

## TEACHERS' ATTITUDES TOWARDS VIRTUAL TEACHING DURING COVID-19 PANDEMIC

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### ABSTRACT

To control the spread of Corona virus outbreak in India, a nationwide lockdown had been started in India since 25<sup>th</sup> March 2020. All educational institutes have been closed since March 16 in West Bengal. The 2020 academic year is a period of darkness in the lives of students due to the Covid-19 epidemic lockdown. West Bengal Education Minister urges stakeholders to consider alternative plans to complete the syllabus after a long shutdown. Therefore, many schools started resuming their sessions through e-learning portals. As a result, e-learning strategies have gained momentum as well as become an important contemporary trend in education during the lockdown. In the lockdown period, both the students & teachers have to access knowledge via ICT (Information Communication Technology) to keep pace in the current information society. ICT reduces the barrier of social distancing as well as the impact of shut down on the education sector with the help of digital transformation in the Indian education system. During lockdown being a digital transformation of education does not mean teachers are willing and natural digital teachers. It is important to know from teachers during lockdown what their knowledge, their skills, their expectations and their perception of e-learning. The main aim of this study is to explore the attitude of secondary school teachers' towards virtual teaching during lockdown at Gaighata Block of North 24 Parganas in West Bengal. A descriptive cross-sectional study was conducted to know the attitude of teachers'. A convenient sampling technique was used to select the participants for the study. Data has been collected with the help of Likert type attitude scale using Google Form during the Covid-19 pandemic lockdown. During the lockdown, the result of this study indicates that the attitude towards virtual teaching is not satisfactory. Moreover, male teachers develop a more favourable attitude toward online teaching than female teachers. This study also proved that more experienced teachers show less interest in virtual teaching-learning than less experienced teachers.

**Keywords:** Attitude, Covid-19, ICT, Lockdown & Virtual Teaching-Learning.

### INTRODUCTION

The Coronavirus first emerged at the district of Wuhan in China. So lockdown was first announced in China to prevent the spread of the virus. To control the spread of the Corona virus outbreak in India, nationwide lockdown had been started in India since 25<sup>th</sup> March 2020 [Wikipedia]. All educational institutes have been closed since March 16 in West Bengal. The West Bengal government had decided to postpone the ongoing Higher Secondary Board examinations and class XI examination to reduce the viral effect. But seeing that the effects of the infection were not diminishing, the government was eventually forced to cancel both the examination. West Bengal Chief Minister Mamata Banerjee further announced all institutions will remain closed till August 31 as COVID-19 pandemic shows no sign of stopping. West Bengal Education Minister urges stakeholders to consider alternative plans to complete the syllabus after a long shutdown. Therefore, many schools started resuming their sessions through e-learning portals. The West Bengal School Education Department (WBSED) has started the "Online Banglar Shiksha Classroom" for secondary school students on its Banglar Shiksha portal 2020. The tag line of Banglar Shiksha Classroom is "To keep Corona at bay School is at your doorstep today." (<https://banglarshiksha.gov.in/>). Syllabus oriented activity tasks, e-learning videos, and television programs are being included in "Online Banglar Shiksha Classroom".

Keller and Cernerud (2002) have identified variables such as age, gender, previous experience of computers, technology acceptance and individual learning styles as major predictive factors when discussing acceptance of technology by students. Usually, teachers use their smart phone for executing teaching-learning activities. It has become also affordable to students due to the reduction in the cost of both hardware and high-speed internet connection. Students have wanted learning materials that are accessible through online mode in mobile phones and computers (Radha et al., 2020). But before lockdown, this technology is not used in that way in our education system. The nationwide lockdown has given a scope to the school teachers to maximize the utilization of virtual platforms. For maintaining the new norm of social distancing because of Covid-19, the e-learning platform has emerged as the only available way of teaching. E-learning has become quite popular among students across the world particularly, the lockdown period due to the COVID-19 pandemic (Radha et al., 2020).

The word 'Lockdown' has been familiarized all over the world due to Covid-19 pandemic outbreak. The 2020 academic year is a period of darkness in the lives of students due to the Covid-19 epidemic lockdown. A fair

assessment of students' perception of e-learning may grant a good precedent in the implementation of fully online learning due to physical isolation caused by the COVID-19 pandemic (Krishnapatria, K. 2020). The entire education system has come to stagnant as the lockdown has been tightened to prevent the spread of the virus. In this case, educational institutions across the country had to close immediately, even at a time when academic sessions were held quite effectively. To minimize the lockdown effect, the teacher began to think of new ways to communicate with the students. The educational institutions took the necessary steps to continue the teaching process from home. As a result, e-learning strategies have gained momentum as well as become an important contemporary trend in education during the lockdown.

In the very initial stages of lockdown, many academic institutions were unwilling to change their traditional pedagogical approach but there was no substitute for changing educational perspectives in the fully online curriculum. During lockdown being a digital transformation of education does not mean teachers are willing and natural digital teachers. It is important to know from teachers during lockdown what their knowledge, their skills, their expectations and their perception of virtual teaching & learning. The review of related literature indicates numerous studies have been done to know the perception of the students towards e-learning. But, very few studies have been conducted to assess the perception of school teachers towards virtual teaching and learning during the lockdown. Surprisingly, no such survey has been found so far in the North 24 Parganas district of West Bengal.

On the other hand, there is a bunch of similar studies conducted before the pandemic and in other countries. For instance, Maafoon and Alenezi (2012) tried to investigate faculty members' attitudes toward e-learning in higher education in the Kingdom of Saudi Arabia and the factors influencing their attitudes. A survey questionnaire was used. The study proved that the perceptions by females being more positive than that of males. The results also showed that faculty members who had less teaching experience had a stronger perception than those who had been teaching for more than 10 years.

Abbasi et al. (2020) wanted to determine the perceptions of students towards e-learning during the lockdown at Liaquat College of Medicine and Dentistry. For this purpose, a self-administered questionnaire was employed and a total of 382 responses were received. The study manifests overall, 77% of students have negative perceptions towards e-learning. The findings of the study are students did not prefer e-teaching over face-to-face teaching during the lockdown situation. In another study in health sciences, Agarwal and Kaushik (2020) collected feedback related to student's perception of online learning from 87% of medical post-graduate students. After 12 days of online teaching session during the pandemic situation obtained data reflects that majority of the participants perceived that the sessions were tailored to their level of learning [n = 76 (99%)] and found the sessions to be interesting and enjoyable [n = 72 (95%)].

Krishnapatria (2020) conducted a study on "From 'lockdown' to letdown: Students' perception of e-learning amid the covid-19 outbreak". Analysis shows that 100% of students participated in e-learning, and 96.4% have accessibility to online learning. However, only 56% expressed satisfaction with the implementation of e-learning. Finally, the study claimed that students' perceptions of e-learning are somewhat fruitful.

Similarly, Sapkota and Narayangarh (2020) also focused on students and surveyed on "Determining Factors of the Use of E-learning during COVID-19 Lockdown among the college students of Nepal: A Cross-Sectional Study". A convenient sampling method through social media and Google form was used to collect 385 data from college students of Nepal during the COVID-19 Pandemic lockdown. The study found that gender, marital status, training on the use of E-learning, the experience of E-learning before pandemic were statistically significant with the future use of E-learning.

On the other hand, Sahoo (2020) focused on student teachers and published the study as "E-Readiness and Perception of Student Teachers' Towards Online Learning in the Midst of COVID-19 Pandemic". An online survey method was adopted to gather the responses from 318 numbers of student-teachers of different teacher education programs from different states of India by using a self-developed questionnaire. A purposive sampling technique was adopted. Only 35% of student teachers are found to be proficient in digital skills and the majority feel that online classes are lacking proper teacher-student and student-student interaction. A significant percentage of student teachers are found to feel stressed isolated and poor confidence in the online platform of learning and are not agreeing that curriculum can be effectively transacted through online mode.

The review of the previous study has shown several studies have been conducted to identify and assess the attitude of e-learners and e-teachers towards e-learning in a normal situation. Before the Covid situation, teaching through the virtual platform gained popularity in the field of distance education & higher education. But in school education, virtual teaching platforms were not used too much before the Covid situation. Now, the Covid situation

made us realized the need for virtual interaction between students and teachers to complete the course in time. So, curiosity has arisen in the mind of the investigator to study the attitude of secondary school teachers towards virtual teaching during Covid 19 lockdown. The present investigator does not found a single study on attitudes of school teachers towards virtual teaching during the Covid-19 pandemic situation at the North Twenty Four Pargana district in West Bengal.

### PURPOSE AND HYPOTHESES

This study intended to reveal the attitudes of secondary school teachers towards virtual teaching during the lockdown in West Bengal and examine the interactions between their attitudes and their gender, teaching experience as well as academic qualifications. In the light of the previous studies the following hypotheses were identified to be tested:

1. (H<sub>1</sub>) There is no significant difference of attitudes between male and female secondary school teachers towards virtual teaching
2. (H<sub>2</sub>) There is no significant difference of attitudes between virtual teaching and teaching experience of secondary school teachers towards virtual teaching
3. (H<sub>3</sub>) There is no significant difference of attitudes between virtual teaching and academic qualification of secondary school teachers towards virtual teaching

### METHOD

A descriptive cross-sectional study was conducted regarding teacher's attitudes towards e-learning during lockdown at Gaighata Block of North 24 Parganas in West Bengal. A convenient sampling technique was used to select the participants from seven secondary schools for the study. A self-report attitude scale was used to collect data. It consisted of 16 items except for demographic questions. 7 of the 16 items were negatively worded and were reversely scored.

Since with social distancing keep in mind, face-to-face data collection is not possible, data has been collected with the help of Likert-type attitude scale using Google Form during Covid-19 pandemic lockdown. The scale was based on a 5-point Likert scale ranging from 1=strongly disagree, 2=disagree, 3=Somewhat agree, 4=agree to 5=strongly agree. The period of study is the month of September 2020. After validation of content from the prominent educational experts and experts in the virtual platform, a pilot test was run on forty-five secondary school teachers before the final administration of the instrument. As a result of the reliability of analysis of the instrument, the Cronbach's alpha was found as 82.39. The norm of the scale is also determined using percentile. Those who scored more than 62 and above were considered to have a high positive attitude and those who scored between 36 to 61 were considered moderate attitude and finally, those who scored less than 36 were considered negative attitudes towards e-learning during the lockdown. Independent T-test and ANOVA were applied for determining the perceptions of school teachers towards e-learning.

### RESULTS

Table 1 reveals that the mean attitude of the school teachers' towards online teaching to be 46.37 which indicates a moderate level attitude towards e-learning ( $M= 46.37, N= 126$ ) during the lockdown.

**Table 1**  
Attitude Level of School Teachers towards Online Teaching

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Status</b>
Level of Attitude	126	46.37	17.830	Moderate

On the other hand, as can be observed from the Table 2, **gender** of the teachers surveyed has no effect on the attitudes. Namely, statistically no significant difference was observed between the secondary school male ( $M = 48.59, SD = 16.87$ ) and female ( $M = 43.78, SD = 18.70$ ) teachers' attitudes towards online teaching ( $t = 1.518, p = 0.132, \alpha = 0.05$ ). However, the mean score for males and females indicates that male teachers developed more favourable attitudes towards virtual teaching than female teachers during the lockdown.

**Table 2**  
Difference between male and female teachers' attitudes

Gender	N	Mean	Std. Deviation	Std. Error Mean	t value	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Male	68	48.59	16.87	2.04	1.518	124	.132	4.812	3.170
Female	58	43.78	18.70	2.45					

In terms of **teaching experience**, initial descriptive statistics from the Table 3 shows that differences exist among the three categories of teaching experience. Less experienced teachers' have shown a greater positive attitude towards e-learning than more experienced teachers. F value also shows that the differences are statistically significant as a whole as the p-value is less than .05 ( $F=6.86, p<.05$ ). The Tukey post hoc test has been further employed to ascertain which two categories out of three categories of teaching experience differ significantly. The Table 4 presents that there is a statistically significant difference between the attitude of within 5 years experienced teachers' and above ten years experienced teachers' ( $p = .001$ ). However, there are no differences between the attitude of within five years experience teachers & between five to ten years experience teachers, ( $p = 0.139$ ), as well as between above ten years experienced teacher and five to ten years experienced teachers' ( $p= 0.192$ ).

**Table 3**  
Differences in attitudes of the teachers based-on their teaching experiences

Teaching Experience	Descriptive			ANOVA					
	N	Mean	Std. Deviation	Groups	Sum of Squares	df	Mean Square	F	Sig. (2-tailed)
Within 5 Years	35	54.37	17.54	Between Group	3988.81	2	1994.40	6.862	.001
5-10 Years	40	46.83	16.51						
Above 10 Years	51	40.53	17.11	Within Group	35750.65	123	290.65		
Total	126	46.37	17.83	Total	39739.46	125			

**Table 4**  
Tukey post hoc test for multiple comparisons among the teaching experience categories

(I) Teaching Experience	(J) Teaching Experience	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Within 5 Years	5-10 Years	7.546	3.946	.139	-1.82	16.91
	Above 10 Years	13.842*	3.742	.001	4.96	22.72
5-10 Years	Within 5 Years	-7.546	3.946	.139	-16.91	1.82
	Above 10 Years	6.296	3.601	.192	-2.25	14.84
Above 10 Years	Within 5 Years	-13.842*	3.742	.001	-22.72	-4.96
	5-10 Years	-6.296	3.601	.192	-14.84	2.25

\*The mean difference is significant at the 0.05 level.

In terms of **academic qualification and attitudes**, initial descriptive statistics from above table 5 show that the attitude of both honours graduate and master degree scale holding teachers' are greater attitude than the pass graduate scale holding teachers'. However, honours graduate and master degree scale holding teachers have shown equal interest in online teaching. But, the F value does not show any statistically significant differences among the categories ( $F=0.992, p>.05$ ).

**Table 5**  
Differences of between attitudes of teacher and their academic qualifications

Qualification	Descriptive			ANOVA					
	N	Mean	Std. Deviation	Groups	Sum of Squares	df	Mean Square	F	Sig. (2-tailed)
Pass Graduate	48	43.52	18.67	Between Group	630.77	2	315.38	.992	.374
Honours Graduate	32	48.13	17.94						
Masters	46	48.13	16.82	Within Group	39108.69	123	317.95		
<i>Total</i>	<i>126</i>	<i>46.37</i>	<i>17.83</i>	<i>Total</i>	<i>39739.46</i>	<i>125</i>			

### CONCLUSION

After critical analysis of collected data from secondary school teachers, it can be concluded that the attitude towards online teaching during COVID-19 Pandemic is not satisfactory at all. The cause behind the moderate attitude of school teachers is about their e-learning skills. Having no prior experience about online teaching and feeling uncomfortable with ICT could also be reasons behind the moderate level of attitudes towards online teaching. The study found that gender, teaching experience were statistically significant with the future use of e-learning. As the paradigm shifts from traditional teaching methods to technology-enabled learning, instructors must be well prepared to utilize new technologies to meet the needs of all students (Marzilli et al., 2014).

The result of this study indicated that male teachers developed more favourable attitudes towards online teaching than female teachers during the lockdown. This finding is varying from the finding of some previous studies. For example, Alenezi (2012) reported more positive perceptions towards the e-learning among females than males. On the other hand, the finding of this study is similar to the finding of Alenezi's study which proved that the faculty members who had less teaching experience had a stronger perception than those who had been teaching for more than 10 years. This study also revealed that there was no significant difference in the attitude of secondary school teachers towards online teaching in terms of academic qualification during the lockdown. A similar view expressed by Alenezi (2012), who found no significant relationship between a faculty member's academic degree and his or her perception of e-learning. According to a survey by Al-Sarani (2010), the level of education seemed to have some effect on faculty members' perceptions of e-learning, but to a lesser extent.

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