TOWARDS INVESTIGATION OF ISSUES AND CHALLENGES IN FACULTY TRANSITIONS TO ONLINE INSTRUCTIONAL ENVIRONMENT AMIDST COVID-19: A QUALITATIVE STUDY

Dr. Jyoti Joshi
Asst. Professor, Lal Bahadur Shastri Girls College of Management (Affiliated to Lucknow University)
Email id: jyotijoshi.711982@gmail.com
Orcid No. https://orcid.org/0000-0003-0876-4235

ABSTRACT
The world has embarked upon a golden age of technology. In education, as in every other sphere of life, technology plays an important role. Unlike other countries, the use of technology in the Indian education system has been rudimentary, but the closure of universities and colleges to check the spread of malicious COVID-19 has catapulted the virtual learning into the spotlight in India. The present paper aims to investigate the challenges that higher education faculty experienced while transitioning from an offline teaching environment to an online instructional environment during the lockdown. A qualitative study was carried out with 20 faculty members teaching in higher educational institutions. Telephonic interviews were conducted to collect the data. Based on the data analysis, six challenges are identified and lastly few feasible solutions are being proposed to deal with them.
Keywords: COVID-19, Virtual Learning, Higher Education, Faculty Challenges, India.

INTRODUCTION-

Inertia.. a well-known concept of physics can be used to dictate not only the physical but also the mental tendency of human beings. This tendency of restraining change is evident in every mundane activity they carry out. For instance, taking the initial stage of lockdown into the spectrum, everybody restrained it even though it provided them with much-needed rest and safety. Although people don't welcome change due to the uncertainty of its consequences, the current global crisis, which has made even our future existence uncertain, demands for bringing change. This worldwide pandemic, namely, COVID-19 has jeopardized every sector of the economy. The irony in such prevailing circumstances is that the only way to bring some sense of stability and certainty is by adopting a few necessary changes. Like other countries, the education sector in India was the first to witness the shutdown in an attempt to reduce the spread of ferocious COVID-19. Since education is a prime contributor to the economic and social development of a nation, the education system of India needs to incorporate few changes in its teaching pedagogy approach to ensure continuity of learning that has come to a halt with the necessary social distancing. As digital education is an easy way to cover up this distance, it is a relief that the Indian government has already taken various initiatives like Swayam, Swayam Prabha, National Digital Library, NPTEL, with "Bharat Padhe Online" being the latest one to encourage online education in the country. Though these web-based learning platforms were present for quite some time, chalk and talk is the most preferred mode of teaching. However, this turmoil has forcibly brought e-learning into practice prominently. If this crisis-driven experiment with digital learning would be able to gain a foothold successfully, no wonder it will result in the creation of a new advanced hybrid education model that will transform the education system of our country. That education system would be very flexible and impregnable enough to cope up with the future unfavourable times. To turn this vision into reality, we need to shape our education system accordingly. Since teachers' are one of the most relevant pillars of the educational system, their experiences of teaching through an entirely different instructional environment during lockdown would be very instrumental for MHRD in designing helpful support and training schemes. Moreover, faculty members' substandard shift to online teaching mode creates negative impacts on the students, such as limited communication from learners to a teacher (Beebe, Vonderwell & Boboc, 2010) and poor feedback to enhance learning outcomes (Jordan, 2012). Buckenmeyer et al (2011) stated that post-secondary administrators, being short of information about the needs of faculty members for a successful transition to the online instructional form, are unable to offer plausible support and training courses. So, it is the need of the hour to explore the challenges that faculty members' encountered in the transition to a digital form so that their transformation could navigate smoothly. In this context, this paper presents with the following research question:

"What problems did the faculty members face on switching to digital teaching during the lockdown period?"
The remaining part of the paper is into five sections. Section 2 states the objective of the study, followed by the section 3 describing the research methodology used, followed by the section 4 highlighting the problems faced by faculty members while teaching digitally. The second last section offers a discussion of the study. The final section presents the conclusion.

OBJECTIVE

The core objective of this paper is to investigate the higher education faculty members' difficulties in transitioning from an offline teaching environment to an online instructional environment during the lockdown.

RESEARCH METHODOLOGY

This study employed a cross-sectional qualitative study design. Faculty members teaching in higher educational institutions in tier two cities were interviewed telephonically from 4th April to 12th April 2020. They asked to share the difficulties faced by them in teaching electronically. Faculty members of Lucknow and Kanpur contacted for data collection. Interview of a total of 20 faculty members teaching in the department of commerce, economics, or management conducted from the above cities. Convenience sampling was a technique for data collection.

FINDINGS

Few significant verbatim accounts touching upon different challenges of online teaching experiences have been encapsulated in the following table:

Challenge	Verbatim Accounts
Student Engagement	"I have experienced many students chatting instead of paying attention during the class thereby disturbing the focussed students too". "I have noticed few students switching their camera off purposely during the class just so I can't gauge their degree of attention and interest in the topic under discussion". "While I teach, my students listen passively but when I start asking questions to test their understanding of the topic, they either make excuses' about not being able to hear the lecture properly due to breaking up and echo of sound resulting from bad bandwidth at their end or leave the class immediately". "Even after I share videos and other required notes in the Google classroom for reference and discuss the same in virtual classroom, submission rate of assignment is very low. If I quote in figures, only 20% students of my class submit their assignments on time followed by 5% who submit late as per their convenience and rest of them never submit". "Surprisingly, many students of my class often ask me for notes and videos that I already posted on whats app several days ago. It seems to me they don't even download them to read or watch and leave them unattended".
Control over class	"Well...As far as my experience is concerned, I don't find any major difference between virtual and physical classroom except my control over the class. My control over physical classroom is quite good as all the students sit attentively, quietly and stay on time. On the contrary, in my virtual classroom, many of them either attend the class with a casual attitude or join late. Sometimes, few students join when the class is about to get over just for the sake of attendance. These kinds of behaviour impede effective learning".
Technical issues	"It frustrates me as a teacher, when an easy going and smooth sailing class suddenly gets disconnected or freeze in between due to bandwidth problem. Whenever this happens, I, even after putting lot of efforts find myself unable to create the same learning environment and teaching pace after rejoining or resuming". "It is painful to hear students often complaining about not understanding properly what I delivered because of technical issues like breaking up of my audio, echo in sound, delaying in my sound, blur presentation, slow updating of presentation etc." "My files which are lesser than even 140 MB don't usually upload on Google classroom easily and keep processing even after 14-15 hours because of poor bandwidth or other technical issues. I have to cancel uploading and reload it repeatedly until it's done. This situation is really vexing". "Poor bandwidth compels me to ask my students to put off their mikes while delivering lectures. As a result class interaction which holds a great significance gets vanished".

Technical Literacy	"Many times I face a lot of trouble sharing few files/ppt/videos with my students. Often whenever I come across any file, video or ppt while surfing that can be very helpful to my students, I download it. But later at the time of sharing, it just won't open in my device due to compatibility issues. Being technically less sound, it's tiresome for me as I have to poke my head a lot to fix this kind of issue. However, my frustration reaches to its peak when few students still complain about the files/videos/ppt which I had shared being incompatible with their devices."
Technical Acclimation Struggle	"I have been taking physical classes for last 20 years. Hence, conducting classes with zoom app was unpleasant news for me. A teacher is always open to learning but being non tech savvy, I am quite apprehensive about going digital and this nervousness often appears while taking class". "I spent my two days learning how to operate Google classroom and zoom app from one of my technically sound friend when our principal announced to teach digitally. Now I am getting used to of these apps day by day. It is surely a good opportunity for a novice like me though it comes up under unfortunate circumstances". "I have managed to easily learn the basics of the apps employed for teaching through digital mod but sometimes I bump into few problems upon their usage. Luckily, I figure out the solution with the help of few technocrats. It is now like learning by doing for me." "Wow! It is fun taking classes virtually because of the opportunity of exercising the computer skills that I learnt during my school days."
Time and Energy Drain	"I am finding virtual teaching much more exhausting than physical. In physical classroom I used to start the topic and teach simply using my expertise in least external disturbances. After teaching the topic I used to dictate notes directly in the class or provide key points to students and ask them to make themselves on the discussed guidelines. On the contrary, while teaching digitally I need to take care of both academic and technical issues. In virtual classroom I have to repeat points many times due to external disturbances like technical glitches and background sounds and provide students with tailor-made notes too. This is very hectic and tedious." "Since I choose to make my own videos of teaching rather than sharing links of available videos made by others because I know my students' learning capability and needs better, digital teaching is energy draining for me. For a subject like Operation Research, Business Statistics, Concept valuation, Accounts, Income Tax etc, explanation of even a single concept requires at least 20-25 minutes. Making video of them, compressing them keeping in mind the quality and then finally uploading those takes up a large portion of a day. It is very tiring."

Discussion-

i) Student Engagement

Since the dawn of time, the proficiency of any teacher has been assessed by gauging their expertise in their field and the ability to engage the students. Attracting student attention and raising their interest, curiosity, and concentration to involve them in the class has always been an arduous task for teacher fraternity. But, digital teaching has made student engagement even more strenuous by severing a prominent tool that gave teachers an edge - physical interaction.

Various teachers experienced that in the virtual classroom, due to the elimination of physical interaction, all other additional perks supplemented by it like control over the class due to the fear and respect of teacher physical presence, student involvement born out of teacher body language, and way of speaking, effortless monitoring of students' concentration and attention by reading their actions, easy steering of the class instantly by ascertaining students' frame of mind, the impact of disciplined study environment, automatically get suspended.

Recommendations-

Although online teaching makes the struggle of student engagement even more herculean, there are several ways of easing up the process.

Multimedia should integrate into the design of e-content in a manner that automatically attracts students' attention and interest (Almala, 2005). E-content should adopt a tempting and engaging approach of teaching by the inclusion of pictures, colours, quizzes, examples, easy-going language, and explanative short videos. Gamifying techniques should use which award students with points or catchy titles and divide content at different levels ranging from easiest to most tough to allure them into studying through peer competition.

In the case of virtual classrooms, innovative techniques should employ to tackle the problem of mono-channel communication. Rather than being monotonous, the teacher should use captivating ways to bring each student into action and help them keep up with the pace of the class (Juan et al., 2011). Since peer interaction, motivation, and competition have always been ultimately engaging, the practice of 3Cs (create, conceive, communicate) should adopt. In this activity, primarily groups of students formed. Then they are provided with a topic or case study to be discussed and conceived, and finally, they communicate their ideas or thoughts on the given topic/case in the class. In this activity, there is no right or wrong answer and is conducted by the teachers to gauge students' knowledge level of the topic they are about to discuss. It helps teacher design their lectures such that they are easy to grasp for every student, therefore engaging them.

Secondly, to grab student attention, a few minutes at the beginning of the class should be allotted to "recalling session" where different ways should use to check what students remember from the last class. It may include a rapid-fire round of questions crafted by students themselves to ask from each other or a normal JAP (just a point) activity with students of teacher's choice where they have to tell only one point which they can recollect from the last class. It will automatically ensure students' attention in class due to fear of peer defamation.

Moreover, once two or three topics are completed, revision classes should be held unexpectedly to strike on students' memory and help them memorize what has been taught. In this, the teacher may ask students to prepare a few questions to be asked from others thus ensuring both his and other students' engagement in an enjoyable manner.

Other than this, in the presence of a teacher breakout room discussion, open chat room discussion among students on any specific short topic can also be conducted.

ii) Control

Teaching students and driving a car have a lot in common. To drive a car, you need to have control of the wheel even if it's ignited to ensure it goes in the right direction. Similarly, even after student engagement, teachers need to have control over them.

Teachers have realized that digital teaching has obliterated the control that they had over the students in the physical classroom. Discipline and sincerity in students born out of fear or respect for the teacher's presence and impact of the educational environment have completely vanished. Thus, making students' approach to online education very casual. Students have stopped keeping up with the pace of the class, doing assignments or homework, and even studying seriously because they think there is no way a teacher can watch, assess, or control them.

Recommendations

Once teachers employ all the possible ways of ensuring student engagement, they can establish control by using a few simple practices and techniques.

Teachers themselves should exercise behaviour that portrays discipline, class ethics, sincerity, and seriousness so that students can reflect the same behaviour. Teachers should establish and communicate rules and regulations of the virtual class beforehand like the use of a gesture to seek teacher's permission before speaking in the class, no off-topic discussion in the chatbox, formal dressing, sit in a peaceful study environment, etc. Each day, a welcome slide having greeting caption, picture of a quiet and disciplined classroom, and golden rules for the virtual classroom should share with the students until the teacher is letting them in the virtual classroom. By doing so, students will remember and uphold the rules. Besides, involving students in creating a code of conduct for a virtual class, a teacher can increase its acceptability and compliance. To control students with critical and constant uncontrolled behaviour like late submission/non-submission of assignment, disturbing the class by posting useless and abusive messages in the chatbox, late classroom entry, etc. teachers need to go a bit out of the way. They will have to be vigilant and sort out students showcasing such behaviour consistently. Then, rather than correcting them in front of the class, teachers should arrange a personal one on one counselling session with them to reach to the core reason for their misbehaviour. In this regard, a teacher can converse with their parents to explore in-depth. If there are some personal reasons, then they must refer to the counselling department of the

college or any other external psychologist depending on the availability. But if they are misbehaving because they do not understand or catch up on what is being taught in the class, then teachers should themselves gather such students and arrange an extra discussion class separately for them.

Such an empathic approach will lead to a more positive response and a better teacher-student relationship. Therefore, a teacher should prefer to take punitive actions against the students like marks cut, barring late class entry, or removing them from the virtual class in the end when he discovers students are consciously and deliberately showing deviant behaviour.

Additionally, parent-teacher regular communication should be held to monitor student sincerity and develop proper control over them.

These friendly but firm approaches can enforce control in online teaching.

iii) Technical issues-

This current pandemic has taught us that uncertainty is inevitable. It has made us realize that we should be fit enough to withstand any unpredictable challenges that our future holds. When taking Indian education into the spectrum, the inclusion of online teaching seems to be a promising step towards ensuring that. Though, lack of ubiquitous technical advancement in India makes it a very challenging and strenuous task. The internet launched in India in 1995. Currently, we are living in 2020. It's deplorable to know that still several remote and rural areas are technically deprived and face constant network and low bandwidth problem. Not only them, but also many tier-2 cities struggle with low bandwidth situation. All these issues are supplemented by unavailability of technical resources at student's or teacher's end in some of these areas. Moreover there are many educational institutes themselves that are financially humble and can't arrange required ICT infrastructure. As a result, lack of technical development becomes a biggest hindrance in our goal of adopting digital approach in our education.

Recommendations-

It's high time we understand the simple rule of survival of the fittest. Rather than sticking only to primitive chalk and talk method due to our underprivileged technological conditions, we must be resilient and put our efforts and focus on bringing technical advancement to help us go digital.

The government can collaborate with private internet service providers and help them install more and more mobile towers in remote and rural areas as well as tier-2 cities. Additionally, it can provide needed support to bring higher generation internet in our country and also launch beneficial schemes to allure the service providers for supplying high-speed internet at a cost-effective price.

Moreover, India can design its own application for virtual classroom and e-content sharing, keeping in mind its internet speed and availability of other resources.

Apart from these, the government should grant affiliation to educational institutes only if they have proper ICT infrastructure and should sanction additional budget specifically for the supply of technical resources to financially deprived institutions.

iv) Technical Acclimation struggle-

'Change is inevitable. Growth is optional'.

This quote of John Maxwell describes the current scenario perfectly. The current crisis has brought change not only in our habits but in every other aspect of our lifestyle. Even after it will be gone, it will leave a revolutionized world with a changed mindset and approach towards its general working. And if we as a country don't adapt accordingly, our growth will come to a halt. The same applies to our education system. We have seen how adopting digital teaching is an encouraging bet and future of education. Still, we can see the hesitation in both teachers and students about the same.

Limited technical literacy and technical issues are already making teachers quite apprehensive about employing tech-driven teaching methods (Fein & Logan, 2003; Osika et al., 2009).

But, apart from them, the resistance of adaption of technology is evident as an issue in itself as many well-equipped institutions with all the required facilities available, too choose for primitive and traditional methods of teaching.

Recommendations-
Suddenly switching to something completely different is difficult for everyone, especially if we have to fight off our traditional mindset. But, once we start understanding the benefits and necessity of change, the process of adaption becomes much quicker.

Thus, teachers need to understand the benefits of e-teaching, its scope, different opportunities that it provides, and exciting new things it can facilitate that physical classroom could not offer. Additionally, engaging in a discussion about it with other colleagues and personally getting interested in knowing its facts, innovative features, perks, etc. can spark temptation and fascination towards digital education.

MHRD should conduct refresher courses covering the latest technology and tools for digital teaching frequently to keep faculty members abreast of the latest developments. This exercise will make faculty members comfortable in using technology and reduce their resistance to the adaptation of technology. Apart from these, the government can also make informational advertisements that highlight the benefits of online learning and boast about its advantages to captivate and attract teachers. Setting "going digital" a trend will automatically attract teachers to take part in it enthusiastically.

v) Technical literacy-
This is a tech-driven era. Technology has set its foot on everything ranging from business to education and undoubtedly increased their efficiency. Based on the circumstances caused by the current pandemic, the tide of technology is going to transform the general working of all the sectors by making its role even firm. This time demands for change in Indian educational methodology too. Since, time and tide wait for none and this increasing role of technology has made technological proficiency a must-have skill, we must focus on inculcating it. Currently, considerable number of Indian teachers is still digital migrants (Singh, 2016) and hence their graspe on technology is not very strong. Additionally, many institutions give less importance and preference to technical mode of teaching even after being financially stable. Consequently, putting even technically sound faculty out of practice. Previous studies explored that many faculty members are not fully prepared to teach via electronic mode because they are still making themselves ICT sound by acquiring the knowledge to use some of the online learning platforms (Jaques & Salmon, 2007; Little-Wiles & Naimi, 2011; Rucker & Downey, 2016; Thorsteinsson, 2013).

Moreover, even though government has mandated computer education in every school, many students are unaware of its practical approach and real life applications.

Recommendations-
Current circumstances present itself with the pressing need of bringing change in our educational methodology to make it more resilient. In order to do so, we must begin from training the faculty who will apparently teach students. In this reference Allan et al., (2012) stated that training would guide teachers to handle ICT platforms and identify educational needs of their learners effectively. Gerrard (2005) also pointed out the requirement of two types of training for instructors involved in online teaching. "Training is vital how to academics utilise pedagogy in the e-learning environment, how do they adapt learning style in their material, correctly using the e-learning features are important, if academics do not know then investment will not yield the expected result" (Islam et al., 2015, p.107).

There should be occasional out-house training making faculty aware about latest technology and its usage in education. These trainings can be real time or recorded and then broadcasted to many institutions together to save the budget. Several special lectures should be scheduled to let teachers know about recent technical advancements and innovative online teaching tools and methods.

Additionally, institutions can start regular in-house training sessions for technically backward teachers hosted by its own tech-savvy faculties to save budget.

vi) Exhausting and time taking-
I found what many teachers complained about online teaching was the same as what I used to complain about riding a bicycle as a newbie. In the beginning, I'd indeed prefer walking than riding a cycle where I had to maintain balance, paddle, keep an eye on the road, escape from traffic, and use my energy all at once. Similarly, not only technically novice teachers but also tech-savvy ones are finding online teaching very time taking and energy drenching (Anderson et al., 2011; Capra, 2011; Mbuva, 2014; Mihhailova, 2006; Tunks, 2012). Teachers take twice as much time as a physical class to prepare and teach the same topic through online mode (Cavanaugh, 2005).

In case of e-content, they find searching for good study material and subject related videos, sometimes self preparing them according to their students, compressing video content accordingly, uploading them, etc very hectic and cumbersome task. Similarly, for the virtual classroom, unlike the physical classroom, teachers have to prepare the bullet points to discuss beforehand and come up with various innovative ways of engaging students. Besides, in the virtual classroom they have to put an extra effort to keep control over students and make class both perceptive and topic-focused to avoid wastage of net. Also, they require to go extra-mile for checking the pace and level of each student, etc. Moreover, maintaining strong presence on digital discussion boards and answering private questions of students as soon as possible is also time-absorbing. After all these tiresome tasks, they automatically develop a preference for chalk and talk method of teaching.

Recommendations-

I learned that cycling would take me way farther effortlessly once I become perfect in it. Similarly, teachers need to understand that tech-based teaching can be a lot more productive, easy, and fun once they become proficient in handling it. And this proficiency can attain by practicing willingly and enthusiastically.

Once they are ready to go the extra mile, in-house, and out-house training provided by institutions can remove their uneasiness and employing technology-driven teaching methods can ensure practice that they need. Thus, it will be gradually instilled in their lifestyle effortlessly.

Faculty members should provide distinctly and concisely crafted learning materials to the students so that they don't require further clarification. They should adopt an easy-to-follow pattern in designing learning materials so that students don't feel confused and lost. Even if they are using available learning materials to share with students, they should first organize it in an easy-to-follow pattern. In this regard, they can e-mail weekly modules to the students that contains highlighting on work to be done daily and on the text that requires first reading.

Teachers can set a time for themselves to be available online and announce this so that they can free up themselves from the act of checking and posting too frequently that is burdensome for both the faculty and the learners. Additionally, they should provide answers to individual learner's queries in the announcement area to help students' having the same kind of questions while saving their time.

Besides, the government can set-up a mentoring group consisting of experienced online instructors who have already run online courses successfully to help the faculty members in their transition. It will surely help the teaching fraternity to streamline their efforts in the right direction and prevent them from getting entangled in the time-sucking activities.

The government can also reduce span of control for teachers i.e. lesser number of students under a teacher to reduce their workload and save time.

Additionally, government can tie up with IT companies to come up with a digital learning toolkit that is compatible with all the devices, runs on low-bandwidth and include many features like file converter, file compressor, presentation maker with audio and video option, live classroom for at least 100 students, automatic attendance tracker, attention tracker, content-builder supporting images, texts, audios and videos, video compressor, skill mapping, performance tracker, teacher-student doubt clearing forum, polls and quizzes launcher, boardroom and other innovative features. Precisely, the app should have complete teaching and assessment tools in it. Every college and university should have an account on this application as mandated by government. Besides, there should be an experienced technical support staff that deal with any technical or general problem teachers or students come up with regarding the usage of that application and continuously engage in knowing instructional needs of instructors for developing or identifying time saving innovative tools.

Conclusion-

This paper highlights the six difficulties that the teachers are experiencing in their transition from classroom teaching to the virtual form of teaching and how to overcome them. The first challenge in an online education setup is student engagement. To engage students, the teacher should use multimedia in their e-content and include activities such as 3Cs, recalling sessions, and JAP just a point during online classes. The second challenge is to make students attend the virtual class with discipline and sincerity. It can achieve by setting a code of conduct for a virtual classroom in consultation with students, conducting one on one counselling sessions for indisciplined pupils, having parent teacher communication frequently, and mild punitive actions. The third and most important challenge where the teacher does not have much role is internet connectivity. It calls for government participation. The government should encourage IT professionals to come up with different

educational apps that run on low bandwidth, grant financial aid to academic institutes for their technical advancement, and ensure a proper state of the art ICT infrastructure. The fourth challenge is teachers' resistance to the adaptation of technology. Teachers should accept the reality that digital learning is going to be the new normal. So they should focus on acquiring the required skill set to survive the new change. The government should also reinforce this fact by focusing more and more on the advantages of going digital. The fifth challenge is limited technical literacy among the teachers. The government should come up with more and more training programs to impart technical skills to them. The last challenge is the exhausting and time-consuming nature of digital education. Once the above-mentioned challenges are being taken care of, this issue will partly be addressed. For the time-saving part, the teachers should set a definite time for their online presence, provide solutions to queries in the announcement area, and seek help from experienced online instructors. The government can reduce the burden by assigning lesser students per teacher and providing them with technical assistance. More challenges might appear if the government of India carries out a comprehensive and wider study of all the snags and loopholes of digital learning. This will help to come up with an efficient digital platform that will have last-mile outreach.

Limitations-

This study has certain limitations which are-

Faculty members teaching in the colleges of higher education of Lucknow and Kanpur are taken as respondent.
Most of the participants are digital immigrants as they were raised prior to digital age.
Sample includes faculty of commerce, management or economics department exclusively and teachers of science, mathematics, foreign language and humanities departments are not included.

Future Research-

This study can be replicated with faculty teaching mathematics, foreign language and science as respondents to explore challenges cropping up before them while teaching digitally.

A study can be carried out to explore general and subject-specific training needs of faculty for successful and smooth transitioning to online instructional environment.

References-

Allan, J., & Lawless, N. (2004). Understanding and reducing stress in collaborative e-Learning. Electronic Journal on e-Learning, 2(1), 121-128.

Almala, A.H. (2005). A constructivist conceptual framework for a quality e-learning environment. Distance Learning, 2, 9-12.

Anderson, D., Imdieke, S., & Standerford, N. S. (2011). Feedback please: Studying self in the online classroom. International Journal of Instruction, 4, 3–15.

Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. Human Behavior and Emerging Technologies, 2(2), 113-115.

Beebe, R., Vonderwell, S., & Boboc, M. (2010). Emerging patterns in transferring assessment practices from F2f to online environments. Electronic Journal of e-Learning, 8(1), 1-12. Retrieved from www.ejel.org

Buckenmeyer, J., Hixon, E., Barczyk, C. C., & Feldman, L. (2011). Invest in the success of online programs at the university? Mentor professors. Contemporary Issues in Education Research, 6(6), 1-6. Retrieved from https://journals.cluteonline.com/

Capra, T. (2011). Online education: Promise and problems. Merlot Journal of Online Learning and Teaching, 7, 288–293.

Cavanaugh, D. (2005). Teaching online – A time comparison. Online Journal of Distance Learning Administration, 8, 1–9.

Cochran, C. E. & Benuto, L. T. (2016). Faculty transitions to online instruction: A qualitative case study. The Online Journal of Distance Education and e-Learning, 4(3), 42-54.

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. Journal of Educational Technology Systems, 49(1), 5-22.

Fein, A. D., & Logan, M. C. (2003). Preparing instructors for online instruction. New Directions for Adult and Continuing Education, 100, 45–55.

Gardner, L. (2020). Covid-19 has forced higher ed to pivot to online learning. Here are 7 takeaways so far. The Chronicle of Higher Education, 20.

Gerrard, C. (2005). The evaluation of a staff development (pilot) programme for online tutoring: a case study. Campus-Wide Information Systems, 22(3), 148-153.

Islam, N., Beer, M., & Slack, F. (2015). E-learning challenges faced by academics in higher education: A literature review. Journal of Education and Training Studies, 3(5), 102-112.

Jaques, D., & Salmon, G. (2007). Learning in groups: A handbook for face-to-face and online environments. Abingdon, UK: Routledge.

Jordan, S. (2012). Student engagement with assessment and feedback: Some lessons from shortanswer free-text e-assessment questions. Computers & Education, 58(2), 818-834.

Juan, A. A., Steegman, C., Huertas, A., Martinez, M. J., & Simosa, J. (2011). Teaching mathematics online in the European area of higher education: An instructor's point of view. International Journal of Mathematical Education in Science and Technology, 42, 141–153.

Little-Wiles, J., & Naimi, L. L. (2011). Faculty perceptions of and experiences in using the blackboard learning management system. Conflict Resolution & Negotiation Journal, 4(1), 1– 13.

Mbuva, J. M. (2014). Online education: Progress and prospects. Journal of Business and Educational Leadership, 5, 91–101.

Mihhailova, G. (2006). e-learning as internationalization strategy in higher education. Lecturer's and Student's perspective. Baltic Journal of Management, 1(3), 270-284.

Osika, E. R., Johnson, R. Y., & Buteau, R. (2009). Factors influencing faculty use of technology in online instructions: A case study. Online Journal of Distance Learning Administration, 12. Retrieved from https://www.westga.edu/distance/ojdla/spring121/ osika121.html

Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of blended learning: A systematic review. Computers & Education, 144, 103701.

Shi, M., Bonk, C.J., & Magjuka, R.J. (2006). Time management strategies for online teaching. International Journal of Instructional Technology & Distance Learning. Retrieved from http://itdl.org/Journal/Feb_06/article01.htm

Sithole, A., Mupinga, D. M., Kibirige, J. S., Manyanga, F., & Bucklein, B. K. (2019). Expectations, challenges and suggestions for faculty teaching online courses in higher education. International Journal of Online Pedagogy and Course Design (IJOPCD), 9(1), 62-77.

Thorsteinsson, G. (2013). Examining teachers' role in using virtual learning environment to support conventional education in Icelandic schools. Journal of Educational Technology, 10(2), 15–20.

Toquero, C. M. (2020). Challenges and Opportunities for Higher Education Amid the COVID-19 Pandemic: The Philippine Context. Pedagogical Research, 5(4).

Tunks, K. W. (2012). An introduction and guide to enhancing online instruction with web 2.0 tools. Journal of Educators Online, 9. Retrieved from https://files.eric.ed.gov/fulltext/EJ985402.pdf

Verawardina, U., Asnur, L., Lubis, A. L., Hendriyani, Y., Ramadhani, D., Dewi, I. P., ... & Sriwahyuni, T. (2020). Reviewing Online Learning Facing the Covid-19 Outbreak. Talent Development & Excellence, 12.

Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 Outbreak.

