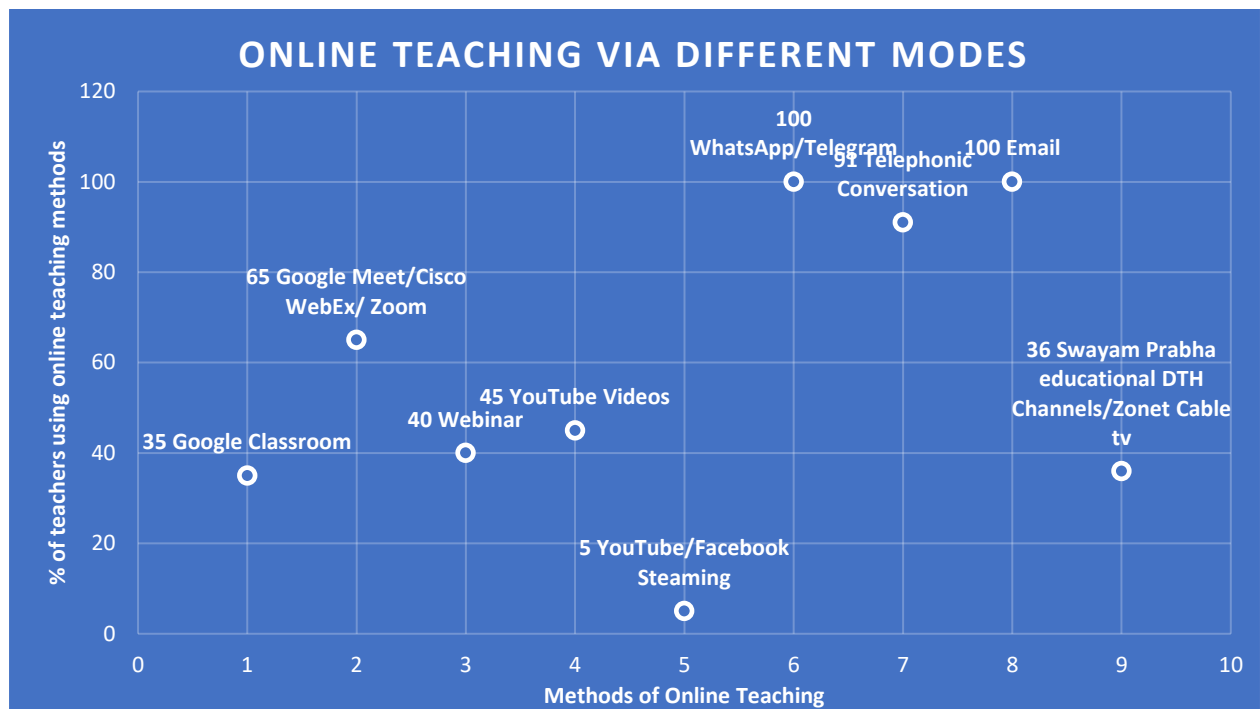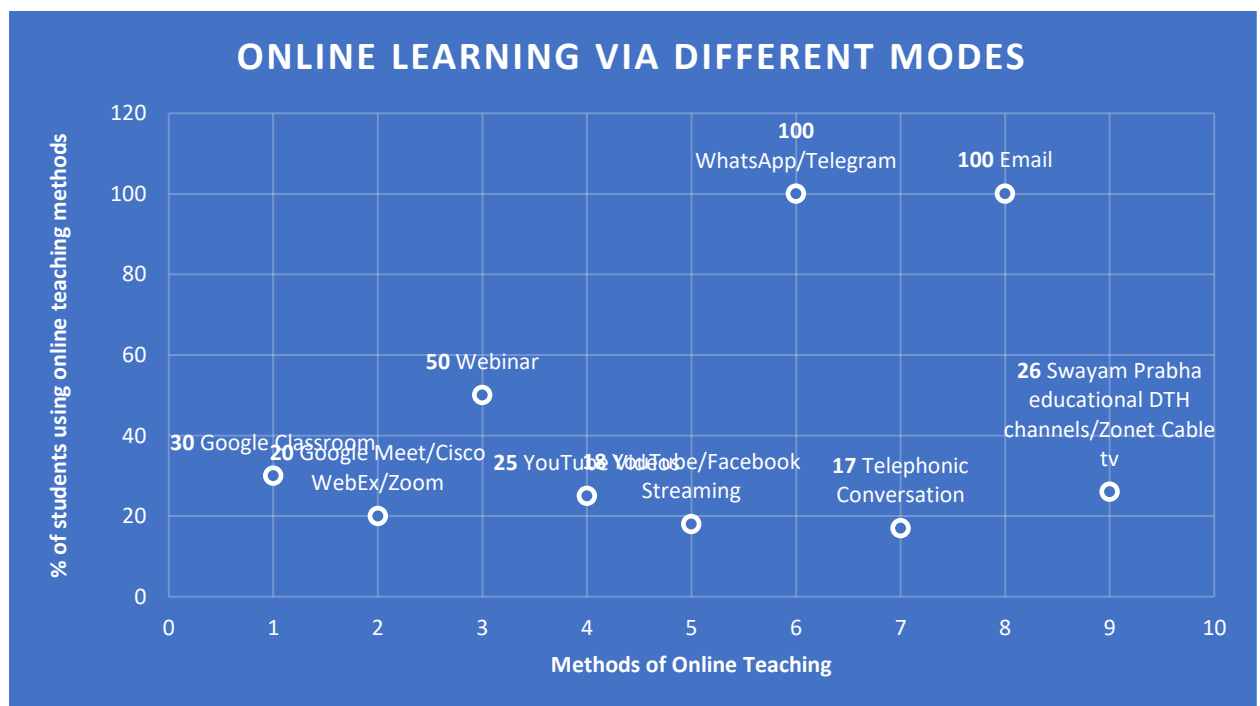
Figure 1 *Online Teaching Via Different Modes*

Figure 2 *Online Learning Via Different Modes*

45% of teachers used YouTube to record their lectures. 25% of students used YouTube to watch presentations and record videos from numerous sources.

The use of YouTube and Facebook streaming as a means of virtual classes by teachers was found to be very low, with only 5% of students admitting to using these online platforms for learning.

In terms of information exchange and reception, 91 % of teachers were found to use telephonic conversation to connect with their

students educationally. Even so, students are hesitant to call their teachers, with only 17 % doing so. Teachers (36%) expressed a strong desire to use new technological tools for online teaching, such as Swayam Prabha educational DTH channels/Zonet Cable TV but students (26%) were found to be using this digital tool for online learning. Swayam Prabha is the government's educational DTH platform consisting of 32 channels dedicated to telecasting content for at least 4 hours every day, which would be beneficial to students.

Results (Findings of second objective)

The content analysis of the questionnaire on teachers' and students' perceptions of online teaching-learning during the COVID-19 pandemic was done to get the findings of the second objective, which was to study the perceptions of teachers and students of online teaching-learning during the pandemic. Researchers also gathered detailed information about the most important aspects of the online teaching-learning process through semi-structured interviews.

The University has a clear vision for implementing online teaching and learning to meet out academic problems especially during pandemic time, and it has encouraged faculty and students to take the necessary steps in this direction. According to some of the teachers, the MHRD, UGC, and universities made the right decision at the right time to include all the staff members in the online teaching-learning mode, which depends on a shift in mindset for organizational authorities as well as educators to adapt to technology-based teaching. One of the senior teacher said that "This is very important for all of us to do online teaching during the lockdown because, along with work, we feel mentally balanced and healthy".

This mode of education is very important during the COVID-19 outbreak lockdown period, and it can thus be managed as a transition mechanism.

The majority of teachers believe that faculty will be more motivated if they are convinced that online teaching has more benefits, particularly during the lockdown period.

Furthermore, self-motivation can be effective, and this will occur gradually.

The current pandemic situation has badly impacted on almost every aspect of life, but it has turned out to provide various opportunities also. The university was found to be managing teaching-learning it capably in the current context due to the top encouragement and motivation. It's difficult to manage on a long-term basis because the university needs more technical preparedness with necessary online educational resources and training programs for both teachers and students. "Now that I have my MS-powerpoint slide material, I am typing the explanatory content for the slide materials and converting them to pdf files," one teacher responded. As a result, I've begun preparing and collecting notes and materials. These materials, when combined, could eventually be turned into a textbook for students.

Excellent domain knowledge, proficient computer knowledge, communication skills, clarity of expression, emotional connection with the students, and other necessary skills to deal with the demands of the online platforms, as well as the ability to resolve minor issues during and after the online classes, are found to be among the online teaching skills and techniques needed to teach in this pandemic. Additional skills discovered to manage the online teaching process included virtual classroom experience, patience, empathy, care for students, excellent presentation skills with addressing the point of a given topic, and proper handling of teaching-learning tools available with user-friendly features. Study materials for reference, digital study materials such as free access to e-books and e-journals, open educational resources, databases, institutional and personal internet connections, Wi-fi, and access to a free account on Google Meet, Cisco Webex & Zoom are among the resources available to university teachers. Accepting change is a difficult task, and it will take time for both teachers & students to become acquainted with the new changes.

The critical strategies found in creating an online classroom were motivating students, collaborating, and team teaching. During the

lockdown, teachers also participated in technology-based teaching programs hosted by various universities in collaboration with the UGC. Some of the teachers who responded said they had already completed MOOCS training courses prior to the pandemic. It was discovered that patience on the part of all stakeholders, including faculty, students, academic administrators, and support staff in general, as well as Information and Communication Technology (ICT) staff in particular, would go a long way toward successfully managing the transition.

Teachers created their own action plans for online teaching that differed slightly from one another. The majority of teachers began by preparing study materials in accordance with the syllabus, scheduling online classes according to the timetable, and uploading study materials after each session. A few teachers have recorded their video lectures and uploaded them to a WhatsApp group and their YouTube channels for those who were unable to attend class due to unforeseen circumstances, as well as to provide an equal access to learning. Some teachers claimed to have prepared modules for each unit they needed to teach. They took online classes after uploading that module, which were more about clearing the doubts of students. "Clear and proper planning of the sessions in consultation with the students, lesson preparation, regularity in conducting the classes, doubt-clearing sessions and personalized responses to the students' queries is my action plan for online teaching," one faculty member said.

In terms of students' opinions on online teaching and learning, they stated that during COVID-19 outbreak lockdown period, online learning helped them stay in touch with their lessons outside of the walls of the classroom, which prevented crowding in the classroom and provided an alternative for completing the syllabus. Because they were not used to learning with smartphones and computers, some students reported a lack of interest and attention during online classes. This proved to be a major setback for them. As a result, they believe that developing soft skills, particularly listening skills, should begin as soon as

possible. A stable connection was required for an online class via Google Meet, Cisco WebEx, Zoom according to the majority of student respondents. In online mode, students check their Google Classroom app for any information, announcements, study materials, assignment and project activities uploaded by the teachers. According to the students, the average time spent on online activities was around 5 hours per day. On average, students said they use 1.0–1.5 GB of data per day because it was included in their low-cost prepaid plan. As a result, when the students' maximum data limit was reached, they felt powerless to continue their online classes. It was a major drawback.

However, those who were staying in hostel in the initial time of COVID-19, they were provided unlimited data with good internet speed but in later days, as per government orders and local administration, three hostels of IFTM University were handed over to authorities for quarantine center of COVID-19 suspect along with dispensary and guest house.

Students found the videos that their teachers uploaded fascinating because they could watch them again, pause them, and take notes as needed.

When they had access to the internet, several students said, "Google Classroom is the simplest and most appropriate way to chat with teachers." Students responded in a good manner to the teachers' pace of online teaching and were also satisfied with the teachers' academic readiness for online teaching.

One of the students suggested using more discussions and student activities (not for marking or score-based activities) as a means of learning motivation and engaging students, as well as having the right balance between visual and audio learners.

Students believed that teachers should foster friendship and, if possible, enlighten the environment of groups. The practical expansion of ICT facilities needs to be promoted in order to better handle this type of situation. As some students have stated, the most important teaching skill that needs to be developed is

making learning a personalized experience for students, even when it occurs online. Parents' awareness was also seen as a requirement during this transition phase of the change process, and this adaptation will improve with time.

Results (Findings of third objective)

Teachers' and students' responses to online teaching-learning were collected through perception surveys and semi-structured interviews during the lockdown period to obtain the findings of objective three, i.e., to examine the challenges faced by teachers and students in adapting to the online teaching-learning process during the COVID-19 pandemic. It was discovered that the majority of the teachers faced similar challenges and issues. The most difficult aspect of teaching online was maintaining a connection between teachers & students. The connection is more stable if the students' videos and audios are turned off, but that mode of teaching appears to teach to a blank wall. Furthermore, it was perceived that some students lacked the necessary resources to participate in online activities, furthering the digital divide. As a result, there were both technical and ideological issues with online teaching. The majority of the difficulties stemmed from students' reactions to the demands of online learning, such as unreliable electricity and intermittent signal issues. Teachers cited a lack of understanding, a lack of opportunities for meaningful interaction and the mechanical conduct of classes as major challenges. Teachers were found to be unable to read students' faces and moods, making it difficult to change the teaching pattern. Furthermore, both teachers and students reported a lack of motivation due to the inability to receive immediate feedback during this online teaching-learning transition phase. Some teachers expressed grave concerns about the research scholars' laboratory activities during the lockdown period and demanded simulation techniques in laboratory practicals. It was discovered that some teachers were in a confusion because they didn't know whether the students turned on the computer for the sake of it, were actively present at the time, or were sitting somewhere; they had no idea about

participation. Both teachers and research scholars expressed similar concerns about data collection for their respective research projects and doctoral research activities, which were hampered in a negative way due to subsequent lockdowns for months on end. The problem with online classes is that in some subjects with abstract content, there are many concepts that require real-face-to-face interaction to fully comprehend. Relying on online interaction is harmful to one's eyes as well as one's overall health. " It was discovered that the majority of students came from rural areas of Uttar Pradesh State, with low socioeconomic conditions in their families, and that during the lockdown period, they needed a laptop for online learning but couldn't because they didn't have a desktop or laptop at home, and mobile phones weren't found to be effective enough to participate in online classes. Furthermore, both male and female students were experiencing financial difficulties at home during the lockdown. Some female students admitted that they did not have a conducive learning environment at home and that they were assigned household chores during the lockdown period, which had a negative impact on their studies and left them depressed and despondent. Because online teaching-learning in a pandemic was a new experience for both teachers and students, they expressed their dissatisfaction with the stressful situation in which they found themselves. They did, however, applaud the university administration's initiative to provide online counseling services with the help of the psychology and social work departments for the students' mental health and well-being. Online teaching is a very exciting concept for Indian teachers in general. Initially, there was a low level of attendance, but as the race progressed, students became more comfortable attending online classes. Teachers acknowledged that, due to the numerous challenges they faced in the early stages of online teaching-learning, they were unable to completely resolve students' doubts and satisfy their satisfaction levels. During the interviews, a few moot questions were raised by teachers and students about the relationship that should be established between the qualitative and quantitative aspects of online education. They

were curious about the quality and quantity of online instruction delivered, as well as students' online learning behaviors when using online teaching tools. One faculty member says there is a lack of information regarding the perception of students' learning requirements regarding online video tutoring and other online teaching tools to be used for teaching in a distance mode. Whether students found online teaching tools adequate for understanding the theoretical portion of the course curriculum, or whether they were simply using them as a required online learning medium.

Discussion

The present research work aimed to find out teachers' and students' perspectives on the online teaching-learning process. While maintaining a theoretical framework, the research offers a variety of perspectives on the challenges that online teaching and learning face today. The mixed-methods study looked at teachers' and students' perspectives while keeping IFTM University in mind. When it comes to understanding teachers' and students' perspectives on the new trend, new insights emerge. It was discovered that the university's initiative for the online teaching-learning mode of instruction began with instructions from the UGC and MHRD (Mishra et al., 2020). During the COVID-19 outbreak lockdown period, the Chinese government demonstrated the same willingness to continue standard online teaching-learning activities under the policy of "Suspending Classes Without Stopping Learning" (Zhang, 2021). The university's readiness in terms of techno-academic blending was increased to a greater extent. Academicians, technicians, and students, as well as other relevant stakeholders, began working together to experience and benefit from the transition (Mishra et al., 2021). Due to their remote location, students faced specific issues such as connectivity and video issues, and they were unable to compromise on the amount of time required for machine learning (Kyne and Thompson, 2020). Several online teaching-learning tools, such as Google Meet,

Cisco Webex, Google Classroom, Zoom etc., were used to meet the needs of students (Kansal et al., 2021). The majority of the teachers were first educated by university ICT team via online mode "the manner of online teaching". During the training, the differences between online and face-to-face teaching were discussed. Using a new instructional strategy was a difficult task for them (Yen et al., 2018). Teachers intended to use WhatsApp, email, and telephonic conversation to impart teaching from the beginning of the lockdown. However, as the lockdown period was extended by the Government of India WhatsApp, email and telephonic communication became insufficient (Charania et al., 2021). Teachers were given training by the IT team on how to use platforms like Google Classroom, Google Meet, Cisco WebEx etc., for efficient online teaching & learning. Despite the fact that the change was underway, the majority of teaching faculty members were still using WhatsApp to conduct online curriculum transactions (More and Vankadara, 2022. The reason given was simple: teachers were used to using WhatsApp in their daily lives, and it was also convenient for students to use it at any time. Furthermore, due to poor internet connectivity, teachers agreed that they relied heavily on WhatsApp for uploading and downloading study materials (Mpungose, 2020). Teachers unanimously agreed that online orientation programs and workshops conducted through e-mode were beneficial in learning how to use the latest online teaching and learning modes (Chattopadhyay and Dalal, 2020). Some professors provided readable lecture handouts, while others provided full reference books for students to read. Preparing handouts necessitated additional effort, which some teachers were unwilling to undertake. As an individual course instructor, teachers exercised their autonomy in terms of imparting instructions, setting questions, and awarding final grades. Teaching transactions took place online without the teachers being held accountable for the specific online platform they used. There were compatibility issues with regard to two-way interaction when students were returned to their home town, which was located in a remote rural setting without good

internet connectivity or broadband services, as well as an uninterrupted power supply (Klymkowsky, 2007). Adaptability was not the only issue that teachers and students expressed dissatisfaction with (Hebebci et al., 2020). In this pandemic, research findings of our work present advocated proper counselling services provided by the university in order to maintain students' mental health, which supports our findings that counselling services are needed for the sound mental health and well-being of students and are thus provided by IFTM University to overcome their stress. Students faced several challenges after the end of face-to-face classes, including socio-emotional imbalance, personal adjustment to daily life activities at home, financial disturbances and others, in order to overcome the negative effects of the isolation period. For the first time, many classroom teachers were attempting to comprehend the ins and outs of distance learning and are searching for free online resources for schools (Dhawan, 2020).

Getting used to the new mode of online teaching took some time. The university was able to handle the situation as well as any other institution of its kind. To make e-content more useful, tasks such as reporting must be completed, and presentations and instruction delivery must be well prepared. To avoid monotony, some brainstorming questions should be interspersed throughout the content delivery (Rapanta, 2020).

The pandemic taught us that, in a situation like COVID-19, it is critical to extend and sustain online education (Peimani and Kamalipour, 2021). Teachers used to get regular feedback from students about the benefits and drawbacks of online teaching transactions and would keep working until they achieved the desired level of student satisfaction (Ni, 2020). IFTM University used to use the university's official website to keep students up to date on a regular basis. Students and teachers are kept up to date on examinations and other academic events through emails and the university's online messenger group. According to the findings of this study, during the lockdown period, there was a greater realization of the time-bound relevance and criticalities of the online teaching-learning mode. Teachers raised the issue of conducting online practical classes during the lockdown period, stating that it was difficult because it required systematic demonstration of the entire process in front of the students. Online teaching has been implemented as a viable alternative well within its limits and limitations as a time-suited mechanism for meeting the demands of the COVID-19 pandemic. It is debatable whether it will be effective in the future. It has recently proven useful in the evaluation of student performance. It may take some time to understand how panicked attempts at online teaching-learning meet the need for a net balance of aggregate consequences (Naik et al., 2021). Finally, as students come from various socioeconomic backgrounds and use the same pedagogical approach, there is an urgent need to bridge the gap to overcome problems. Because online teaching-learning is still in its infancy in this country, a lack of understanding of students' individual differences may lead to biased conclusions.

Conclusion

The conditions of lockdown because of pandemic COVID-19 impacted too much on entire education system. Online teaching-learning methodology was adopted to meet the challenges due to closure of offline classroom teaching.

This was of utmost significance for educational governing council viz UGC, MHRD etc to find out the models which can maximise the effectiveness of online learning for better subject content delivery. Online free tools of video conferencing including zoom, google-claasroom app, google-hangout, google-meet, recorded lectures, youtube etc played very significant role in meeting the challenges of lockdown.

The state of art IT based infrastructure is need of contemporary time in each Higher Educational Institutes. The findings of present research concluded that neither student, not institutions were ready to meet the IT related challenges in best way. During and after

lockdown, HEI developed the IT infrastructure excellently and students too arranged the same to meet out the requirements of online teaching learning process.

As the faculty members were not so much familiar with online teaching, need of special training to teachers were needed. The result concluded that due to the numerous challenges faced by faculty members in the early stages of online teaching-learning, they were unable to completely resolve students' doubts and satisfy their satisfaction levels at highest level.

We must learn the lesson of pandemic time with an aim to develop new online teaching platforms and should establish a balance digital education with screen-free activities.

Conflict of Interest

None

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