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Online Teaching-Learning in Higher Education during Lockdown Period of COVID-19 Pandemic

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Abstract: The whole educational system from elementary to tertiary level has been collapsed during the lockdown period of the novel coronavirus disease 2019 (COVID-19) not only in India but across the globe. This study is a portrayal of online teaching-learning modes adopted by the Mizoram University for the teaching-learning process and subsequent semester examinations. It looks forward to an intellectually enriched opportunity for further future academic decision-making during any adversity. The intended purpose of this paper seeks to address the required essentialities of online teaching-learning in education amid the COVID-19 pandemic and how can existing resources of educational institutions effectively transform formal education into online education with the help of virtual classes and other pivotal online tools in this continually shifting educational landscape. The paper employs both quantitative and qualitative approach to study the perceptions of teachers and students on online teaching-learning modes and also highlighted the implementation process of online teaching-learning modes. The value of this paper is to draw a holistic picture of ongoing online teaching-learning activities during the lockdown period including establishing the linkage between change management process and online teaching-learning process in education system amid the COVID-19 outbreak so as to overcome the persisting academic disturbance and consequently ensure the resumption of educational activities and discourses as a normal course of procedure in the education system.

Keyword: Online teaching-learning modes, perception, COVID-19, pandemic, outbreak, lockdown period, online education

Introduction

The COVID-19 is a highly infectious disease or illness caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), originated in Wuhan city of China, has already taken on pandemic proportions, affecting across all the continents (Remuzzi & Remuzzi, 2020), mostly spread among individuals during close contact now resulting in millions of death. COVID-19 is referred as pandemic due to its severity and fierceness also as the greatest global health crisis since after centuries in human civilization. The onset of the novel coronavirus made everything from world economies to social rituals (Schulten, 2020) devastated. For that reason, the International Labour Organization (ILO) estimated that 195 million jobs could be lost (UNDP, 2020). One of the most preferred ways to subdue the effect of this crisis is to enact the COVID-19 containment measures in their respective territories (De Brouwer¹, Raimondi & Moreau, 2020). Nowadays lockdown is a common buzzword that has been mulled over by the people during corona pandemic. In fact, lockdown is a state of the emergency protocol implemented by the competent authorities (in this case it is central and state governments) to restrict people from leaving their place of living resulting in mass quarantines and stay-at-home across the world since March 2020. The coronavirus triggered the first phase nationwide lockdown in India which began on March 25, 2020, for 21 days and subsequently repeated on April 15, 2020, for 19 days as the second phase; on May 04, 2020, for 14 days as the third phase; on May 18, 2020, for 14 days as the fourth phase and on June 01, 2020, only for containment zones taking 16 days. To get control over COVID-19 pandemic is possible to a greater extent with people's unbridled determination of the stringent precautionary measures such as maintaining social distancing, following medically instructed quarantine process and embracing hygiene and sanitation (Khachfe, Chahrour, Sammouri, Salhab, Makki & Fares, 2020).

Approximately 264 million children and adolescents are not in school (UNESCO, 2017), and this pandemic made this situation further worst. As the COVID-19 pandemic spreads, there has been an increasing move towards teaching online because of shutting down of schools, colleges and universities for an indefinite time as the only option left (Martinez, 2020). Therefore, this is the time to gravely rethink, revamp and redesign our education system in much demanding need of unprecedented current situation. Informal and non-formal education is also tremendously affected. However, it is a well-established assumption that no pedagogical approach can replace the peak position of formal education due to having teacher-taught direct interaction. But, the aftermath of COVID-19 crisis, online education

became a pedagogical shift from traditional method to the modern approach of teaching-learning from classroom to Zoom, from personal to virtual and from seminars to webinars. Previously, e-learning, distance education and correspondence courses were popularly considered as the part of non-formal education, but as of now, it seems that it would gradually replace the formal education system if the circumstances enduringly persist over the time. Some of the most popular online communication platforms that would change the destination and direction of the whole education system across the world in post-COVID-19 circumstances are Start.me, Neo, Classtime, Classwize, Ted-Ed, Coursera, Google Classroom, Bakpax, Pronto, Skillshare, ClassDojo, Edmodo, Blackboard Learn, Parlay, Docebo, Feedback Fruits, Udemy, WeVideo, WizIQ, Flipgrid, Codeacademy, Gynzy, Adobe Captivate, Seesaw, Edx, GoGuardian, Elucidat, Kami, Pluralsight, G Suite, Otus, Articulate 360, Floop, Future Learn, Hapara, Shift, Lectora Inspire, Kialo Edu, Buncee, LanSchool and many more. De-schooling society (Illich, 1971) seems relevant as the current scenario tries to keep our children away from the traditional formal education system and provide an opportunity to flourish on their curiosity.

Lederman (2020) justly stated that due to the COVID-19 crisis teachers and students both find themselves in the situation where they felt compelled to embrace the digital academic experience as the summum bonum of the online teaching-learning process. Through digital intelligence (DQ Institute, 2019) teachers can cater children's digital skills which are on the brink of cyber risk into the educational opportunities to get success in future ventures especially in this pandemic where children are wholly dependent on online learning. The coronavirus is upending life (EdSource, 2020) that caused an enduring threat to our educational institutions from kindergarten to tertiary level and day by day exacerbated the teaching-learning. Apart from the philanthropic efforts, some people hoped to parlay their enterprising skills into profit-making opportunities.

For any innovative changes, external and internal, both forces are held responsible as Kurt Lewin (1958) discussed the three-step process (unfreezing → changing → refreezing) in his change management theory, which delineates the inherent process of any change. Unfreezing of traditional teaching-learning occurred during unforeseen circumstances out of COVID-19, which brought to the shift into online teaching because of anticipated uncertainties in pursuing the traditional mode. As of today's scene, it is quite impossible to take classes in regular mode amid the COVID-19 outbreak in which to maintain the social distancing is of paramount importance; hence undoubtedly online teaching mode became a

necessity that brought an organization and individual both in a unfreeze phase. *Unfreezing step* provided an opportunity for motivation and readiness among system and stakeholders (Siegal, Church, Javitch, Waclawski, Burd, Bazigos, Yang, Rudolph & Burkr, 1996).

Besides, online teaching mode is providing the feeling of psychological safety to learning community in COVID-19 afflicting period. The second step is about *changing* process under which two options are left either to adopt a new online mode in practice in other institutions elsewhere or to innovate one's own. The research is always for a better implementable model. Here, notably, change is not an event but a dynamic process as a break in continuity. For any result-oriented change, we need to have a time suited outlook and a new mindset (Bridges, 1991) for online teaching mode at an individual and organizational level to supplement the transition phase. Tam and El-Azar (2020) advocated that "resilience must be built into our educational systems" and also indicated three trends that would be seen in future transformations viz. increasing educational innovations, emboldened public-private educational partnership and digital divide gap.

After four months of online experiences, a paradigm shift has occurred with online teaching, gaining prominence to have near permanence even after COVID-19 pandemic leading to refreezing. Refreezing step is inevitable for integrating technology in our teaching-learning process that enables us to teach students with the methods in which they would not only feel comfortable but also, they can match the demands of technology in 21st century.

This study has been conducted in Mizoram University, located in the capital city Aizawl, north-eastern India with 'A' grade accredited by National Assessment and Accreditation Council (NAAC) in 2019 and ranked 51 by the National Institutional Ranking Framework (NIRF), 2020. The Gross Enrolment Ratio (GER) of Mizoram in higher education was calculated by 25.7% as compared to the national GER of 26.3%. (AISHE, 2019) in which one constituent college and thirty-five colleges are affiliated with the University.

Programmes and policy of the government of India on online teaching-learning in HEIs

The government of India started thinking gravely on this matter with emphasizing on ICT and use of online education as the part of compulsory teaching-learning process at tertiary level. Moreover, it is reflected on preparing draft new education policy 2019 that has been regarded as a proactive and highly techno-efficient step in the time of this pandemic. Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) is a programme or

Massive Open Online Courses (MOOC) platform initiated by the government of India hosted online courses in different quadrants. The SWAYAM PRABHA is a group of 32 DTH channels dedicated to telecasting of high-quality educational programmes throughout the week. Annual Refresher Programme in Teaching (ARPIT) is an online professional development programme launched by the MHRD on November 13, 2018 using SWAYAM platform. Another initiative of MHRD was e-PG Pathshala run by the University Grants Commission (UGC) that provided high-quality curriculum-based and interactive e-content in 70 subjects across all disciplines. e-Pathshala is a portal jointly run by the MHRD and National Council of Educational Research and Training (NCERT) launched on November 7, 2015, that provided educational resources for teacher educators, teachers, research scholars, students and parents through an online learning platform. Therefore, it can be said that we were not unaware of the challenges and prospects of online education.

India's apex regulatory body of higher education, UGC, has taken the present educational scenario very seriously and put some efforts proactively to resolve the deadlock of completing courses and examinations in on-going semesters as well as issued circular regarding the academic calendar after the recommendations of one of the committees constituted by UGC itself. It has also become mandatory for all the universities in India to complete the 25% syllabus through online teaching mode and 75% face-to-face interaction (UGC, 2020). The educational scenario of the post-COVID-19 outbreak would not be easy to manage teaching-learning situations without using online teaching platforms rigorously. Having seen the fearsome monster of coronavirus, it can be anticipated that in the upcoming time student would face multiple challenges of educational hardships including quality education, hands-on experience, laboratory work, library visit, peer tutoring, remedial teaching, research and innovation. Hence, the tentative solution of post-COVID-19 educational tantrums is to maintain the equilibrium of online and offline learning classes (hybrid mode).

Implementation of online teaching-learning in HEIs

There are some difficulties felt in the implementation of the change process in the education system that has been arisen after COVID-19 crisis; these difficulties are related with the novel perspectives of online education and their technological complexities. Earlier to this pandemic, online education is considered as the education provided by the open universities in India. But in COVID-19 induced time, online teaching-learning became a

massive challenge to deal with, and stakeholders are not potentially fit to adjust with the sudden educational change as they are not technologically competent to embrace the current situation. Therefore, for successful implementation of educational change (in this case, it refers to the shift from traditional teaching-learning methods to online teaching-learning methods), implications of change need to be addressed.

Figure 1 described how to decide the implementation process of online teaching-learning. The journey begins from the collective vision of UGC and MHRD (*supra-system*), University and Colleges (*system*), and different academic departments (*sub-system*) in favour of implementing online teaching-learning in the education system. In the face of COVID-19, the shared vision of education system realized that during the pandemic period, teachers and students are motivated to adapt online teaching-learning platforms in fulfilling the current educational needs. Everyone, either teachers or students, were friendly skilled in using social media app viz. WhatsApp, Facebook, Twitter, Instagram, which turned into smooth facilitation of using online educational platforms such as ZOOM, Cisco WebEx, Google Meet etc. as a sign of positive transfer of learning. Also, there are some useful educational apps such as Office 365, Google classroom and much more user-friendly videoconferencing app that can be downloaded free of cost and easy to use (FutureLearn, 2020); so to some extent, it seems that there is no reason to get into a panic to get new technology all of sudden as some of the apps are already embedded in our HEIs. Majority of stakeholders possessed smartphones and only considerable numbers having laptops are the needed resources to implement online teaching-learning. Mizoram University has its ICT centre and LMS that helps in seamless monitoring of online teaching-learning modes.

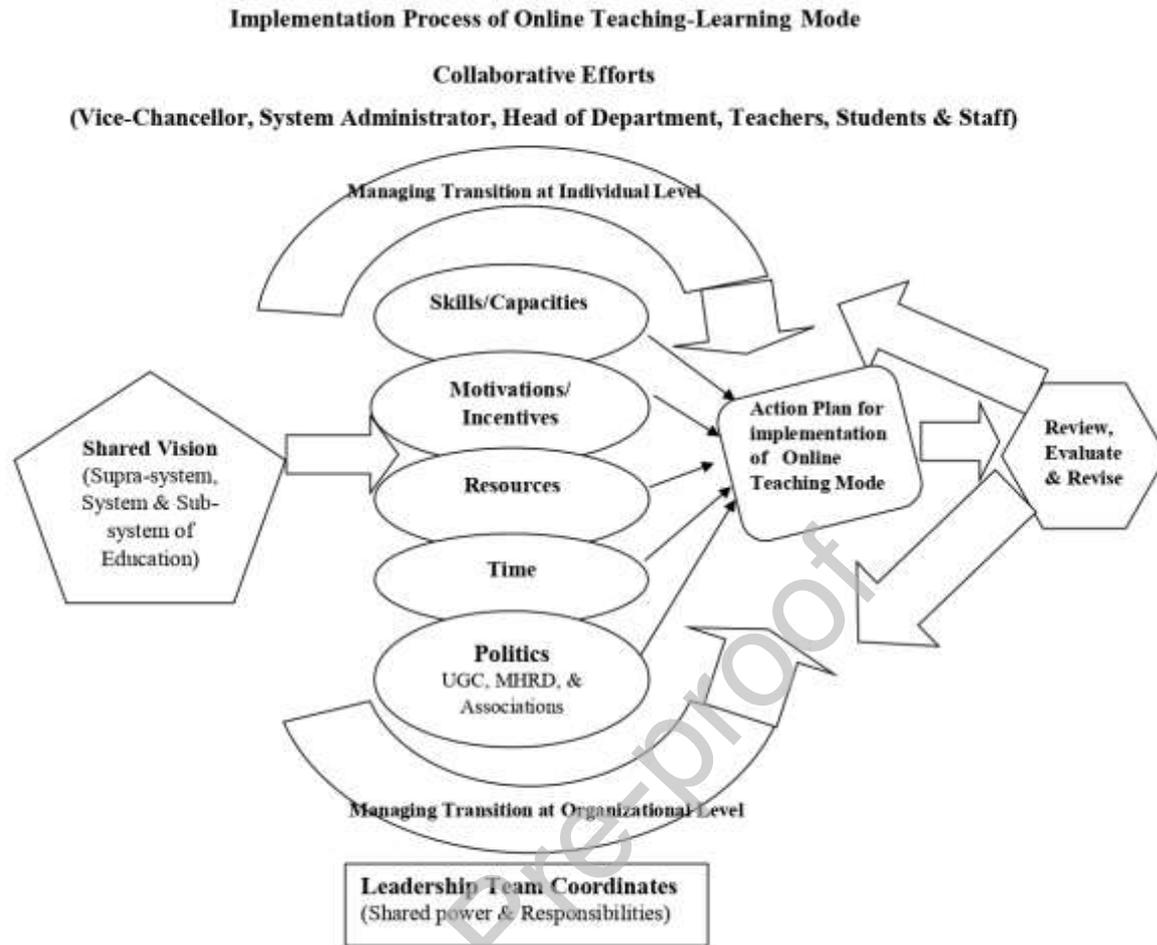


Figure 1: represents the conceptual model of the implementation process of online teaching-learning

Source: Adapted from M. Speck, The change process in a school learning community, The School Community Journal, 6(1), 1996

Central and State governments were unanimously agreed upon implementing online education across the country, keeping in mind the need of the hour. Various national, state and university level teachers' and students' associations were half-heartedly and hesitatingly supported the vision of online teaching-learning modes with the mix bags of opinion as a result of curiosity to trial new technology and the new mode of the teaching-learning process in the education system; it is due to the lack of preparedness, orientation and incentives of stakeholders in using online mode of teaching. The action plan was prepared, keeping in view of our readiness for online teaching mode, drive for change in this pandemic and availability of resources for implementing online teaching mode. To go with the action plan, teachers prepared and trained themselves independently to be accustomed to the technology required

in using online teaching modes. At the university level, system administrator and Information & Communication Technology (ICT) experts provided necessary assistance to stakeholders and managing the change process. However, many pieces of research have been conducted over online teaching and learning and its effectiveness, no such studies conducted during COVID-19 lockdown period. Hence, the researcher insightfully gets interested in doing this study with the following objectives.

Objectives

1. To reveal the various forms of online teaching-learning modes adopted during COVID-19 pandemic.
2. To study the perceptions of teachers and students on online teaching-learning during COVID-19 pandemic.
3. To examine the challenges faced by the teachers and students in adapting to the online teaching-learning process during COVID-19 pandemic.

Methodology

The researcher used both quantitative and qualitative methodologies to study the perceptions of stakeholders based on the online teaching-learning process in HEIs during the lockdown period. This study is delimited to Mizoram University.

Population and Sample

All teachers and students of Mizoram University were the populations of the study. There were three teachers (one professor, one associate professor & one assistant professor) and ten students (five pursuing Post-graduate courses and five Research scholars) from each department selected as sample for the quantitative study using disproportional stratified sampling. Twenty-six departments out of thirty-nine were chosen for the present research keeping the availability of all the three types of teaching faculty in one department in view (i.e. professor, associate professor & assistant professor). Thus, the total of seventy-eight faculty members and two hundred sixty students participated as a sample in a descriptive survey to assess their perception towards online teaching-learning. Teachers' age, gender and designation are given in table 1.

Designation	Assistant Professor		Associate Professor		Professor	
	Male	Female	Male	Female	Male	Female
No. of Faculty Members	13	13	13	13	13	13

Age range	>30	5	4	-	-	-	-
	31-40	7	9	2	1	1	-
	41-50	1	-	11	12	5	3
	51-60	-	-	-	-	4	4
	<60	-	-	-	-	3	6

Table 1: represents data of teacher respondents with their age, gender and designation
Students' age and gender are given in table 2.

		Post-graduate students		Research Scholars	
Gender		Male	Female	Male	Female
No. of Students		65	65	65	65
Age range	21-25	25	33	10	11
	26-30	28	20	34	39
	31-35	9	8	14	9
	36-40	3	4	7	7

Table 2: represents data of student respondents with their age and gender

Besides, there were 20 teachers (ten male and ten female) and 20 students (ten male and ten female) selected for semi-structured interviews using nested concurrent sampling design (Johnson & Christensen, 2012) to collect qualitative data concerning their perceptions towards the online teaching-learning process. All the respondent teachers are permanent teaching faculty of Indian nationality residing in on-campus and off-campus premises. Likewise, all the student respondents are enrolled in regular mode of instruction with Indian nationality living in University's hostels and outside the campus.

Procedure of data collection

The researchers for quantitative analysis developed two questionnaires to study the perception of teachers and students separately on online teaching-learning mode. A semi-structured interview schedule was prepared to get the opinion and detailed information from teachers and students during the said lockdown period. Their experiences, perceptions and reflections regarding the ongoing online teaching-learning process were consolidated for qualitative analysis. In the first phase of data collection, the researcher got permission from the Registrar, Mizoram University to pursue this study and Assistant Registrar (Establishment); provided the relevant data concerning online teaching-learning mode

adopted by the University. The second phase involved the collection of teachers' and students' perception of the pros and cons of online teaching-learning. In the third phase of data collection, the researcher obtained data through semi-structured interviews. All the sample respondents extended their full co-operation by responding to the questionnaire. Valuable feedback and suggestions were gathered while interviewing. Data obtained from the various sources were analysed by using the descriptive statistics for quantitative data and content analysis for qualitative data. The study was passed in the ethical committee of the University.

Findings

This section presents objective wise findings derived after percentage analysis and content analysis.

Findings related to Objective one

To get the findings of objective one, researchers conducted a survey study in which percentage analyses have been done to reveal the different types of online teaching-learning modes adopted by the teachers and students during the lockdown period.

Table 3: Table showing different modes of online teaching modes used by the teachers and students

S.N.	Modes of online teaching-learning modes	% of teachers using online teaching modes	% of students using online learning modes
1.	Mizoram University-Learning Management System (MZU-LMS)	100	60
2.	Google Classroom	32	20
3.	Zoom/ Cisco WebEx/ Google Meet/ Skype	45	15
4.	Webinar	25	35
5.	YouTube Videos	50	28
6.	YouTube/ Facebook Streaming	6	18
7.	WhatsApp/ Telegram	100	100
8.	Telephonic Conversation	87	23
9.	Email	100	100
10.	Swayam Prabha educational channels/Zonet Cable TV	11	27

Table 3 portrays the details of the varied modes of online teaching-learning modes being used by the teachers and students during the lockdown period of COVID-19 outbreak. Mizoram University has developed its own Learning Management System in the wake of the suspension of the formal teaching-learning process due to the imposed lockdown by the government of India. All the teachers needed to log in on LMS and upload the study materials required by the students, clear their doubts on the discussion forum. So, it was one of the most popular means of digital education among teachers almost all the teachers reported in the Mizoram University but slightly down the percentage of 60 from students' side due to the accessibility reason of internet connectivity. Interestingly, despite having a variety of digital modes of teaching-learning, almost all the teachers and students both were using WhatsApp/ Telegram and Email for educational interactions, submission of assignments, clarification of doubts and conducting class tests. There were 32% of teachers using Google classroom and 45% teachers using Zoom/Cisco WebEx/Google Meet/Skype platform for taking online classes, but the recipient students were found only 20% and 15% respectively. Twenty-five percent of teachers conducted Webinars as online teaching while 35% of students were attended University's webinars and outside the University's webinars for enriching themselves widely as an online mode of learning. There were 50% of teachers recorded their lectures on YouTube as teaching through web mode, whereas 28% of students watched presentations and recorded videos of all sources on YouTube.

YouTube and Facebook streaming as a means of virtual classes taken by the teachers found significantly very low with 6%, whereas 18% of students admittedly found using these online platforms for learning. Eighty-seven percent of teachers were found using telephonic conversation for educationally get connected with their students in relation to giving and receiving information. Still, students tend to feel hesitant to call their teachers, and the percentage found only 23. Some teachers(34%) showed an ardent interest in the pursuit of using the new technological tool of online teaching such as Swayam Prabha educational DTH channels/Zonet Cable TV with 11% only but students were found a little bit impressive 27% using this digital tool for online learning; actually, Swayam Prabha is a government's educational DTH platform consisting 32 channels dedicated to telecast content for at least 4 hours every day which would be repeated five more times in a day, and Zonet Cable TV is a Mizoram's local channel broadcasted the video lectures recorded by the university teachers of each department.

Findings related to Objective two

To get the findings of objective two, i.e. to study the perceptions of teachers and students on online teaching-learning during COVID-19 pandemic, the content analysis of the questionnaire on the perception of teachers and students over online teaching-learning has been done. Besides, through semi-structured interviews, researchers also collected detailed information over the nitty-gritties of the online teaching-learning process.

The University has a clear vision about implementing the online teaching-learning and thus encouraged faculty and students to do the needful in this regard. The MHRD, UGC and University substantially made the righteous decision at the right time for inclusion of all the stakeholders in online teaching-learning mode that depends upon the change of mindset for the organisational authorities along with the educators to adapt to the technology-based teaching as stated by the some of the teachers. In the words of one teaching faculty 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.”

During the COVID-19 phase, this mode of education is useful, and thus it can be managed as a transition mechanism. Mizoram University Teachers Association (MIZUTA) and Mizoram University Students Council (MZUSC) were cooperative in implementing online teaching-learning and unanimously agreed upon that there is no alternative of online education in this pandemic.

Majorities of teachers opined that faculty might be better motivated only if they can be convinced that the online method of teaching has more advantages, especially during the lockdown period. Moreover, self-motivation can also work, and this will happen gradually.

The present pandemic situation has caused a lot of damage to almost all walks of life, but it is a blessing in disguise. Due to the authorities' encouragement and motivation, it was found that the University has been managing it capably in the present context. The University needs more technical preparedness itself with necessary online educational resources and training programmes for both teachers and taught; it's challenging to manage it on a long-term basis. One teacher respondent explained that:

“as I have my MS-power-point slide material, now I am typing the explanatory content for the slide materials and convert them as pdf files. This way, I have started preparing and collecting notes material. These

materials, in a combined manner, may eventually be converted as text-book for the students.”

Excellent domain knowledge, proficient computer knowledge, communication skills, clarity of expression, emotionally connect with the students and other necessary skills to deal with the demands of the online platforms and the ability to resolve small issues during and after the online classes are found as online teaching skills and techniques needed to teach through online mode in this pandemic. Virtual classroom experience, patience, empathy, care for students, excellent presentation skill with addressing to the point of a given topic, proper handling of teaching-learning tools available with user-friendly features were the additional skills found to manage online teaching process. One teaching faculty delineated that *“there is a need for bringing theatrical skills into teaching online.”* Study materials for reference, digital study materials such as free access to e-books & e-journals, open educational resources, databases, institutional as well as personal internet connections, Wi-fi, access to a free account on Zoom & Google Meet are found as the resources available with the teachers of University. One faculty member perceived that:

“teachers and students are giving effort at the moment, and it is a new normal, which also require a learning process for both stakeholders. It is a very challenging task to accept the change, and it will take time from both sides to acquaint with new changes.”

By motivating students, along with collaborating and team teaching was the critical strategies found in creating an online classroom. University administration has organized professional development training for MZU-LMS portal. The ICT Centre of the University has conducted several online sessions for familiarization with online tools, techniques, processes and platforms with question and answer sessions. Besides, teachers attended technology-based teaching programmes conducted by different universities in collaboration with the UGC during the lockdown period. Some of the respondent teachers revealed that they had already done MOOCS training courses much before this pandemic. It was found that patience on the part of all the stakeholders including the faculty, students, academic administrators, and support staff in general and ICT staff, in particular, would go a long way in managing the transition.

Teachers developed their action plans for online teaching that were a little bit different from teacher to teacher. Most of the teachers started with preparing study e-

materials as per the syllabus, taking online classes as per time table, after taking online classes, study materials being uploaded by them. Few teachers have recorded their video lectures and uploaded to WhatsApp group and on LMS portal for those who missed the classes due to some unavoidable circumstances as well as providing equal opportunity to access learning. Some teachers reported that they prepared modules on each unit, what they need to teach. After uploading of that module, they took online classes which were more of clearing their doubts. One faculty member opined in these words:

“clear and proper planning of the sessions in consultation with the students, lesson preparation, regularity in the conduct of classes, doubt clearing sessions, and personalised responses to the queries of the students is my action plan for online teaching.”

As far as students' perception on online teaching-learning, they opined that online learning process during the time of COVID-19 had helped them in touch with their lessons outside the four walls of the classroom that has been prohibited the gathering of crowds in the classroom and created an alternative for completion of the syllabus. Some students reported a lack of interest and attention during the online classes as they were not accustomed of learning with smartphones and computers turned into the major setback for them. That is why, they felt to develop soft skills, especially listening skills online, as early as possible. Majority of the student respondents revealed that log in with particular Ids and passwords on MZU-LMS discussion forum needed to have a stable internet connection. On online mode, students used to first check their dashboard on MZU-LMS concerning any information, announcement, study material, assignment & project activities uploaded by the teachers and then along with academic purposes many times they used to watch movies and listening to music. Approximately 5 hours per day were the average times spending on online activities, as mentioned by the students. On an average student responded that they use 1.5-2.0 GB data per day as it was in their affordable prepaid plan. Further, consequently, when the maximum data limit used by the students, they felt helpless to continue online classes.

Students found that the videos uploaded by the teachers were fascinating as they can see them again, pause and take notes when needed. *“Google Classroom is the simplest and appropriate way to chat with teachers,”* as responded by several students with the condition of functional internet connectivity. Students responded half-heartedly on the pace of online teaching done by the teachers and also get contented with the academic readiness regarding

online teaching of the teachers. Students responded negatively on the understanding of online classes to sufficiently understand the conceptual knowledge and discourse activities; they further exposed that they were not able to maintain the pace of their learning behavior or capacity with the teachers' teaching speed. One of the students opined that:

“more discussions and student’s activity can be given (not for marking or score-based activity) as a means of learning motivation and engaging students as well as can have a right balance between visual learner and audio learner.”

Students' perceptions reflected that teachers should create friendship and enlighten the environment of the groups, apps or any platform through voice call if possible. Expansion of ICT facilities is to be promoted practically to make this kind of situation a better handle. The most crucial teaching skill that needs to be developed is making learning personalized experience for the students even when it is happening online as narrated by some of the students. Awareness of parents were also perceived as pre-requisite in this transition phase of the change process, and this adaptation will gradually improve by the time passing.

Findings of the Objective three

To get the findings of objective three i.e., to examine the challenges faced by the teachers and students in adapting to online teaching-learning process during COVID-19 pandemic, teachers' responses and students' responses on online teaching-learning were collected through perception survey and semi-structured interviews during the lockdown period. It was found that most of the teachers somehow encountered with similar kinds of challenges and issues.

The major challenge while teaching online was the unstable network connection. If the videos and audios of the students were kept off, the connection remains more stable, but that mode of teaching seems to teach to a blank wall. Moreover, it was perceived that some of the students had not essential resources to join online; there it appeared like pushing the digital divide further. So, the difficulties with online teaching were both technical and ideological. Most of the challenges were related to the students and their responses to the needs of online teaching, which include uninterrupted electricity connection, intermittent signal issues. Among others, level of understanding, lack of scope for meaningful interaction, the range for innovative teaching, and mechanical conduct of classes were the significant

challenges reported by teachers. It was found that teachers were unable to read the face and mood of students, and thus difficult to change the teaching pattern. Besides, a lack of motivation as immediate feedback was not possible in this online teaching-learning transition phase perceived by both teachers and students. Some of the teachers expressed their grave concerns over the laboratory activities for the research scholars during the lockdown period and demanded simulation techniques in laboratory practical. It was found that some teachers were in a dilemma as they were not sure whether the students switched on the computer for the namesake or actively present at the moment or sitting somewhere; no clue about the participation. One resembling concern was shown by both teachers and research scholars concerning data collection for their respective research projects and doctoral/post-doctoral research activities which hampered in an adverse manner due to subsequent lockdowns for the months in a row. One Associate Professor exhibited her wide mental grasp in these words:

“Lengthy use of online interaction has revealed the many problems encountered by teachers and students. The online classes are problematic is that, in certain subjects where the content is abstract, many concepts exist that need real face to face interaction for complete understanding. Relying on online interaction is detrimental to the health of the eyes and general body health too.”

It was found that the most students came from remote areas of Mizoram State with low socio-economic conditions of the family, therefore, during the lockdown period when they needed the laptop for online learning but they could not do so as they did not have desktop or laptop at home and the mobile phones were not found enough effective to participate in online classes. Besides, during the lockdown period at home, both male and female students were struggling with financial problems as well. Some of the female students accepted that they did not have conducive learning environment at home and they were assigned in household chores during the lockdown period, consequently, their studies were adversely affected and left them into dejection and despair. Since online teaching-learning in pandemic was a new experience for both teachers and students and therefore they pointed out about the stressful situation they were involved in. But they appreciated the initiative taken by the university administration regarding online counselling services with the help of the department of psychology and department of social work for the sound mental health and well-being of the students.

Online teaching is a rather exciting concept of teaching for Indian teachers in general. Initially, there was a feeble attendance, but subsequently, its' race gained momentum, and the students were comfortable in attending online classes. Due to not following the time table as in regular classes, sometimes the timing of online classes clashed with other faculty members were reported by the teachers of various departments. Additionally, teachers accepted that they were unable to resolve the doubts of students completely and fulfil students' satisfaction level due to the varied challenges faced by them in the initial stage of online teaching-learning.

Few moot questions raised by the teachers and students while interviewing them regarding the relationship that should be established between qualitative and quantitative aspects of online education. Indeed, they wanted to know about the quality and quantity of delivery of online instruction and online learning behaviour of students regarding online teaching tools. In the words of one faculty member:

“there is a lack of information regarding the perception of students' learning requirement about online video tutoring and other online teaching tools to be used for teaching in a distance mode. Whether students found online teaching tools sufficient enough to comprehend the theoretical portion of the course curriculum, or they were just using them as a mandatory online learning medium.”

Discussion

This paper intended to study the perception of teachers and students on the online teaching-learning process during the COVID-19 lockdown period. While keeping the theoretical lens at the base the research provides varied perspectives on the challenges facing online teaching-learning today. The mixed-methods study examined perceptions of teachers and students keeping at Mizoram University in context. New insights come to the forefront while understanding teachers' and students' perceptions about the new trend.

It is found that University's initiative for online teaching-learning mode of instruction commenced through the instructions received from UGC and MHRD under the Government of India. The same readiness was shown by the Chinese government under the policy of “Suspending Classes Without Stopping Learning” to continue standard online teaching-learning activities during the period of COVID-19 situation of uncertainty (Zhang, Wang, Yang, & Wang, 2020). University's preparedness was geared up in respect of techno-

academic blending to a greater extent. Three relevant stakeholders, namely, academicians, technicians and students, started working in tandem to experience and utilize the transition. Students faced specific problems like connectivity and video issues due to the remoteness of their location and could not compromise the quantum of time required for machine learning.

Again, several available online teaching-learning tools like Zoom, Google Meet, Facebook and YouTube streaming available for both teachers and students were put to need-based use. Most of the teachers were trained by institutions who gained hands-on experiences. The differences between online and face-to-face mode of teaching could be deliberated during the training. It was an arduous task for them to use new instructional strategy. At the very onset of the lockdown, teachers intended to use WhatsApp, Email and telephonic conversation for imparting teaching. But gradually, as the lockdown period went on being extended from time to time, WhatsApp, email, and telephonic conversation proved inadequate. Teachers were given training on MZU-LMS and were made to transact teaching. In due course, other online platforms were explored. Teachers and students started installing online learning platforms such as Zoom, Google meets, Telegram, LinkedIn learning, SoloLearn, Udemy, and many more to widen their academic exposure and understanding.

While the change was underway, yet the majority of the teaching faculty members were still found themselves using WhatsApp as a mode of online curriculum transaction. The reason attributed was simple, teachers were accustomed to using WhatsApp in day to day life and also suitable anytime for students. Additionally, due to the slow internet connectivity, teachers agreed to have been predominantly dependent on WhatsApp instead of uploading and downloading study material on MZU-LMS. Teachers unanimously opined that orientation programmes and workshops were found useful to get along the newest modes of usable online teaching-learning. Some teachers uploaded readable lecture handouts, and others gave full reference books, for reading. Preparation of handouts required extra work which some teachers were not ready to do. Teachers used their freedom as an individual course instructor was autonomous about imparting instructions, setting questions and final award of marks.

Teaching transactions went on online without fixing the accountability on the teachers regarding the exact online platform used by them. Since students were returned to their home town located at remote rural setups without 4G internet connectivity or broadband services and uninterrupted power supply, there were compatibility issues with regard to two-way

interaction. Complains received from teachers and students were more than regarding adaptability.

Research findings of Sahu (2020) advocated proper counselling services provided by the University in order to maintain the mental health of students in this pandemic which support our findings that for sound mental health and well-being of students, counselling services is needed and thus provided by Mizoram University to overcome their stress. After the cessation of face-to-face classes, students faced several challenges such as socio-emotional imbalance, personal adjustment to daily life activities at home, financial burden (UNESCO IESALC, 2020) and others to overcome the adverse side effects of the isolation period.

Qualitative findings corroborate the findings of Brandon (2020) that efforts should be made to provide free-to-access online educational resources to students so that they could utilize their time in the best effective manner during the lockdown period. “Many classroom teachers are now trying to understand the ins-and-outs of distance learning for the first time and looking for free online resources for schools” (National School Choice Week, 2020) which support the perception of our university teachers who also advocated for free access to online teaching-learning resources. However, it took some time before getting used to the new mode of online teaching. University did manage to cope up with the situation at par with any other institutions of this kind. To make the e-content more useful works like reporting are done the presentations and delivery of instruction need to be well prepared. There have to be some brainstorming questions coming in between during delivery content to avoid monotony. This is also asserted by the Zayapragassarazan (2020) who emphasizes on flexible learning, a learner-centred approach which provide students with a variety of learning choices to make learning outcome useful and exciting. The pandemic taught us that the need of the hour is to prolong and sustain the online education at the situation like COVID-19.

Teachers used to get regular feedback from students about the positives and negatives of online teaching transaction and continued to work until the desired quantum of student’s satisfaction. Mizoram University used to use MZU-LMS portal and official website of the university for getting students informed on a regular basis. Students and teachers of the University are informed regularly regarding examinations and other academic events by the authorities through emails and University’s online messenger group.

Data from this study reveal that there has been a greater realization of the time-bound relevance and criticalities of online teaching-learning mode during the lockdown period. This corroborates Lim's (2020) finding that even though efforts were made to connect with the students through some digital tools using online teaching-learning platforms without setting some basic features in advance can become agonized experience. One troublesome issue was brought in a notice by the teachers that conducting online practical classes during the lockdown period proved difficult because it required systematic demonstration of the whole process in the presence of the students.

As a time-suited gap mechanism for meeting the demands under COVID-19 pandemic, online teaching has been implemented as a viable alternative well within its limits and limitations. It is a moot question whether it can be effective in future or not. As of now, it is proved useful with the evaluation of student performance recently. It may take time to realize how the panic attempts of online teaching-learning meet the need of net balance of aggregate consequences. Finally, there is a dire need to bridge the gap between the *haves and have not*, remote rural and urban affluent as students come from different socio-economic backgrounds and applying the same pedagogical approach. Non-understanding of the individual differences of students may result in biased conclusions specifically as online teaching-learning mode, which is in infancy here, may not meet its desire end.

Conclusion:

Liberalization, Privatization and Globalization of education has been deteriorated remarkably due to limited mobility and limitedly confined exchange programmes of academic activities among the countries during the COVID-19 lockdown. The third world countries are facing policy paralysis in handling the sudden shifting scenario of educational planning, management and organization during this pandemic with their fractured technical infrastructure, academic incompetency and lack of resources; especially among them, low and middle-income countries would suffer the setbacks most as they were already running out of finance (Thomas, 2020). But noticeably everyone must learn to live and survive with the present crisis as it is the beginning only; in the long run, no can afford the negligence towards digital transformation in HEIs. To develop multimodal approaches to achieve course content objectives for better learning outcome can be a better idea to deal with the complexity of online education. Undauntedly, the governments must ensure the availability of reliable communication tools, high quality digital academic experience, and promote technology-enabled learning for students to bridge the disparities originated in the education system

before and after COVID-19 catastrophe which is also inevitably necessitated for uninterrupted learning. Few steps should be accounted in the wake of this pandemic; to develop such a curriculum that reflects the perceptible change in the content knowledge and learning experience of students as well as enable them to think critically.

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Competing interests

The authors declare that they have no competing interests.

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