

Forced Adaptation To A Pedagogy: Changes In Teacher' Perception Of Online Teaching

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Abstract

The COVID-19 pandemic and the measures initiated by the authorities to curb the pandemic have affected all spheres of society. Education was one among them which had to move to the new normal right from the beginning. This resulted in the new pedagogy of 'Online teaching'. Many studies were conducted over these years on the concerns of teachers and students in adapting to this new pedagogy. However there are hardly any studies that reflect the change in teachers' perception of online teaching after continuous usage. The present study captures the change in teachers' perception of online teaching among the college teachers in South India through focus group discussions. The findings of the study reveal that there is a substantial change in the perception of teachers in adapting technology for teaching due to the continuous usage and has given way to the development of teachers.

Keywords: COVID-19, online teaching, pedagogy, teachers' perception, focus group discussions

Introduction

Year 2020 have given us a new way to live, learn and work. Due to COVID-19 pandemic national emergency was declared by most of the countries in early 2020. Various measures were initiated by governments of all countries to curb the spread of the virus. Nationwide lockdown, closing of offices and other commercial establishments, shutting down of schools and educational institutions and uncompromising social distancing practices were some of these measures. As per UNESCO observation, 191 nations had put school closures into practice affecting more than 90% of the world's learner population (UNESCO, 2020). As 'necessity is the mother of invention', in this context necessity was the mother of adaptation: Adaptation to a new teaching pedagogy. This was an ideal opportunity to comprehend the total capability of technology for teaching and learning.

COVID-19 pandemic has made the educational institutions and schools to move to an online mode of teaching. Classroom face to face learning got replaced with Microsoft teams, Google meets, Zoom and others. Teachers and students were exposed to these online platforms over a fortnight. Directions and protocols were given to teachers, students and parents to ensure the smooth adaptation to the new mode of learning (Saxena 2020). The shift to this pedagogy was rather very

fast. Although conventional pedagogical techniques like, a Smart board or PowerPoint are generally acknowledged and used, the genuine incorporation of technology integrated teaching for educational intentions is another level (Ertmer & Ottenbreit-Leftwich 2010; Romeo, Lloyd & Downes 2012). For any new method of teaching, training of the teaching community is very important. While these training programs were fundamental, due to the unpredictable circumstances, imparting training did not take place.

Teachers had to begin instructing on the online platform within a brief time frame, despite the fact that most educational institutions, their advanced learning environments, and their back end support systems were not completely prepared. The short preparatory period because of the COVID -19 pandemic has left numerous teachers ill-equipped (van der Spoel et al. 2020). This prompted a significant burden on the teachers. A main consideration in teacher professionalization with regards to the adaptation of technology is the teachers' individual perception of the same. As per Blignaut et al. (2010), teachers need to have indulged the 'deep rooted learning' demeanour, to completely draw in with ICT-rich schooling. All in all, an open demeanour is required in the process of adapting technology. So there is a lot of importance in studying the perceptions of teachers.

The curriculum reaches the students through the teachers and teachers influence what is taught and learned in the classroom (Brophy 1982; Frymier & Houser 2000). In that regard, teachers are the most appropriate participants to the study about perceptions of online teaching. Therefore it is important to study about teachers and their perceptions at this critical point of time, where the new pedagogy have been in use for more than a year. There have been many studies about teachers and students indulged in the new pedagogy of online teaching. This study is different from the previous studies, as the study tries to understand how these perceptions have changed over these years. The aim of this study is to understand if there is a change in the teachers' perceptions with respect to their online teaching experiences and encounters in the context of the COVID-19 pandemic in South India. The study tries to understand whether, the experiences of teachers at the beginning of online teaching have undergone a change, and this is the topic of discussion. The study is important because it explores the change in teachers' perception and a realistic vision of how the online teaching which was a forceful adaptation has taken a form. It is very important to understand the current status of online teaching in a developing country like India, because it provides practical implications of how far the teaching community has been developed and adapted to this new teaching pedagogy. This can also benefit the entire educational system and the teaching community in the post COVID-19 days to come.

Background of the study

The COVID-19 pandemic handled the education framework in peril. Teaching on the online platform is altogether different from traditional pedagogy, the move from traditional instructional method in higher education to the online system demanded the teachers to bring up with a new technology enabled instructional method. On this background Jandrić et al. (2020) accumulated eighty one textual testimonials from eighty four authors from different countries to have a real life understanding of the situation. It quoted the difficulties of a mathematics teacher who miss his pen and paper discussions with his students, the absence of teacher student human contact, the greater risk of students with pre-existing anxieties, the twin responsibilities of teachers when they work from home and the network issues which are very common in the online platform. Contrary to this there were teachers who already use online teaching as a means of instruction for courses like

graphical designing and animation, they had no issues in shifting to the learn from home pedagogy.

During the COVID-19 pandemic, educational institutions have strived to discover intends to guarantee students can proceed with their studies in spite of the emergency and social distancing. This has made an exceptional push to online learning. Much of the time, to guarantee the continuation of studies, educational organizations have continued to discover convenient solutions with certain education applications. This has also opened chances for dealers' market (Teräs et al. 2020). Though the continuation of education and curriculum were important, there were different opinions from the stakeholders of education in this regard. In light of the National ICT Program, new programs were introduced to the teacher's training curriculum to prepare the teachers to teach according to the program's objectives. The pandemic has accelerated the pace, need, and uptake of technology in teaching. The sudden necessity for online teaching revealed the need for digital readiness. Reports from schools indicate that many teachers were not ready and did not have the relevant digital literacy to change their teaching methods (Peled 2021). The lack of previous experiences in virtual education, the lack of preparation by their teacher education programme, and the possible lack of expertize contributed to making this experience more challenging and frustrating. (Sepulveda-Escobar & Morrison 2020). There are theoretical, methodological, practical and societal challenges that concern teaching mathematics with technology in its broadest sense (Clark-Wilson, Robutti & Thomas 2020). The lack of physical resources and scepticism in the use of technology are two major factors for under use of technology by the teachers, therefore measures should be initiated for availability of physical resources and professional development of teachers should be structured to strengthen confidence in technology use (Thomas & Palmer 2014). The students and lecturers should be trained and retrained to become competent and up-to-date with the new normal. (Omodan & Ige 2021).

The move to online teaching raised significant difficulties for educational institutions for getting sorted out assessments and guaranteeing the opportunities for students to advance in their studies (OECD, 2020). Electronic examinations (E-exams) were presented as an effective method of evaluation with specific significance to give quick tests and results, which is viewed as challenging for teachers when the strength of the class is high (Alruwais, Wills and Wald 2018).

Right now, E-exams are viewed as a vital component in online education. In addition to the general challenges of remote assessment, academic dishonesty was something that affected the integrity of the learning process. The main challenges identified in remote assessment were academic dishonesty, infrastructure, coverage of learning outcomes, and commitment of students to submit assessments. To minimize academic dishonesty, preparing different questions to each student was found to be the best approach. Online presentation was also found to be a good option to control academic integrity violations. Combining various assessment methods, for instance report submission with online presentation, helps to minimize academic dishonesty since the examiner would have a chance to confirm whether the submitted work is the work of the student (Guangul et al. 2020).

From the available literature we can find various terms related to teachers perception of online teaching like Teachers' attitude (Saxena 2020), teachers unpreparedness (van der Spoel et al. 2020), teachers influence on the classroom (Brophy 1982; Frymier & Houser 2000), teachers confidence in technology (Clark-Wilson, Robutti & Thomas 2020), teachers digital illiteracy (Peled 2021). These terms are confined to teachers' subjective perceptions of online teaching pedagogy. The study is related to the 'Subjective theory of teacher' (Marková 2013) to describe the change in teachers' perception of online teaching. The term 'subjective theories' came into existence in the German speaking countries from the eighties last century To be able to operationalize the subjective theory, we must determine the subject and the object. In this study, the subject is the change in teachers' perception and the object is online teaching.

Methodology

The study uses a qualitative research approach to bring forth the change in perceptions of the teaching community towards the online teaching practices in the COVID-19 pandemic scenario. A qualitative study is the most suitable approach to understand a central phenomenon and draw meaningful findings (Creswell et al. 2007). Focus group discussions were conducted among the teachers to gather information. Focus group discussions are group conversation or discussion held among the participants in a qualitative study. Focus groups as a research method originated in the work of the Bureau of Applied Social Research at Columbia University in the 1940s (Bloor 2001).

It facilitates the participants to share their views, ideas, perceptions and feelings regarding a particular topic that is being conversed. The information gathered from this group conversation or discussion is used to explore the theme of study. In addition to uncovering the views, ideas, perceptions and feelings of the participants, the gathering conversation was additionally coordinated to incite a discussion among them on their current methods of preparation and showcase their exercises with and through the advanced technology.

Focus group discussions were initiated among the teachers in South India. The discussions were executed in four group of teachers, namely male teachers below forty five years, female teachers below forty five years, male teachers of forty five years and above and female teachers of forty five years and above. The participants for this study was selected based on a purposive non probability sampling that is often used in qualitative research (Deliens et al. 2014).

Table 1: Demographic information of the participants in the various groups

Group	Demographic information of the participants
1	Male participants below 45 years
2	Female participants below 45 years
3	Male participants of 45 years and above
4	Female participants of 45 years and above

The discussions were conducted on the online platform and a few telephonic conversations also took place prior to the focus group discussions. The discussions were initiated by the author after informing the participants about the need for the data and the context in which the data will be analysed and executed. The number of participants in each focus groups were restricted between eight and ten as this was the ideal size of participants in a focus group discussion. A set of semi structured questions were used to get a full picture of the topic of discussion. The questions were structured using the available literatures and testimonials of various academicians. While the semi-structured discussion offered some control over the data gathered, it was taken care to protect the spontaneous flow of the discussion, allowing the participants to express their perceptions freely. A compiled and detailed report of the discussion by the participants was prepared by the author. Analysis of data was guided by the semi structured questions and conducted by the inductive approach (Boyatzis 1998). This was the methodology used to bring out the findings in this study.

Discussions

According to the recommended focus group methodology, the semi structured questions have been used to segregate the information and analyse the same (Krueger 1997). The semistructured questions was developed to identify the changes in teachers' perception about online teaching. The perceptions have been categorized into perceptions about the online teaching, perceptions about benefits to student community and perceptions about institutional support in online teaching pedagogy. The change in these perceptions were the topic of discussion. The findings have been discussed based on the key elements of perceptions which were included in the semi structured questions.

Table 2: List of various perceptions that were discussed

Perceptions about teaching in online teaching pedagogy	Perceptions about benefits to student community in online teaching pedagogy	Perceptions about institutional support in online teaching pedagogy
Ambiguity	Syllabus completion	Adequate training
Fear of using technology	Student assessments	Support to students by institution/ university
Familiarity of technology	Students with special needs	Availability of physical resources
Network issues	Teacher student contact in classroom	Technical support and innovative practices
Preparation time	Online examinations	
Distractions while working from home		

Ambiguity in the mode and its effectiveness

All the four groups that took part in the discussions had this particular perception in common.

'One fine morning we were asked to keep aside our chalk and move to online teaching.

The uncertainty that we had in the beginning was about everything around.' (Participant, Group3)

'Things were not gradual, it was all of a sudden.' (Participant, Group2)

'Now we know what and how it is, though not experts.' (Participant, Group1)

There was a lot of ambiguity in the beginning of the online teaching practices. The pace of the shift was one the reason that increased the ambiguity. But the ambiguity was fixed within a few weeks. And right now, teachers are certain about the online teaching practices, there are still scopes for improvement.

Fear of using technology in teaching

'I felt like giving up the job, that fearful was the situation when I got to know that I had to adapt technology in teaching.' (Participant, Group3)

'The trauma that I had to undergo was the worst in the last thirty five years of my teaching career.' (Participant, Group4)

The comments that were given by few of the participants of Group3 and Group4 showcased the fear of the participants in the new pedagogy. Though the other two groups did not express a fear of using technology, they expressed the fear of outcome; as to how far this is going to be effective. None of the participants expressed a fear aspect in online teaching at the moment.

The perception which was once their 'trauma' is now their improvised pedagogy. Fear of using technology in teaching is subject to individual teachers' perception about the same.

Familiarity with technology

With regard to familiarity with technology, majority of the participants were familiar with the technology like usage of smartphones and computers.

'We used to have PowerPoint presentations and smart classes but that was not online teaching in a full-fledged manner.' (Participant, Group1)

'Rather than checking mails I rarely use my laptops', 'I am used to online banking transactions and purchases.' (Participants, Group3)

'I am a big zero when it comes to technology.' (Participant, Group4)

Only the participants in group 1 and group 2 used technology in the teaching practices. From the available literature we understand that online teaching is a level higher than smart classes (Ertmer and Ottenbreit-Leftwich 2010). Group3 and group4 expressed similar perceptions in the familiarity with technology, but none of the participants used technology in any form in the teaching practices. There emerged a group of technology averse participants in this group who claimed themselves 'big zeros in using technology'. Over the year even these big zeros are adapting technology in the teaching practices, resulting in the change of perceptions of all participants of the study.

Network issues

The network issue was a major problem in the teachers' perception of online teaching.

'Even if we are prepared for the class, the network connection should also allow the class to actually happen.' (Participant, Group1)

'Bandwidth and internet speed were something that was not given much concern until the start of online teaching.' (Participant, Group4)

'It took a lot of time to settle on the network issues and make the online teaching happen.' (Participant, Group3)

'In the beginning if there were any network issues, the only option for me was to stop the class, but now I know that switching off the video or closing a few tabs may help to fix the issue.' (Participant, Group2)

As the dependence on internet began to increase, there were a lot of issues. From the discussion, it was understood that network issues still persist but the participants perception to it has changed over the time. Rather than giving up, they started to get the things fixed and make the online teaching happen.

Preparation time

Participants of the study were a mix of teachers offering theory papers as well as problem papers. Theory papers were delivered in the online live sessions using PowerPoint presentations and recorded sessions were used to deliver problem papers. Preparing PowerPoint presentations demanded time for finding the correct template and making it attractive. Checking the authenticity of various websites was also time consuming.

'The traditional teaching method was rooted in us, handling a one hour session did not require much preparation but in online teaching things are different.' (Participant, Group4)

'To record a forty five minutes sessions, it was a two hours activity for me, I even had an experience of recording a session three times in the beginning since it was completely new to me.' (Participant, Group3)

'We started online teaching with odd semester and right now it is even semester running, so we have to prepare fresh materials but for the next semester

we already have the materials of the odd semesters with us, we just have make some editing.' (Participant, Group1)

'I insist on sending the recording of the meeting of my accountancy class to the students, because this will help them in further reference.' (Participant, Group2)

But now things are different for all groups of participants. Participants of all the groups agree that the preparation time has substantially reduced and things will be better in the next semester as the materials are already available with them. Participants in group1 and group2 were using both online and recorded sessions simultaneously from the beginning. But Participants in group3 and group4 depended more on recorded sessions as they were not confident to host a live session. But now all the four group of participants are hosting live sessions for theory and problem papers.

Distractions while working from home

'Working from home was double responsibility, there were a lot of distractions while working from home.' (Participant, Group2)

'It is an unavoidable part of working from home, but since these days we host the sessions from college there is a lot of difference.' (Participant, Group2)

All of the participants of group2 (female teachers below 45 years) expressed this opinion. Even after so many months of teaching from home on the online platform, for the participants of group2 the distractions remain the same. None of the participants from other groups shared this opinion.

Syllabus completion

'How? Was the question in the beginning, once it was sorted out things became very easy' (Participant, Group1)

'It took about a month to decide on the platform and make the online teaching happen; syllabus completion was very fast.' (Participant, Group2)

'I could easily complete the syllabus by online teaching, but did it benefit the students is yet to be known.' (Participant, Group3)

In physical classes a lot of time is consumed in marking attendance and managing the class, both

these were not needed in the online platform. (Participant, Group4)

All the participants of the study shared the common perception with respect to syllabus completion. Participants of all the groups agreed that syllabus completion was much faster than the physical offline classes as there was no question of managing the class.

Student assessments

Submission of assignments through Google classrooms, seemed very convenient to trace the defaulters and also use of paper could be reduced. Internal exams were conducted on the online platform and all the participants doubted the honesty from the part of the students. End semester exams were conducted in the pen and paper mode, very few students have come up with good performance.

‘In an examination hall of 30 students, 15 of them left the hall after one hour. Just two students were there throughout the allotted time of the exam. So what has been delivered to the students is doubtful.’ (Participant, Group2)

‘The Bright students will turn brighter and benefitting the entire class alike is doubtful.’ (Participant, Group4)

Participants of group2 and group4 opined that students benefitting from the online teaching is doubtful, but can claim syllabus completion. The students who are very keen in studying, use multiple means and they succeed. Others students might not have benefitted. Assessing the students is very difficult. Participants also claimed that online classes will benefit only if the students feel the need for the same. Teachers’ perception is very subjective in this regard.

Students with special needs

Students with special needs require various support measures throughout the teaching process and also in the environment of teaching. Their problems can be easily understood and solved in a physical class.

‘Providing remedial classes and supporting students with special needs is not possible in the online teaching.’ (Participant, Group2)

This has come out as a major problem in the new pedagogy. The online environment is encountering

problems in full inclusion and active participation of the students with special needs as well as students with comparatively weaker academic record.

Teacher – student contact in the classroom (human contact)

All the participants are of the opinion that there is a lot of importance of human contact of teachers and students.

‘I can learn from the eyes of my students, how far my class reached them, this is not possible in online teaching.’ (Participant, Group2)

‘There are a few students who make personal telephonic conversations for clearing doubts, just three or four from a class of fifty. This is not the scenario in a physical class, there I walk between the seats and see how far my students are with me. This one aspect cannot be replaced in the online teaching.’ (Participant, Group4)

Online teaching restricts the human contact of teachers and students. As far as the first year students are considered even after the completion of an entire year they are still ‘fresher’ to the college as well as teachers. No personal attention or ‘reading from the face’ methods are offered as the teacher student contact is not there in the online platform. Even after a year of online teaching, teacher’s perception about the lack of human contact remains the same.

Online examinations

‘Strongly doubt the honesty on the part of the students in online exams.’ (Participant, Group1)

‘Students could easily blame the network and switch off the cameras, nothing that we can do about it.’ (Participant, Group3)

The participants of all groups were equally unhappy with the online examinations. Participants opined that online examinations will work when it is a multiple choice question examination with a very limited time, so that students are left with no chances of dishonesty. Few of the colleges also came up with the idea of conducting online examinations from college, but it was not feasible for colleges with larger student strength and limited physical resources. All the participants had a common concerns about online examinations and its effectiveness.

Adequate training

‘We were asked begin online teaching after giving a half day training about the various platforms, this was inadequate to cope with the new pedagogy.’ (Participant, Group1)

‘No training was provided, it was self-training.’ (Participant, Group2)

‘I had to sit with the young teachers and my children who used these platforms for holding meeting as part of their profession.’ (Participant, Group3)

Participants of Group1 and Group2 depended on YouTube videos and it a trial and error method for them in the beginning. Group3 and Group4 depended on the younger colleagues for getting themselves trained. But now the participants themselves enrol for various workshops and the institutions are also providing workshops by experts in this field. The participants of all groups believe there are still chances of improvement. Teachers of the younger generation find it easier to adapt to this online teaching.

Support to students by the institution/ Universities

Universities have come up with various steps in the favour of students like leniency in the attendance requirement for appearing for the exam, providing more options in the question paper and liberal valuation.

‘More leniency means greater harm to the students, students tend to take these online classes without seriousness.’ (Participant, Group3)

Participants of Group3 and group4 opined that this has created more harm on the students. Students tend to take online classes without seriousness.

Availability of physical resources

Lack of physical resources was a problem in the beginning. But the institutions have come forward with various methods to make itself and the students equipped with necessary physical resources. Few of the colleges also took subscriptions to online platforms and also encourage students to register for online courses using the various platforms like Coursera and National Programme on Technology Enhanced

Learning (NPTEL). Universities have also come up with purchasing of softwares for the efficient conduct of examinations.

Technical support and Innovative practices

Previously the institutions were not providing room for innovative practices as there were lot of limitations of resources.

‘I still remember the difficulty in finding a technical assistance from college for a faculty development program. But now things are different.’ (Participant, Group1)

‘The need was not felt before, but now it is the need of the hour.’ (Participant, Group2) The pandemic has given way to improved technical assistance and encouragement for innovative teaching practices.

As a concluding discussion in the various focus group discussions, the participants were asked: Would you have gone for this ‘Online Teaching’ if not COVID-19 pandemic situation?

‘It would have taken place as it was a required adaptation, but at a later stage, not in the near future, institutions never felt the need and it was not encouraged.’ (Participant, Group1)

Participants of group1 opined that the COVID-19 pandemic have given an opportunity to adapt to a required improvement in the pedagogy and the institutional support will help them to take it forward.

‘Always wanted to adapt technology in the teaching methodology, but as the need was not felt, never bothered to equip ourselves, there were limitations in our technical knowledge, availability of resources and considered technology adaptation as an extra time consuming method over and above our regular work.’ (Participant, Group2)

Participants of group2 were happy that the current scenario has given them a chance to learn and adapt the online teaching practices.

‘Never thought such an adaptation will happen in our career, have been teaching for about thirty years now, and might go for another ten more years if health permits. I never felt that online teaching was a necessary adaptation.’ (Participant, Group3) ‘Never knew that we could make a transition, but it happened.’ (Participant, Group4) Participants in both group3 and group4 agree that COVID-19

related school closure was the only reason for them to adapt to this pedagogy. They also opined some of these practices will be taken forward even when physical classes start operating. Subjective theory of teachers is underpinned throughout the study on change in teachers' perception. All the perceptions that were discussed in the study substantiates the point that there have been change in the teachers' perception about online teaching over the period of time. The pandemic has shown that there is a possibility of adapting online teaching as a new pedagogy. Teachers' perception about online teaching have changed more positively than what it was years back when the online teaching started. But the teachers' perception about students' assessment and the benefits to the students are not very positive.

Implications of the study

The pandemic has given a new way of teaching. It was an opportunity to develop a new teaching pedagogy among the teachers. Though the forceful adaptation created discomfort and disappointment in the beginning, it has given way to an improvised pedagogy. The pandemic has shown us the possibilities of online teaching. The COVID-19 pandemic on a global scale has shocked teachers at all levels and at the same time inspired them to find solutions to problems they have not encountered before (Flores & Swennen, 2020). Another important insight is that academic administrators were tempted to do patchwork with incremental moves on technology and training (Pandit & Agrawal, 2021). All the stakeholders of education should be in a position to learn from this situation. Failure to learn from this pandemic will risk the students, teachers and the education system. To take online teaching forward teachers should be prepared about the advantages and value of online teaching. Further, if there are any teachers who don't comprehend the usage of technology, they should be motivated to do so. Those teachers who are leading classes online could persuade their colleagues to use technology enabled teaching pedagogy. Proper training of the teaching community to integrate teaching with technology in faculty development programs and also in teachers training curriculum have a positive impact on teachers' use of technology in teaching. Teachers should be given opportunities to excel and continue in the online teaching pedagogy. As we adapt to this ongoing pandemic, it is important to build flexible and resilient models of education that enable continuous adaptation to different phases of the 'new normal' (Gupta & Garg, 2021). For the fruitful adaptation of technology into

teaching, it is important that all the stakeholders of education like the government authorities, institutions, teaching community, students and parents to work hand in hand.

Conclusion

The adaptation of online teaching was not out of choice, it was rather a compulsive transfer from the traditional pedagogy to an exclusive online mode of teaching. Above all this was a swift consequence of the COVID-19 pandemic. Teachers were subject to various difficulties when they were forced to move from the traditional method to the online method of teaching. Creating content that covers the educational plan and engaging students were the greatest hurdle. A usable and resourceful system is required to convey online conveyance of classes.

Multiple technical issues like downloading issues, installing applications, low internet-speed, issues with login credentials, issues with voice and video, etc added to the difficulties in adapting technology to teaching. The initial stages the teachers' online teaching experiences were subject to all these difficulties. Ambiguity, unfamiliarity and the fear of adapting technology slowly gave way to a new pedagogy that was accepted by the teachers as well. The focus group discussions have brought out that the perceptions of teachers have undergone a change. Even for the teachers who feared to adapt to the online teaching pedagogy they started realising it is possible. They believe that they can excel with adequate training and timely development programs.

The study can be concluded that the urgency to shift to the new online teaching pedagogy has made the teachers to make a new adaptation. This adaptation took place despite of providing any proper training programs or technical support. Teachers were overwhelmed with responsibilities. The perceptions of the teachers at that moment was guided by the uncertainty and unfamiliarity of the online teaching pedagogy. Over the time there has been transitions and changes in this perceptions because there were support and assistance from all stakeholders of education. The broad utilization of open learning applications, online courses from various national and international universities and institutions, web-based media and meeting applications during the COVID-19 lockdown, has opened up the possibilities for the teaching community, further empowering them to get the essential instructive data sources, preparing them with abilities in any event, during the current

pandemic circumstance. This will have a major effect among the teachers, methods of teaching and learning process in the days to come.

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