Attitude of College Teachers towards Virtual Classroom during COVID-19 Pandemic

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Abstract

Due to technological advancement important changes have been seen in the field of teaching and learning process. It is one of the tools that have emerged from information and communication technology, and during this pandemic, many schools, colleges and universities have been included in the teaching-learning process. In this paper, an attempt has been made to study the attitude of college teachers towards virtual classrooms during the COVID-19 pandemic. A self-constructed scale was administered to 206 college teachers via online mode. Item-wise analysis showed variations in attitudes towards virtual classrooms during the COVID-19 pandemic. However, both genders showed average attitudes, but in certain items, both genders showed highly positive attitudes towards virtual classrooms during the COVID-19 pandemic. The results also revealed that the teachers from different streams like sciences, social science, arts and commerce have not shown any significant differences in attitude towards virtual classrooms during the COVID-19 pandemic. The research outcomes can be used as input for framing virtual classroom learning platforms in an educational setting through teachers.

Keywords: Attitude; College Teachers; Virtual Classroom; COVID-19 Pandemic

Introduction

Today, the world is facing a pandemic as the Coronavirus (Jamrozik et al., 2020) is sweeping around the globe, and its effect is going on. The pandemic has led to many deaths; lakhs of people have been quarantined and has led to a serious situation of thinking towards a global health emergency. The COVID-19 pandemic has led to a total lockdown world over and India is no exception. During the lockdown, the education sector was impacted heavily and educational institutions had to move from the offline mode of teaching and learning to online mode.

Learning was rebooted during the Covid-19 pandemic. This Covid-19 was an ideal time to accept technological introduction and its latest offerings to make education delivery to students more efficient and make it more productive through online learning. The shutdown of educational institutions has led to many apprehensions among the students and teaching fraternity (Gupta & Goplani, 2020).

However, the teaching fraternity has been adapting innovative methods to interact with the students with a focus on the curriculum. Online learning also comes as an interesting and interactive additional resource as compared to the normal classroom. Undoubtedly, the spread of COVID-19 created huge challenges for the world's educational systems.

All the educational institutions cancelled their classwork, examinations and other allied activities and it led to many negative impacts. During the COVID-19 pandemic educational institutions switched to a virtual mode of teaching, the body language and facial expressions are under restrictions as it is difficult to use these tools through online mode. However, the pandemic came with its own disadvantages and switching from traditional to modern methods of teaching and learning was not a simple task. Therefore, in virtual teaching, the teachers used different social networking and educational applications/platforms, like, zoom, Google Meet, Facebook, YouTube, Skype, etc., to restore their classwork and save the precious time of students. India was no exception to the global trend where every student is not well equipped with high-speed internet and digital gadgets. Numerous advanced educational institutions in India are also not equipped with digital facilities right now to cope with sudden changes from the educational setup to the virtual education system (Jena, 2020). Due to this sudden transition from physical classes to virtual classes, many teachers and students faced difficulties in order to operate the platform as they were not ready for this sudden transition. The problem was compounded in areas that already were underdeveloped like J&K, where accessibility of modern gadgets was a herculean task for students from low-income backgrounds.

Since the mode of teaching and learning during the pandemic changed, teachers had to adopt modern ways which were dominated by information and communication tools. This is a new area for both students and teachers, and assessments will probably have greater measurement errors than the normal teaching-learning process (Upoalkpajor & Upoalkpajor, 2020).

In this context, the present work tries to analyse the attitude of teachers in higher education, particularly college teachers towards, adapting to modern methods of ICT and virtual classrooms by using the questionnaire method distributed among 206 College teachers.

Relevant Prior Research

A number of studies have been conducted on the attitude of teachers towards E-Learning, learning through technologies, computers, the Internet, online learning, etc. For instance, a study was conducted by Panda & Mishra, (2007) in which they came to the conclusion that frequent usage of computers and email is strongly correlated with favourable attitudes towards e-learning. Similarly, Mahdizadeh et al. (2008) found that teachers' attitudes towards online learning may be affected by their perceptions of web-based activities, computer-assisted learning, and the additional value of online learning settings. However, Kutluca (2010) found in his study a significant difference in the scores of attitudes towards computers based on factors like experience using a computer, degree of computer use, taking computer classes, owning a computer, frequency of use, and class of the scores.

Bakr (2011), did a study on Egyptian public schools and found that teachers generally have a favourable attitude towards technology. In terms of gender and teaching experience, no significant differences were seen. Similarly, Suri & Sharma (2017) indicated that no significant effect of gender or faculty on teacher attitudes toward computers and e-learning whereas a significant effect of age was seen on teacher's attitudes towards computers &

e-learning. Nachimuthu (2020) found that normal classroom practice does not affect the attitude of students towards online learning and there is no significant difference between the male and female attitude scores of students and teachers toward online learning practice in Covid-19. Besides, Alhumaid et al. (2020) stated that there is a positive relationship between technology acceptance and e-learning during Covid-19.

To sum up, a number of studies have been conducted on the attitude of teachers, towards information and communication technology, computers, learning through technology, e-learning, computer competency, technology acceptance, etc., but none of the studies has been conducted on the attitude of teachers towards virtual classroom during COVID-19 pandemic. Therefore, the present work will be an addition to the already established knowledge of E-Learning by filling the suitable gap of attitudinal variations among the teaching community of colleges towards virtual classrooms. The present study holds much significance as it is done in such a study area where levels of development are very low and adaptation of modern methods of teaching and learning is very slow.

Objectives of the Study:

1. To study the attitude of male and female college teachers towards virtual classrooms during the Video-19 pandemic.

2. To find out whether a significant difference exists between the attitude of college teachers in different streams towards virtual classrooms during the COVID-19 pandemic.

Methodology

Descriptive survey research was used in the present study. The process of description as employed in this research study goes beyond mere gathering and tabulation of data. It involves an element of population/sampling procedure, tools for collecting the data, and interpretation of the meaning or significance of what is described.

Population of the Study

The population of the study consists of all the Assistant Professors of colleges of UT of Jammu and Kashmir.

Sample of the Study

In the present study, 206 College Assistant Professors currently posted in different Colleges of UT of Jammu and Kashmir filled out the questionnaire and were selected through simple random sampling. Out of the total 109 were male and 97 were female respondents. The researchers did not visit colleges personally due to the COVID-19 restrictions; the data was collected through the Google platform as the scale was distributed via mail and WhatsApp groups.

Tool Used

To know the attitude of college teachers towards virtual classrooms during the COVID-19 pandemic, a self-constructed scale was devised by the investigators to collect the information. The five-point scale consisting of 20 statements was developed to check the attitude of college teachers towards virtual classrooms. The response alternatives for each item were (1) Strongly disagree, (2) Disagree, (3) Neither Agree nor Disagree, (4) Agree and (5) Strongly agree.

Validity

To ensure the validity of the scale the researchers used two methods, face validity and construct validity. The face validity was evaluated by experts from the concerned field. Furthermore, to evaluate the construct validity of the scale, the researchers used the correlation method i.e., to correlate the score of each item & total score of the scale. The results are shown in table 1.

Table-1: Correlation between each item and total score

Items	'r' values	Sig.	Items	'r' values	Sig
1.	.720**	.000	11.	.709**	.000
2.	.710**	.000	12.	.491**	.000
3.	.448*	.045	13.	.399**	.000
4.	.289**	.000	14.	.245**	.000
5.	.725**	.000	15.	.419**	.000
6.	.689**	.000	16.	.529**	.000
7.	.265**	.000	17.	.401**	.000
8.	.389**	.000	18.	.397**	.000
9.	.165**	.043	19.	.345**	.000
10.	.307*	.032	20.	499**	.000

**Significant at 0.05 level

The values found to be are .720, .710, .448, .289, .725, .689, .265, .389, .165, .307, .709, .491, .399, .245, .419, .529, .401, 397, .345, .499 which are significant at 0.05 level.

Reliability

The reliability of the scale was calculated through Cronbach alpha and was found 0.72. The scores of the scale are categorized into three categories i.e., low attitude (below 50), average attitude (50-75), and high attitude (above 76).

Statistical Techniques Used

To analyse the data the researcher used Percentages, Descriptive statistics and One-way-ANOVA. The tabulation and analysis of data was done by using SPSS software version 20.

Analysis and Discussion of Data:

Objective 1: To study the attitude of male and female college teachers towards virtual classrooms during the Covid-19 pandemic.

To analyse the attitude of male and female college teachers towards virtual classroom, all the items in the scale were analysed by using percentage. The description of each item with respect to male and female is shown in Table-2.

Table-2: Item-wise Analysis of the attitude of male and female college teachers towards Virtual Classrooms during the COVID-19 pandemic

| S.No.	Items	Percentage%	
		Male	**Female**
1.	All goals of teaching are fulfilled through virtual classrooms.	45.73	43.71
2.	Quality of teaching is much better through virtual classrooms than actual ones.	41.47	41.71
3.	Interaction between the students and teachers is not good in virtual classrooms.	43.82	40.28
4.	Virtual classrooms are more inexpensive in terms of cost and time than the actual classrooms.	65.00	63.71
5.	Virtual classrooms are effective for all the types of students.	38.23	39.42
6.	All students remain motivated throughout the session during online teaching.	37.05	37.14
7.	Individual attention is not paid to every student while teaching online.	37.79	34.57
8.	Virtual classrooms should be made as a part of curriculum.	66.47	69.71
9.	All teachers do not have competency to teach virtually.	50.44	51.14
10.	Online teaching should replace actual classroom teaching.	36.76	42.00
11.	Effective learning takes place through virtual classrooms.	46.47	45.42
12.	Teaching online is much easier than teaching in actual classrooms.	54.85	51.42
13.	Problems of students are not addressed through virtual teaching.	46.02	44.85
14.	Online teaching and learning help students to become aware about online learning strategies.	77.05	78.57
15	Virtual teaching help all the teachers to know the new ways of teaching.	74.85	73.42
16.	Performance of students are not assessed fairly in virtual classrooms.	40.44	36.28
17.	There is a lack of coordination between students and teachers in virtual classrooms.	76.47	80.57
18.	All the students do not attend the online classes.	35.44	32.00

S.No.	Items	Percentage%	
		Male	Female
19.	Online teaching has the advantage to attend the class again for those who miss it.	70.58	73.71
20.	Network issues on the part of teachers and students is big hurdle in Virtual teaching and learning.	91.32	97.14
	Total	53.81	53.84

The perusal of table-2 shows the attitude of both male and female teachers towards virtual classrooms against each item. Most of the teachers showed an average attitude towards all the questions which were asked to them using Questionnaire. Less than 50% of participants showed positive responses when asked about whether the overall goals of teaching were fully met using online education and tools. When asked about the quality of teaching, more than 50% replied negatively which indicated a decrease in the quality of education. Similarly, around 91% of males and 97% of females replied positively when they were asked about the issues, they faced on the part of internet connectivity for both teachers as well as students end. The overall attitude of male teachers is 53.81% and 53.84% of female teachers towards virtual classrooms during the COVID-19 pandemic. The overall attitude indicates that both male and female teachers have average attitudes towards virtual classrooms during the COVID-19 pandemic. The item-wise analysis also shows that in items 14, 17 and 20 both male and female teachers showed highly positive attitudes towards the virtual classroom and in items 4, 8, 9, 12, 15 and 19 both the male and female teachers showed average attitudes towards virtual classroom and in the rest of items 1, 2, 3, 5, 6, 7, 10, 11, 13, 16 and 18 both male and female teachers showed low attitude towards the virtual classroom.

Online learning is not a substitute for classroom teachers; the low attitude of teachers towards virtual classrooms may relate to the fact that teachers and students have no eye contact and sometimes students join for the sake of attendance. The graphical representation of each item with respect to male and female is shown in Figure-1

Figure-1: Item-wise graphical representation of male and female college teachers towards virtual classroom during the COVID-19 pandemic
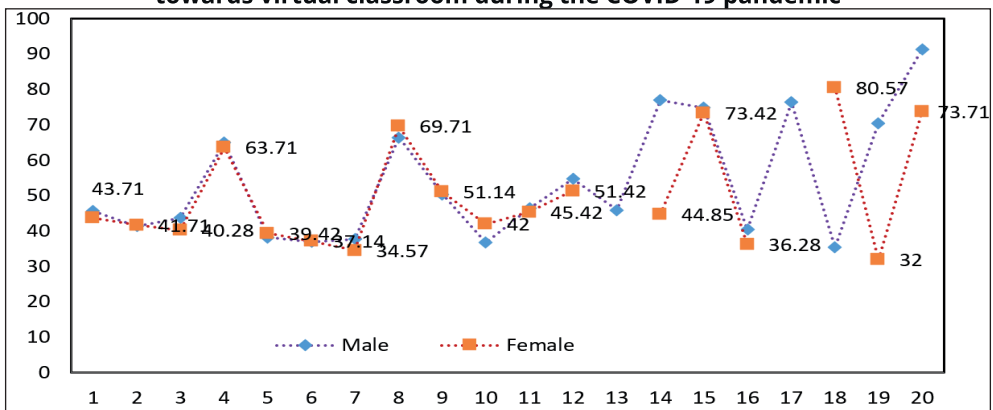
Objective 2: To find out whether a significant difference exists between the attitude of college teachers K in different streams towards virtual classrooms during the COVID-19 pandemic.

The researchers intended to measure the differences in the attitudes of college teachers towards virtual classrooms from different streams. To find out the differences within the groups and to interpret the results, the data was analysed with the help of One-way ANOVA. The result of 'f' ratio within groups in the attitude of teachers towards virtual classrooms from different streams is shown in Table-3.
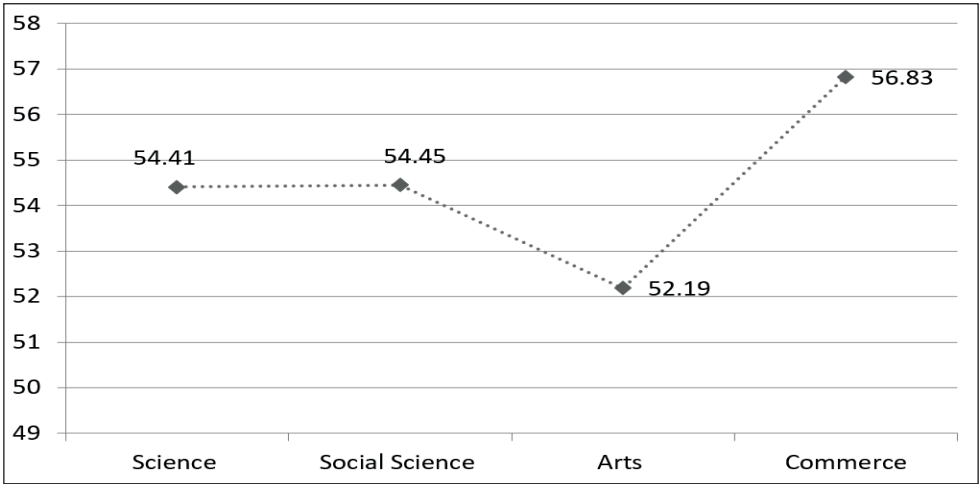
Table-3: Mean difference in attitude towards virtual classroom of college teachers from different streams

Stream	N	SD	Mean	F	Sig
Sciences	78	6.77	54.51		
Social Science	86	7.89	54.45	1.25	.292
Arts	36	6.97	52.19		
commerce	6	5.91	56.83		

Table-3 depicts that, 'f' value (1.25) is not significant at the 0.05 level. Therefore, it can be concluded that there is no significant difference in attitude towards virtual classrooms of college teachers from different streams. The mean difference is shown in Figure 2.

Figure-2: Graphical presentation in attitude towards Virtual Classrooms of College teachers from different Streams

The results reveal that the teachers from different streams like sciences, social science, arts and commerce have not shown any significant differences in attitude towards virtual classrooms during the COVID-19 pandemic. The results indicate that all the teachers have the same attitude despite belonging to different streams.

Educational Implications of the Study

- Teachers used the virtual classroom to encourage students, enhance their mental health, and reduce stress throughout the epidemic.

- Students can look at course materials and revisit courses from online classroom folders, which is one of the major advantages of a virtual classroom. They can access pre-recorded videos and lectures.

- The flexibility of the virtual classroom enables both students and teachers to work and attend classes from anywhere.

- Virtual learning environments are cost-effective because they minimize the need for textbooks and travel.

- Teachers and students can both enhance their knowledge and skills by using a virtual classroom. It facilitates learning interactive online technologies like e-mail, online tests, homework drop boxes, collaboration tools, etc.

- Moreover, as information and communication technologies (ICT) rule the globe, a new paradigm in education will emerge as a result of the combination of online and offline teaching and learning techniques.

Conclusion

The perusal of results revealed that teachers of both genders showed average attitudes towards online teaching and learning, however, in certain items, both genders showed highly positive attitudes towards virtual classrooms during the COVID-19 pandemic. The results also revealed that the teachers from different streams like sciences, social science, arts and commerce have not shown any significant differences in attitude towards virtual classrooms during the COVID-19 pandemic.

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