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A STUDY OF SCHOOL TEACHERS' AWARENESS AND EXPERIENCE TOWARDS ONLINE TEACHING LEARNING PROCESS DURING COVID 19 LOCKDOWN

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ABSTRACT

Online mode of learning requires new type high-tech infrastructure, compatible digital gadgets, high speed and affordable internet connectivity and most importantly technical know-how to use the technology. It was very challenging to cope with the sudden change in teaching- learning pattern caused by COVID-19 lockdown. This study tries to investigate the awareness, experiences and identify the challenges faced by school teachers in Himachal Pradesh during the online teaching learning process. This is primary data based study information provided by school teachers through Google Forms. The study reveals that despite advantages of online teaching learning like flexibility, students' friendly, creative etc. There is lack of face to face interaction, problem of internet connectivity, absenteeism and difficulty in students' evaluation process.

Key Words: Covid-19, Pandemic, Lockdown, Curricula, Online-Learning,

1. INTRODUCTION:

Reaching students through live classes both educational institutions and students require high speed internet, infrastructure etc. Online education is not just oral presentation of content by teachers through mobile/laptop/computer or it's not listing at other end by a student but it posed many challenges right from no experience to conduct/attend live class by teacher and student, to lack of early preparation or support from educational technology teams.(Wang et al.2020). Studies reveals that teachers and students have faced many difficulties during online learning due to lack of technical knowledge, unavailability of compatible digital devices, unaffordable internet data

plans ,high speed internet connectivity problem, lack of proper classroom type environment at home etc

Sudden change posed by Covid-19 lockdown in the teaching/ learning process from traditional classroom teaching to online classes had large implications and raised new challenges for the whole education system and particularly for the school teachers and their students. The closure of 1.5 million schools due to pandemic and lockdowns in 2020 has impacted 247 million children enrolled in elementary and secondary schools in India (UNICEF, 2021). Here through the present study we have tried to investigate the awareness, experiences and identify the challenges faced by the teachers regarding online education during Covid-19 pandemic.

Covid-19 pandemic has affected every aspect of human life across the globe and India is no exception. Education system is one of the most affected areas and subsequent lockdowns jeopardize the academic calendars. To continue the curricula most of the educational institutions shifted from traditional face-to-face and blackboard-chalk teaching- learning system to online learning platform which was entirely new to Indian teachers and learners. Successive waves of Covid-19 pandemic have affected mankind in every aspect in various ways. The biggest challenge in front of the governments was to save precious human life and keeping it in mind all the countries across the globe resorted to imposing strict lockdowns to contain the spread of the virus. Lockdowns in turn disrupted every aspect of human life and education was one of the most affected areas. Although, in India, many sectors were reopened in a phase wise manner, educational institutions remained closed for almost two years as it was very difficult to follow strict Covid-19 protocol behaviour in educational institutions.

Since the whole world was under lockdown, e-learning was the best and the only option left in the hands of educational institutions to impart education. Educational institutions worldwide have attempted to apply educational technology for providing synchronous or asynchronous online learning (Ynung-Hsiang Hu 2021). In India we had never taken to online education except few exceptions on such a mass level before but the pandemic forced us to it sooner than we thought we were ready to adopt it. Educational institutions have tried many methods to provide online education. During the beginning of lockdown educational institutions continued the curricula through recorded classes, uploading study material in social media or websites and later on they adopted the other methods of live classes/online classes.

2. REVIEW OF LITERATURE

Joshi et al. (2021), found four main barriers faced by teachers during online teaching and assessments of students under their home environmental conditions. These were lack of basic facilities, external distraction, family interruption during teaching and conducting assessment. Further teachers also faced other difficulties like lack of training, lack of technical support and limited knowledge of online platforms. **Khan et al. (2021)**, in their study concluded that despite enhanced technological literacy of students, saving in time, flexibility in time and space still online learning is not comfortable compared to offline classes because of lack of personal interaction with teachers, difficulty in taking online classes with mobile phones and difficulty in conducting practical works. **Chandwani et al. (2021)**, in their study found that in rural areas either there is lack of or have poor internet connectivity problem and for most of the students' smart gadgets are out of reach. So it was very difficult to impart online teaching in such conditions particularly in remote areas. **Shaheen (2021)**, highlighted many challenges faced by teachers in online teaching during pandemic. Among these problem of time management, lack of parental cooperation, problem to adapt new technology, indiscipline, lack of confidence and lack of appropriate resources were prominent ones. **Singh et al. (2022)** revealed that due to many challenges like network issues, lack of professional environment at home, lack of teaching material and personal computer/laptop at home, the effectiveness of virtual classrooms is not as per the expectations. Further these issues need to be addressed to make virtual education more effective and fruitful. **Dayal (2023)** observed that although teachers adapted quickly online teaching methods with the help of institutional training and self-learning tools. But due to lack of internet connectivity, smart devices accessibility and physical and mental health issues teachers found dissatisfied with online teaching methods. Tayagi et al. (2020) revealed that online teaching in Indian schools is still in its infancy and it is gradually becoming popular as it is the need of the hour. On the one hand technical issues and connectivity are the biggest challenges for both teachers and students and on the other hand absence of face-to-face interaction affects the teaching learning. Pravat Kumar (2020) found that students felt happy to attend online classes during lockdown despite some difficulty in joining online classes in the beginning but got acquainted later on. But at the same time students faced the difficulty of having technical knowledge and inability to afford required technical gadgets with high speed internet facility. Naik et al. (2020) found that more than 60% of students are not ready

for online classes due to lack of technical, infrastructural, high speed internet access, power supply and limited network data per day. It was also found that students found it difficult to understand problematic subjects compared to theoretical subjects. UNESCO (2021) concluded that in most of the states the majority of the students are falling behind compared with where they should be during the Covid-19 lockdown in India because families did not have access to digital devices and e-learning tools. Bast, Felix. (2021) found that students of urban areas were more receptive towards online learning during COVID-19 lockdown in India than students of rural areas due to digital device and technology knowledge gap. Sandeep et al. (2021) concluded that though online education has raised many challenges but also created many opportunities. India should develop concrete strategies to ensure that all children must be able to get viable access to online education and e-learning practices should continue even after lockdown. National Achievement Survey (2021) in Uttar Pradesh found that 85% students of class 8th had no access to digital devices at home and 98% experienced anxiety and fear of the same class. On the other hand this percentage is 20% and 42% respectively for class 10th students. Muthu prasad etc. (2021) found that the majority of students (above 70%) preferred online line classes to manage the curriculum during Covid-19 pandemic. The students opined that flexibility and convenience of online classes makes it more attractive but at the same time internet connectivity and availability of digital devices are the biggest challenges for the students to make use of online learning particularly in rural areas. Rahman & Afzalur. (2021) revealed an unsatisfactory picture of emergency online learning implemented overnight during the lockdown period of Covid-19. It is due to poor internet connectivity, insufficient IT infrastructure, high cost of internet data plans, lack of proper study environment at home, lack of technical and pedagogic skill of teacher and students comforts. A large IT infrastructure is required to be installed irrespective of geographical locations and students belonging to the poor families require support from the government in access to compatible devices and data plans to take the benefit of e-learning. Kamal & Asheref. (2021) indicated that on an average teachers have positive perception about online teaching for reducing the learning gap for shaping the future of students but nevertheless they faced several difficulties in online teaching like technical obstacles, difficulty in conducting online exams and assessment etc.

3. RATIONALE OF THE STUDY

COVID-19 pandemic has significantly transformed every aspect of human beings. Transformation in the education system is the one of those changes which this pandemic has brought. From literature review it is evident that education institutions have forced the teachers and students toward online learning through different modes to continue their set curricula. It has completely changed our traditional way of teaching and learning. Modern IT techniques and electronic gadgets have suddenly replaced traditional chalk-black boards and face to face teaching learning for which both our teachers and students were not prepared particularly at school level. So there was a need to study the experiences and challenges which school teachers experienced towards online teaching-learning during COVID-19 pandemic. The literature review reveals that although different studies have been conducted on this topic, no such specific study was undertaken to analyse the experiences and challenges of school teachers during online teaching in Himachal Pradesh which is a geographically difficult terrain state. The findings of this study may be helpful to the policy makers to bring required makeover in the education sector to firmly face such challenges in future.

4. OBJECTIVE OF THE STUDY

The main objective of this study was to examine the school teachers' awareness, evaluate their experiences, recognize their challenges and identify the factors for adoption of e-learning during Covid-19 lock down in Himachal Pradesh.

5. RESEARCH METHODOLOGY

The study investigates the experiences and challenges of Himachal Pradesh school teachers toward the online teaching learning process during COVID-19. In this study information has been collected from both primary and secondary sources. Convenient sampling was used to contact school teachers of Bilaspur district in Himachal Pradesh. Structured questionnaire in Google Form was used to get the required information from the target population. The whole questionnaire was divided into two parts. First part was concerned with demographic status and information and communications technology gadgets used by respondents and the second part was concerned with experiences and challenges faced by teachers during online teaching. Descriptive statistics such

as Mean, Standard Deviation, Skewness and inferential statistics Chi Square Test and ANOVA were used to analyse the collected data to reach meaningful conclusions.

6. RESULT AND DISCUSSION

6.1. Sample Profile

Demographic features of the respondents are presented in table1. In this study 67.5% are male and the rest are female teachers. Out of total respondents 39% teachers have more than 20 years teaching experience, 28.6% have 6-10 years and 19.5% have 11-15 years teaching experience. In this study the majority of teachers (83.1%) are post graduates while 6.5% and 1.3% are M. Phil and doctorate respectively. There are just 1.3% teachers that deal with pure numerical subjects, 39% teachers teach theory and practical, 28.6% theory and numerical and 31.2% teaches pure theoretical subjects. Majority of school teachers have basic knowledge of computers and have taken online classes during Covid-19 lockdown.

Table 1 Demographic profile of the target respondents

Gender

Gender	Frequency	Percentage
Male	104	67.5
Female	50	32.5
Total	154	100

Teaching experience

Teaching Exp.	Frequency	Percentage
up to 5 years	6	3.9
6-10	44	28.6
11-15	30	19.5
16-20	14	9.1
More than 20	60	39
Total	154	100

Qualification

Qualification	Frequency	Percentage
Graduation	8	5.2
Post-graduation	128	83.1
M. Phil	10	6.5
Doctorate	2	1.3
Other	6	3.9
Total	154	100

Nature of teaching subject

Subjects	Frequency	Percentage
Pure theoretical	48	31.2
Pure Numerical	2	1.3
Theory and numerical	44	28.6
Theory and Practical	60	39
Total	154	100

Basic knowledge of computer

Computer Knowledge	Frequency	Percentage
Yes	124	80.5
No	30	19.5
Total	154	100

Experience of online classes

Online Class	Frequency	Percentage
Before Covid-19	38	24.7
During Covid-19	116	75.3
Total	154	100

Source: Data compiled through questionnaire using Google form.

6.2. Awareness and Experience of School Teachers towards Online Teaching Learning during Covid 19 Lockdown

Reasons for adoption of online classes portray that 63.6% school teachers have adopted online teaching during Covid-19 by self motivation. It is followed by the teachers' i.e.16.9% who adopted

the same as it was made mandatory by the institution. There were 15.6% teachers who started online teaching on the demand of the students (Table 2).

Table 2 Reasons for adoption of online teaching- learning process

Reasons	No. of respondents	Percentage
It was made mandatory by the institution	26	16.9
Self-motivation	98	63.6
Demand of students	24	15.6
Inspired by colleagues	2	1.3
Other	4	2.6
Total	154	100

Source: Data compiled through questionnaire using Google form.

Table 3 reveals that Google meet was the most popular mode of teaching and learning among school teachers during Covid-19 lockdown. It was used by 92.2% of school teachers to interact with their students.

Table 3 Mode of teaching- learning process

Mode of learning	No of respondents	Percentage
Zoom	4	2.6
Google meet	142	92.2
WhatsApp	2	1.3
YouTube	6	3.9
Other	-	-
Total	154	100

Source: Data compiled through questionnaire using Google form.

Actual experience of school teachers regarding online teaching –learning is manifested in table 4. In this regard potential benefits of e-learning were included in questionnaire and response was sought at five point Likert scale, ranging from strongly disagree (1) to strongly agree (5). This response was further analyzed with the help of descriptive statistics i.e. mean, SD and SK. Finally the chi square test of goodness of fit was applied to test the significance. From the table it was observed that regarding all potential benefits of e learning included in the table, the mean score is higher than the standard average score (3) at five point likert scale. It revealed that school teachers either agreed or strongly agreed with the benefits of e-learning. Standard deviation was found low with negative SK. It also satisfies our conclusion. Finally the application of the chi square test

portrays that this difference is significant at 5% level of significance. Since p value is less than level of significance.

Table 4 Descriptive statistics regarding actual experience of school teachers about online classes

Indicators of actual experience about online classes (after joining online classes)	Mean	SD	SK	P Value
Online teaching-learning was flexible and permitted you to educate your students as per your own speed	3.9	.67	-.42	P<0.05
Online teaching-learning helped you to increase your technological skills thereby your students	4.1	.62	-.73	P<0.05
Online teaching-learning is students friendly and they enjoyed it more	3.7	.83	-.77	P<0.05
Online teaching-learning helped me to discuss syllabus contents in better way	3.8	.81	-.59	P<0.05
Online teaching-learning stimulated my desire to learn new things	4.2	.64	-.80	P<0.05
Online teaching-learning is teacher friendly and I enjoyed it more	3.8	.83	-.61	P<0.05
Online teaching-learning was interesting and creative	4.0	.87	-1.03	P<0.05
Online teaching-learning was able to complete my syllabus with in time	4.0	.78	-.56	P<0.05

Source: Data compiled through questionnaire using Google form.

In the light of potential benefits of e-learning, efforts have also been made to analyse challenges of e-learning. For this purpose potential challenges of e-learning included in table 5 were developed and school teachers' response at five point likert scale was analysed with descriptive statistics and chi square test of goodness of fit. Descriptive statistics viz. mean, SD and SK revealed that the majority of school teachers either agreed or strongly agree with mentioned problems of e-learning as the mean score is higher than the standard average i.e.03 with low SD and negative SK. Chi square value (P value) was found significant at 5% level of significance. It also supports our inference that the opinion of teachers is not equally distributed. But it is distributed more toward the higher end.

Table 5 Descriptive statistics regarding challenges during online classes

Indicators regarding challenges during online teaching-learning process	Mean	SD	SK	P Value
Problem of network connectivity	4.1	0.8	-1.6	P<0.05
Lack of personal proper e-learning device	3.6	1.0	-0.8	P<0.05
Lack of knowledge for proper use of e-learning device	3.3	0.9	-0.7	P<0.05
Lack of face to face interaction	4.0	1.0	-1.1	P<0.05
Problem of explaining numerical content of the syllabus to the students	3.6	1.0	-0.7	P<0.05
Absenteeism of students	4.2	0.8	-1.5	P<0.05
Lack of personal touch during e-learning	3.8	0.9	-1.1	P<0.05
Lack of discipline in the class	3.3	1.1	-0.4	P<0.05
Problem of giving assignments and conducting test and practical	3.7	0.9	-1.1	P<0.05
Problem of facilities available in your institute to meet online education needs (i.e. Computer, projector etc.)	3.5	1.0	-0.8	P<0.05

Source: Data compiled through questionnaire using Google form.

The analysis in table 6 reveals that only 7.8% school teachers are satisfied over 80% from their online teaching during Covid-19 lockdown. Whereas 28.6% are satisfied between 60-80% and 50.6% are satisfied with the same between 40-60%.

Table 6 Satisfaction of school teachers towards online teaching-learning process during Covid-19 lockdown

Level of satisfaction	No. of respondents	Percentage
More than 80%	12	7.8
60-80%	44	28.6
40-60%,	78	50.6
20-40	20	13
Below 20%	-	
Total	154	100

Source: Data compiled through questionnaire using Google form.

6.3. Comparison Between Satisfaction Levels Towards Online Teaching Learning Process Across The Demography Of The School Teachers

Gender: There is significant difference between gender of school teachers and satisfaction toward online teaching during Covid-19 as P value is significant at 5% level of significance. Female teachers are more satisfied than male teachers (Table 7). The difference in mean score of females was found statistically significant ($P < 0.05$).

Table 7 Comparison between gender of school teachers and satisfaction level towards online teaching –learning process during Covid-19 lock down

Gender	Comparison on the basis of gender and satisfaction level				ANOVA	
	N	Mean	SD	S Error	F	P Value
					7.5	0.007
Male	104	3.19	0.81	0.08		
Female	50	3.56	0.70	0.10		
Total	154	3.31	0.79	0.07		

Source: Data compiled through questionnaire using Google form.

$P < 0.05$

Educational level: the difference between mean scores across different educational levels and satisfaction level was found statistically significant ($P < 0.05$) and it was found more in highly educated teachers (table 8).

Table 8 Comparison between educational level of school teachers and their satisfaction level towards online teaching –learning process during Covid-19 lock down

Educational level	Comparison between educational level and satisfaction level				ANOVA	
	N	Mean	SD	S Error	F	P Value
					4.82	0.001
Graduate	8	3.00	0.75	0.26		
Post graduate	128	3.23	0.72	0.06		
M. Phil	10	4.20	0.78	0.25		
Doctorate	2	4.00	0.00	0.00		
Other	6	3.66	1.36	0.56		
Total	154	3.31	0.79	0.06		

Source: Data compiled through questionnaire using Google form.

$P < 0.05$

Teaching experience: The difference between mean scores of teaching experience and satisfaction level was found statistically significant ($P < 0.05$) and it was found more in high newly appointed teachers (table 9).

Table 9 Comparison between teaching experience of school teachers and their satisfaction level towards online teaching –learning process during Covid-19 lock down

Teaching experience	Comparison between teaching experience and satisfaction level				ANOVA	
	N	Mean	SD	S Error	F	P Value
					2.46	0.048
up to 5 years	6	3.66	1.03	0.42	2.46	0.048
6-10	44	3.50	0.78	0.12		
11-15	30	3.26	0.58	0.11		
16-20	14	3.57	0.75	0.20		
More than 20	60	3.10	0.83	0.11		
Total	154	3.31	0.79	0.07		

Source: Data compiled through questionnaire using Google form.

$P < 0.05$

Nature of teaching subject: The difference between mean scores of nature of teaching subject and satisfaction level was found statistically insignificant ($P > 0.05$) and it was found almost equal in theoretical, numerical and practical subjects (table 10).

Table 10 Comparison between nature of teaching subject and satisfaction level towards online teaching – learning process during Covid-19 lock down

Nature of teaching subject	Comparison between nature of teaching subject and satisfaction level				ANOVA	
	N	Mean	SD	S Error	F	P Value
					1.38	0.251
Pure theoretical	48	3.46	0.65	0.09	1.38	0.251
Pure Numerical	2	3.00	0.00	0.00		
Theory and numerical	44	3.14	0.76	0.12		
Theory and Practical	60	3.33	0.91	0.12		
Total	154	3.31	0.80	0.06		

Source: Data compiled through questionnaire using Google form.

$P > 0.05$

Experience of online classes: The difference between mean scores of experience of online classes and satisfaction level was found statistically significant ($P < 0.05$) and it was found more in those teachers who had attended online classes before covid-19 lock down (table 11).

Table 11 Comparison between experience of online classes and satisfaction level towards online teaching –learning process during Covid-19 lock down

Experience of online classes	Comparison between experience of online classes and satisfaction level				ANOVA	
	N	Mean	SD	S Error	F	P Value
Before Covid-19	38	3.63	0.99	0.16	8.54	0.004
During Covid-19	116	3.20	0.69	0.06		
Total	154	3.31	0.79	0.06		

Source: Data compiled through questionnaire using Google form.

$P < 0.05$

Basic knowledge of computer: The difference between mean scores of basic knowledge of computer and satisfaction level was found statistically insignificant ($P > 0.05$) and it was found almost equal in both cases (table 12).

Table 12 Comparison between basic knowledge of computer and satisfaction level towards online teaching –learning process during Covid-19 lock down

Basic knowledge of computer	Comparison between basic knowledge of computer and satisfaction level				ANOVA	
	N	Mean	SD	S Error	F	P Value
Yes	120	3.30	0.77	0.06	0.027	0.87
No	30	3.33	0.88	0.16		
Total	154	3.31	0.79	0.06		

Source: Data compiled through questionnaire using Google form.

$P > 0.05$

7. CONCLUSION

Online teaching learning process is an emerging concept and need of the time. During Covid-19 lockdown this concept was adopted at mass level in India as well as in Himachal Pradesh to stop the gap in teaching learning process. During Covid-19 lock down in Himachal most of the school

teachers conducted online classes for the first time using Google meet app. School teachers have observed flexibility, students friendly, creative and ability to create desire to learn new things as benefits of online teaching learning process. Despite this, school teachers have also faced many challenges in this process. Problem of network connectivity, lack of face to face interaction, absenteeism of students, lack of personal touch during e-learning, problem of giving assignments and conducting tests and practical were prominent ones. During the lockdown period most of the school teachers were found 40-60% satisfied with online teaching. This study reveals a significant difference between the mean score of school teachers' demography (i.e. gender, educational qualification, teaching experience and experience of online classes) and their satisfaction level towards online classes. Despite it, there is an insignificant difference in the mean score of the nature of the teaching subject, basic knowledge of computers and satisfaction level towards online classes.

8. SUGGESTIONS AND IMPLICATIONS

Study has exposed the deficiencies in the online teaching learning process during the lockdown which was imposed to curtail the spread of COVID-19. To improve the quality of online teaching-learning process basic infrastructure, high speed internet connectivity and reduction of digital divide between remote rural areas and cities need to be enhanced with Govt. support. Proper planning and arrangements should be ensured for continuous teacher training to update teachers with rapidly changing e-learning technology. Even in normal situations there should be a blend of both classroom and virtual teaching-learning. The government must make more budgetary provisions for improvement of infrastructure suited for 5G high speed internet technologies. Government schools which are the backbone of school education in rural areas must be equipped with modern technology and electronic gadgets.

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