



Online mode of education: Perception of college teachers toward online education during COVID-19 pandemic

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Abstract

Teaching and learning in education through the online mode has become increasingly popular during recent COVID-19 pandemic. Most of the college students and teachers have adapted to this relatively new model of online teaching-learning. However, many teachers experienced some sort of difficulty in transition to online teaching. The role of digital technology through online learning platforms has been widely recognized in education delivery system. This study was conducted to determine the perceptions of college teachers toward online teaching and learning in post Covid-19 lockdown period at Government Postgraduate College, Himachal Pradesh, India. The sample for this study consisted of 56 college teachers drawn through non-probability convenience sampling method. The data were collected by administering a predesigned and pretested questionnaire to all college teachers who were involved in online teaching. A 5-point Likert scale was used in the questionnaire. The empirical data was tabulated and analyzed using descriptive statistics. It was observed from the results that about three-fourths (76.78%) of teachers possess very good knowledge about online teaching and techniques. Three-fourths (75%) of the teachers showed positive perception toward online teaching during the lockdown period. Overwhelming majority (89.92%) of teachers claimed that face-to-face teaching is better than the online teaching. It was observed that online teaching has not only attracted attention of teachers but it becoming very important due to COVID-19 pandemic. Interestingly, the online teaching and learning has its own merits for enhancing students' learning and knowledge, most particularly during Covid-19 crisis and other crises of this nature, and can serve as a potential teaching method in college education.

Keywords: information and communication technology, online education, digital platforms, perception

Introduction

The COVID-19 pandemic crisis of the 2020 has caused significant disruption of education systems in history, affecting more than one billion learners in about more than 200 nations and all continents ^[1]. In India also, by the last week of March, all educational institutes were closed to contain the spread of coronavirus. All teaching, research, examinations and evaluations, and conferences, seminars and workshops suffered a setback. Later on, Ministry of Home Affairs, Government of India (MHA) through UGC and universities decided and instructed all the colleges to maintain the academic calendar by conducting the online classes ^[2]. The implementation of such a gigantic task in India, was not easy because of many difficulties, such as, lack of access to internet, smartphones, and laptops; uninterrupted power supply in remote areas, lack of experience, awareness, and expertise among faculty in conducting online classes; poor technical support; lack of interest among the students and teachers, etc. Fortunately, most of the students and faculties slowly adapted to this relatively new model of online teaching-learning. The increased familiarity of teachers, students and people at large with Internet Computer Technology (ICT) in education for the last three decades helped a lot to overcome this situation. It has been natural that on one hand, many teachers, in fact, intelligently realized this urgent need and adopted online teaching techniques. On the other hand, contrary to this, some teachers showed reluctance for adopting new technology in teaching and learning, as they apprehended difficulties and started to find the faults/drawbacks in this online system of teaching-learning ^[3]. Fortunately, almost all the teachers became sensitive to emerging situation due to unwarranted spread of killer coronavirus and started teaching through online mode to keep in touch with students. The University Grants Commission's (UGC's) Faculty Induction Programme (FIP) 2019 having the main objective of the mandatory induction programmes to sensitize and motivate the faculty to adopt learner centered approaches, ICT integrated learning and new pedagogic approaches to teaching-learning assessment tools in higher education ^[4]. has given confidence and moral boost among college and university teachers. This is a continuous programme of Under FIP programme of sensitizing and training of all university and college teachers in new mode of teaching and learning.

In common sense, online teaching is understood as exchange of communication between teacher and learner mediated through the use of electronic technology. Howlett *et. al.*, “Electronic (e) or online learning can be defined as the use of electronic technology and media to deliver, support, and enhance both learning and teaching and involves communication between learners and teachers utilizing online content”^[5]. Online education is not new to the academic world. In the past decades, online classes are gaining so much importance all over the world, and it shifts the thought of colleges that “Online class is an Optional” to “Online class is necessary”^[6]. A peep into recent past about online education makes it evident that In India, there are more than 370m users are on the Internet and helping online education to grow at a fast pace. At present, more than 3bn users are using the e-learning platforms. It is likely to increase by 19% in future^[7]. India has emerged as the third-largest market for online learning after the US and China. In this scenario, the role played by teachers and students gains due importance as it is their perceptions and attitude, which is critical to motivation and learning^[8].

A glance into previous studies on online education reveals that teachers and students have mixed opinions towards online classes. Many students believed that degrees obtained through online classes are not valid as much as a traditional method of classroom teaching. This may affect the desire of students to enroll in online courses. So, there is a need for awareness programs regarding the importance of online learning.^[9] In a study, it was found that even though students are on the positive side of an online class, but other participants of an online class, i.e. teachers, have mixed opinions about online class. Teachers should analyze what is currently presented and what is the better way to present the way to subject to a complete understanding of course by examining “Faculty perceptions,” “training,” “mentoring,” and “best practices”^[10].

It was observed that the main reasons for taking an online class by the students are “flexibility” and “self-control” within the learning environment, and they also perceived that online class would be a convenient method of teaching compared to traditional classroom learning. Here convenience is based in terms “Price” and “self-directed learning”^[11]. In Dakshina Kannada and Udupi districts of Karnataka, researchers found that teachers have positive perception of online classes. They were confident of effectiveness of online classes, but also pointed out some negative aspects, such as, emotional disconnect with students, lack of training and skills, lack of infrastructure. They did prefer face-to-face teaching and equivocally pointed out that online classes cannot replace traditional method of teaching^[12].

From the studies referred to above, it is observed that there is a need for the study in the area of perception of college teachers in online education. We are aware that India has switched over to online education in response to Covid-19 global pandemic for immediate benefit of students and society. The college teachers constitute an important group of stakeholders in academic field and it is they who make it possible and effective. It is of vital importance to understand their perception toward online education and online teaching. The perception in general is awareness or understanding of world around us and our actions. It is the organization, identification, and interpretation of sensory information in order to represent and understand the presented information or environment^[13]. Thus, for understanding behavior of human beings it is very important to understand their perception, that is, how do they perceive their environment?

In this backdrop, this study investigated the perceptions of college teachers toward online teaching during the coronavirus pandemic.

Objectives

The main objective of this study is to analyze perception of college teachers about online education. This research attempts to highlight views of college teachers on knowledge of technology, digital platforms, efficacy, comparison with face to-face learning, teaching practice, and training for online classes.

Method

This study was carried out at Solan, Himachal Pradesh, India in the month of October 2020. A non-probability convenience sample comprised of 56 college teachers from Government Postgraduate College, Solan. They have been associated with online teaching to undergraduate classes for the last over six months. They belonged to Arts, Humanities, Science, commerce, and self-financing departments. A questionnaire covering different aspects, such as, knowledge of technology and digital platforms, quality of online teaching, face-to-face teaching versus online teaching, and incorporation of online teaching in curriculum, and overall perception of the college faculty toward online teaching was developed and pretested. The questionnaire contained four sub-groups. A 5-point Likert Scale was used in the questionnaire with five response categories:

1 – strongly disagree, 2 – disagree, 3 – neutral, 4 – agree, and 5 – strongly agree. Positive statements/questions were allotted scores in ascending order, that is, 1-5 and negative statements/questions allotted scores in reverse order, that is, 5-1. The empirical information was collected by sending this instrument to all the faculty members through google link. In addition to this, informal chat was also held with a few teachers to gather in-depth information on some related aspects of online education to supplement and explain statistical findings. The data was analyzed using the Statistical Package for the Social Sciences software version 20.0. The results of statistical data were described based on mean scores and percentages. The respondents were also accommodated in two categories: the positive perception and the negative perception. The *t*-test was applied for examining the perceptions of faculty toward online teaching. Statistical test of significance was tested at $P < 0.05$ level.

Results

The college teachers occupy are central in in central in conducting online classes. Their knowledge of communication technology, digital platforms, ease of using digital platform, their motivation and interest, skills and training, attitude, etc., are important in the context of online education the results of statistical analysis of data depict interesting observations. Table 1 shows that just over one-third (76.78%) of college teachers sounded of having good knowledge of communication technology, online teaching and techniques. Further, from informal chats it was found that they often updated their knowledge of online delivery of education by interacting and discussing with their counterparts and getting suggestions from teachers of IT. Consulting online literature available on Google about this new technology also helped them a lot for getting acquainted with latest developments in this field. This reflects their positive attitude and involent in online education. A little less than half teachers (42.85%) admitted that they have previous experience of conducting online classes. Significant more than half (69.64%) of teachers were affirmative towards students, motivation and interest in online classes. This points out that students are interested in online classes. With regard to student-teacher interaction in the online class, a little less than half of teachers (48.21%) pointed out that some students (5-10%) actively interact with them by seeking clarification to their queries and also responding to our questions during online classes. It can be observed from this that students participation in clas interaction is low. The teachers (53.57%) also put forward their satisfaction with student-teacher interaction during online classes. On the issue of inclusion of online classes in stipulated curriculum, about half of them were affirmative, however, they were also skeptical about its long-term success. Around (57.14%) of faculty believed that online classes for theory can be incorporated in study curriculum, only 10% of college teachers expressed that online classes can also be conducted for students in science stream. Majority of college teachers (89.28%) were quite familiar with working on at least with one digital platforms, such as, Google Meet, Zoom, and Jio Meet for Power Point presentation.

On the whole, it was found that 75% of teachers were satisfied with online teaching during the last 7/8 months of lockdown period. Interestingly, despite being engaged in to online teaching during corona pandemic, significant majority of them (83.92%) still favoured face-to-face mode of teaching and they believed that it is better than the online teaching.

With regard problems in conducting online classes, a little over two-third (82.14%) of college teachers expressed that the internet connectivity, speed and band-width are major hindrances in smooth functioning of online classes. It was interesting to observe that more than 80% of them indicated uninterrupted power supply and adequate electronic gadgets are available for conducting online classes. This further indicates that they have favourable views toward online education.

Table 1: Perceptions of college teachers about online teaching

Sr. No.	Question	Response	
		Positive	Negative
1.	Do you have adequate knowledge of technology required for Online Teaching?	43(76.78)	13 (23.22)
2.	Do you have previous experience, in teaching through online mode?	24 (42.85)	32 (57.15)
3.	Do you think students have less motivation and interest online classes?	39 (69.64)	17 (30.36)
4.	Does interaction takes place between you and students during online classes?	27(48.21)	2 (51.79)
5.	Is there need to make online education as part of academic curriculum?	30(53.57)	26 (46.43)
6.	Are you not familiar with diferent digital platforms?	32 (57.14)	24 (42.85)
7.	Are you comfortable in using at least one digital platform for holding classes?	50(89.28)	06 (10.72)
8.	Are you not satisfied with overall teaching through online mode?	42 (75.00)	14 (25.00)
9.	Whether, in your opinion, face-to-face mode of teaching is not better than the online mode?	47(83.92)	09 (16.18)
10.	Do you think, poor internet speed and band width adversely affect online teaching?	46(82.14)	10 (17.86)
11.	Availability of uninterrupted power supply.	52(82.85)	04 (17.85)
12.	Since you work from home these days, do have sufficient resources e.g. smartphones, laptops and separate room at home.	45 (80.35)	11 (19.65)

On comparison between online teaching and traditional mode of Face-to-Face teaching, significant majority of college teachers (83.92%) held that face-to- face teaching is better than online teaching. They pointed out that online teaching lacks physical and emotional connect with students. They also added that it is difficult to monitor whether students actually continue to attend clas, once they login to the portal. On their overall satisfaction with online teaching, three-fourths of them (75%) conveyed that they are satisfied with this mode of teaching.

For further analysis participants were accommodated into four categories,that is, overall satisfaction, quality of online teaching, face-to-face teaching vs online teaching, and incorporation of online teaching in curriculum. Mean scores of their positive and negative responses on these for categories along with their respective p-values are depicted below:

Table 2: Category wise perception of college teachers toward online teaching

Item No.	Item Description	Response		P-Value
		Positive	Negative	
1.	Overall perception/satisfaction of college teachers toward online teaching	4.12±1.02	1.12±0.46	*P<0.0001
2.	Satisfaction about quality of online teaching	3.55±0.72	2.14±0.56	*P<0.0001
3.	Face-to-face mode of teaching and learning is better than online	3.96±0.45	1.23±0.72	*P<0.0001
4.	Inclusion of online teaching in academic curriculum	3.02±0.75	1.14±0.36	*P<0.0001

*P<0.0001 statistically significant.

Mean score 4.12 ± 1.02 of positive responses to overall satisfaction of the college teachers is statistically significant. Despite this, they preferred traditional mode/face-to-face teaching when compared to online teaching. They also perceived quality of online teaching as satisfactory with mean score of 3.55 ± 0.72 . They were also positive in terms of inclusion of online teaching in curriculum.

Discussion

This study explores perception of college teachers about the use of online teaching and learning. The basic concern is on experiences and observations of college teachers towards online teaching. This study revolves around five major specific domains, such as, overall perception, quality of online education, traditional mode of teaching i.e. face- to-face teaching versus online teaching, inclusion of online teaching in curriculum, and difficulties in conduct of online classes.

The online mode of education (teaching and learning) is now widely recognized and is in practice during current year 2020 in the context of COVID-19 pandemic crisis. We all know that the internet introduced digital literacy in the academic world during early nineties and slowly paved the way for formal online education by providing e-content in the form of various modules for online courses. The availability of mobiles, laptops, internet services, web, and social media has opened vast opportunities for learners personalized learning experiences. One need not to be surprised because online mode of learning is not new to the world of education but it emerged as intranet in 1960, in which different computer terminals interfaced with each other were used to provide academic material to students [14].

In the present study, 77% of college teachers have good knowledge about online teaching techniques. It means that online education is catching up with college teachers. This gets support from the point of view that demand for online education is increasing in India and it should be upgraded with current digital technology [6]. With the Digital India programme's vision to transform India into a digitally empowered society and knowledge economy, the education sector in India is poised to witness major growth in the years to come. Technology-led reach and easy access will bring about a socio-economic difference in the lives of Indian learners [11, 14].

Mean score of positive responses of overall perception/ satisfaction of the college toward online teaching is 4.12 ± 1.02 which is statistically significant and shows acceptability of online learning. Kulal A. and Nayak Anupama observed that teachers have positive attitude toward online teaching and learning, but points out to emotional disconnect with students, lack of training and skills, lack of infrastructure, prefer face-to-face teaching, and holds that online classes cannot replace traditional method of teaching [12]. Similarly, Dubey Babita and S Singh, observed positivity among teachers of higher education towards online teaching. They concluded that young teachers are more actively participating in the online education to teach the students and taking online education positively. Such a change in perception of teachers may be attributed to their increased familiarity with technology. They also commented that despite this positivity, teachers are still struggling with digital skill, time adjustment, work overload and student connect [15].

Findings of this study cannot be generalized as it was confined to one college only. Additionally, there may be variations in the context of exposure, training, learning techniques, experience, infrastructure, institutional support, etc. The limitation of this study is that these perceptions of faculty members are of one college which cannot be generalized because variation may be noticed due to many factors such as exposure/training of faculty members toward online learning techniques, experience, infrastructure, and institutional support.

Conclusions

The digital technology is playing a great role in the interaction of faculty and students through online learning platforms. The overall perception of faculty regarding online teaching, its effectiveness and quality is satisfactory. The acceptance of online teaching and learning is on the rise among college teachers. It is the only choice available to deliver the required content and meet the desirable outcomes from the students until they come back to regular classes. Despite all these developments, college teachers are reluctant to include online teaching into academic curriculum, and they continue to struggle for refinement of digital skills, effective training, and technical and infrastructure support. Problems of time adjustment, diversified work overload, student disconnect, uninterrupted power supply, internet speed invariably surrounds their online and teaching activities. Another, important conclusion is that online learning can be complementary to the face-to-face learning, but not its replacement.

This calls for effective role of the state to make provision of periodical training programs for updating of technological and digital skills of the college teachers. State need to provide enough technical support and equipments along with uninterrupted power supply and effective internet speed with requisite band width to make online teaching and learning more techno-friendly. The college teachers need to involved in continuous dialogue in the context of prevalent education policies and their goals. Since, this study is limited to teachers of one institution, therefore, there is need to conduct such studies at micro and macro level and on larger samples in order to collect a corpus of information on different aspects of online education.

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