

# Embracing Blended Learning Approach for Professional Growth of in-service School Teachers Post Pandemic of COVID-19

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## Research Article

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# Abstract

The impact of the pandemic has been felt through all sectors of the global society including the field of education. The pandemic is a strong indication of the fact that things will not be the same as they were before. Similarly, the educational institutes that were working regularly would also undergo a change in the methodologies that they will adopt post-pandemic. Many research scholars and educationalists believe that a blended learning approach will become a reality as a dominant pedagogy for the teaching-learning process. The current situation demands a proactive strategy where not only students but teachers are also considered as learners while talking about their professional growth through seminars, conferences and refresher courses. The present study lays emphasis on embracing the blended learning approach in professional development training courses for school teachers which will provide an opportunity to inculcate educational programs across disciplines in Indian as well as global communities. The study consists of 169 in-service school teachers from India. Simple random technique of sampling was used to collect data. The attitude of school teachers towards blended learning and its six dimensions viz. learning flexibility, online learning, study management, technology, classroom learning and online interaction was studied. Also, the effect of gender and location of educational institutes where they teach was considered. Analysis for the testing research hypothesis was done using the IBM Statistical Package for Social Scientists (SPSS-26). The results indicated that both male and female teachers have similar attitudes towards blended learning but their attitudes varied while considering the six dimensions. Also, it was found that school teachers teaching in urban areas had a more positive attitude towards blended learning and its dimensions as compared to those teaching in rural areas. Implementation of blended learning for professional growth of school teachers post pandemic will push the boundaries of learning by creating opportunities for collaboration of various educational societies throughout the globe, enhance constructivist learning and also help in following social norms set to fight against COVID-19.

# Introduction

The year 2020 has brought unfamiliar situations for the entire world due to the outbreak of COVID-19 pandemic. Education sector too has been severely impacted (BBC News, 15 Feb 2020; Reid, David, 30 January 2020). Deliberations of whether or not to reopen educational institutions are still going on. During these testing times, the teacher community is striving to adapt with the new dimensions of teaching-learning in order to best help their students and the institutions. Teachers are themselves experimenting with new forms of online learning and taking training from several premium institutions across India who are working towards making learning digital. COVID-19 which has hit the world from November 2019 with a severity increasing since January 2020 and is still existing throughout the globe. COVID-19 is a disease caused by a new strain of coronavirus. 'CO' stands for corona, 'VI' for virus, and 'D' for disease. Formerly, this disease was referred to as '2019 novel coronavirus' or '2019-nCoV.' (UNESCO, WHO, January 2020)

Blended learning is a methodology that has been introduced over a decade ago and is being used in the field of education that combines (or blends) online learning with traditional place-based classroom methods (face-to-face learning). It requires the physical presence of both teacher and student, with some elements of student control over time, place, path or pace and also, educational materials and technology for online interaction (Friesen, Norm 2012). While students must still attend physical schools with a teacher present, face-to-face classroom practices are combined with computer-mediated activities regarding content and delivery (Strauss, Valerie, 2012) to enhance the teaching-learning experience and to encourage the students to explore more to the given content.

Since, end of march 2020, several apex educational institutions across India are providing training to teachers for implementing e-learning through webinars or workshops. During the time of Lockdown 2020, the tables have turned by making the teachers as the learners. Hence, the teachers who have attended or conducted these online training programs and webinars have not just experienced the use of online tools and softwares as teachers but also have had an experience of using these as a student. Considering the role switch that has occurred, the present paper emphasizes the readiness of these in-service school teachers towards adopting Blended Learning approach as one of the models that would be preferred in most of the educational institutes once they reopen post-pandemic of COVID-19. Blended learning has been implemented in various institutions as a constructivist pedagogy across the globe but very few institutes have implemented it in Indian educational scenario. Blended learning being one of the approaches suggested where online and offline strategies can be used together for teaching-learning along with following social distancing norms like work from home, avoiding gathering. Along with being working-from home, especially in an Indian house-hold, the role of females varies comparative to that of males. Teaching profession, usually seen dominant in females, has a different experience of blended learning. With managing time to experiment new technologies and balancing home related chores along with completing work related tasks leads to a different attitude towards this mode of education; teachers are already overwhelmed with work. Similarly, the vibe of the city along with the support of technology also sometimes makes a difference in the attitude of the teachers. This paper emphasizes the comparison of the attitude of male and female in-service school teachers towards implementing blended learning post-pandemic for their professional growth. The fact cannot be ignored, that basic technological help is required while talking about blended learning. Urban and Rural areas in India differ in technical advancement and facilities. Therefore, the paper also deals with the comparison of the attitude of teachers teaching in educational institutes located in Urban and Rural regions of India as well.

## **Background**

For blended learning, the instructor's role in an online class environment is a significant factor for learners' successful and positive learning experiences. Teaching presence and teaching immediacy are found to be significant factors in traditional face-to-face class settings (Witt et al, 2004). It is important to study the influences of these two important factors in an online class environment (Baker, 2010). Next aspect that one should consider is the engagement of students in activities which are fairly easy in face-to-face set-up and equally challenging in online form of learning.

La Roche and Flanigan (2012) defined student engagement as activities that involve students' 'active cognition processes.' Hence, creating and delivering instruction and learning activities and assignments aimed toward involving learners in online class environments is required for student engagement in an online class context. The challenge of keeping our students engaged and motivated is common across grade levels, subject matter, and all types of institutions and courses. Online courses, however, present a special concern. With students and faculty in contact only via the Internet several new challenges arise. Grandzol (2006) coined that empirical evidence of best practices are the most effective in finding out strategies that help create engaging and interesting online courses. Garrison suggests that teaching presence in online learning environments is an important factor influencing learners' experiences. "The consensus is that teaching presence is a significant determinate of student satisfaction, perceived learning, and sense of community" (Garrison, 2007).

These challenges and conditions are faced globally by apex institutions of the first world countries where the high speed internet, tablet/laptop are basic essentials. Several Indian institutions are following global curriculums and have picked up the cur of blended learning form their international parent set-ups. For the local schools, in the present situations, new mode of learning environment is a need of hour. Blended Learning is yet an emerging trend of teaching where the teachers themselves have not thoroughly experienced it. Blended learning in Indian context refers to a strategic and systematic approach to combining times and modes of learning, integrating the best aspects of face-to-face and online interactions for each discipline, using appropriate ICTs (Pandey, 2019). In essence, there is a blending of flexible learning and teaching experiences that may involve assessment, teacher/student communication, student activities, teaching activities and students' resources. For this, understating the readiness of teachers is pivotal for the success of this change.

## Research Methodology, Sampling And Tool

The present study adopted a descriptive survey method for collecting data. The sample was selected by simple random technique. The total sample consisted of 169 in-service school teachers teaching at pre-primary, primary and secondary sections from all over India. Data was collected by circulating google forms in order to collect data during COVID 19 pandemic. Out of the total in-service school teachers 145 were females and 24 were males and 148 were from urban area and 21 were from rural area. The questionnaire for the present study was adapted from Birbal et al. (2018) study on learners' readiness for blended learning. The instrument consisted of 34 items that measured learners' attitudes towards six different aspects of blended learning: learning flexibility (4 items); online learning (8 items); study management (6 items); technology (4 items); classroom learning (5 items) and online interaction (7 items). Relevant descriptive and inferential analysis was done using IBM Statistical Package for Social Scientists (SPSS-26) for hypothesis testing. The table 1 below represents the sample size of the study based on gender and location of educational institutes.

**Table 1 Sample Size for the Present Study**

		N	Total	Percentage (%)
Gender	Male	145	169	85.80
	Female	24		14.20
Location of institute	Urban	148	169	87.57
	Rural	21		12.43

The above figure 1 represents the pie chart of sample size of in-service school teachers based on gender. Out of 169 teachers 85.80% were Female teachers and 14.20% were Male teachers.

The above figure 2 represents the pie chart of sample size of in-service school teachers based on location of educational institutes. Out of 169 teachers 87.57% teach in educational institutes located in Urban areas and 12.43% teach in educational institutes located in Rural areas.

### **HYPOTHESIS TESTING AND INTERPRETATION:**

t test was used for testing the null hypothesis using IBM SPSS software (26). The following null hypothesis were framed for the present study:

**Hypothesis 1:** There is no significant difference in the attitude of male and female in-service school teachers towards blended learning and following six factors affecting it:

- learning flexibility
- online learning
- study management
- technology
- classroom
- online interaction

Table 2 represents the Attitude of Male and Female In-Service School Teachers towards Blended Learning and its Dimensions

**Table 2 Attitude of Male and Female In-Service School Teachers towards Blended Learning and its Dimensions**

	Gender	Mean	t value	Sig. (2-tailed)
BL	Female	125.5517	1.545	.124
	Male	133.5833		
F1	Female	14.8069	.416	.678
	Male	14.4583		
F2	Female	27.5379	2.666	.008*
	Male	30.8750		
F3	Female	19.3172	2.601	.010*
	Male	21.6667		
F4	Female	14.5793	1.086	.279
	Male	15.4583		
F5	Female	18.9310	.149	.882
	Male	19.0833		
F6	Female	30.3793	1.140	.256
	Male	32.0417		

(BL= Blended Learning, F1= Learning Flexibility, F2= Online Learning, F3= Study Management, F4= Technology, F5= Classroom Learning and F6= Online Interaction)

The t value for attitude of male and female in-service school teachers towards blended learning was found to be 1.54 and p value was found to be .124 which is not significant at 0.05 level and 0.01 level. Therefore, the null hypothesis is accepted for BL.

The t value for attitude of male and female in-service school teachers towards Learning Flexibility, Technology, Classroom Learning and Online Interaction was found to be .416, 1.086, .149 and 1.140 respectively and the p value was found to be .678, .279, .882 and .256 respectively which is not significant at 0.05 level and 0.01 level. Therefore, the null hypothesis is accepted for the above dimensions of blended learning.

The t value for attitude of male and female in-service school teachers towards Online Learning and Study Management was found to be 2.666 and 2.601 respectively and p value was found to be 0.008 and 0.010 respectively which is significant at 0.01 level. Therefore, the null hypothesis is rejected as far as the above two dimensions of blended learning are considered. The mean value for female in-service teachers towards online learning was 27.5379 and for males it was 30.8750. The mean value for female in-service teachers towards study management was 19.3172 and for males it was 21.6667. The mean score for male in-service teachers is greater than that of female in-service teachers with respect to online learning and study management. This indicates that male in-service school teachers have a higher attitude towards online learning and study management as compared to female teachers.

**Hypothesis 2:** There is no significant difference in the attitude of in-service school teachers teaching in educational institutes located in Urban and Rural areas towards blended learning and following six factors affecting it:

- learning flexibility
- online learning
- study management
- technology
- classroom
- online interaction

Table 3 represents the Attitude of In-Service School Teachers from Urban and Rural areas towards Blended Learning and its Dimensions

**Table 3 Attitude of In-Service School Teachers from Urban and Rural areas towards Blended Learning and its Dimensions**

	Location of Educational Institute	Mean	t value	Sig. (2-tailed)
BL	Rural	12.4286	2.052	.042*
	Urban	15.0878		
F1	Rural	27.6667	3.082	.002*
	Urban	28.0608		
F2	Rural	18.2381	.291	.771
	Urban	19.8514		
F3	Rural	13.0952	1.668	.097
	Urban	14.9324		
F4	Rural	17.5238	2.167	.032*
	Urban	19.1554		
F5	Rural	27.9048	1.517	.131
	Urban	31.0000		
F6	Rural	116.8571	2.022	.045*
	Urban	128.0878		

(BL= Blended Learning, F1= Learning Flexibility, F2= Online Learning, F3= Study Management, F4= Technology, F5= Classroom Learning and F6= Online Interaction)

The t value for attitude of in-service school teachers teaching in educational institutes located in urban and rural area towards blended learning was found to be 2.052 and p value was found to be 0.042 which is significant at 0.05 level. Therefore, the null hypothesis is rejected for BL. The mean value for in-service school teachers teaching in educational institutes located in urban area was 15.0878 and rural area was 12.428. The mean value for in-service teachers teaching in urban area is greater than that of those

teaching in rural areas. In other words, in-service teachers teaching in urban areas have much more positive attitude towards blended learning as compared to in-service teachers teaching in rural areas.

The t value for attitude of in-service school teachers teaching in educational institutes located in urban and rural area towards Learning Flexibility, Technology and Online Interaction was found to be 3.082, 2.167 and 2.022 respectively and p value was found to be .002, 0.032 and .045 respectively which is significant at 0.01 level and 0.05 level. Therefore, the null hypothesis is rejected for Learning Flexibility, Technology and Online Interaction. The mean value for in-service school teachers teaching in educational institutes located in urban area towards Learning Flexibility was 28.0608 and rural area was 27.6667. The mean value for in-service school teachers teaching in educational institutes located in urban area towards Technology was 19.1554 and rural area was 17.5238. The mean value for in-service school teachers teaching in educational institutes located in urban area towards Online Interaction was 128.0878 and rural area was 116.8571. The mean value for in-service teachers teaching in urban area is greater than that of those teaching in rural areas as far as Learning Flexibility, Technology and Online Interaction were considered. In other words, in-service teachers teaching in urban areas have much more positive attitude towards Learning Flexibility, Technology and Online Interaction as compared to in-service teachers teaching in rural areas.

The t value for attitude of in-service school teachers teaching in educational institutes located in urban and rural area towards Online Learning, Study Management and Class-Room Learning was found to be .291, 1.668 and 1.517 respectively and the p value was found to be .771, .097 and 0.131 respectively which is not significant at 0.05 level and 0.01 level. Therefore, null hypothesis is accepted. There is no significant difference in the attitude of in-service school teachers teaching in educational institutes located in Urban and Rural areas towards Online Learning, Study Management and Class-Room Learning.

## **Discussion And Conclusion**

The results from the present study indicates that both Male and Female in-service school teachers had no difference in their attitude towards blended learning. While considering the six factors affecting blended learning a difference in attitude was observed. Male and Female in-service school teachers had a similar attitude towards Learning Flexibility, Technology, Classroom Learning and Online Interaction. On the other hand, male in-service school teachers had a higher attitude towards online learning and study management as compared to female teachers. This could be because in a regular Indian household, the time to explore new things is comparatively more with men than that with women of the house. The study also reflected upon the attitude of in-service school teachers teaching in educational institutes located in Urban and Rural areas towards blended learning and the factors affecting it viz. learning flexibility, online learning, study management, technology, classroom and online interaction. It was found that in-service school teachers teaching in educational institutes located in Urban area varied significantly in their attitude towards Blended Learning as compared to those from Rural areas. The proposed reason for this could be the environment of the surroundings and the support, motivation and encouragement of the

affiliated institution to their teachers. Also, better facilities related to technology are more easily accessible in urban areas than rural areas. A difference in attitude was also observed between teachers teaching in educational institutes located in urban and rural area while considering the six factors affecting blended learning. No significant difference in the attitude of in-service school teachers teaching in educational institutes located in Urban and Rural areas towards Online Learning, Study Management and Class-Room Learning but a significant difference in the attitude of in-service school teachers teaching in educational institutes located in Urban and Rural areas towards Learning Flexibility, Technology and Online Interaction was observed. in-service teachers teaching in urban areas have much more positive attitude towards Learning Flexibility, Technology and Online Interaction as compared to in-service teachers teaching in rural areas. With the demanding parents of the urban areas and the competitive nature of the Educational Industry, the schools have to ensure that their teachers are sufficiently motivated and are well equipped with technological support. With no such competition seen in rural areas, the institution's agenda is to provide basic amenities and essential support to the teachers and students.

## List Of Abbreviations

COVID-19	Corona Virus Disease 2019
MOOC	Massive Open Online Courses
BL	Blended Learning
SPSS	Statistical Package for Social Scientists
FDPs	Faculty Development Programs
OER:	Open Educational Resources
IT:	Information Technology
S.D.:	Standard Deviation
r:	Pearson Moment Correlation
p:	Probability Value
F:	Factor

## Declarations

### Competing interests:

The authors declare that they have no competing interests.

### Authors' contributions:

RS identified the tool and PM made the online form for collecting data. Both RS and PM have distributed tool for data collection. PM did data sorting and RS did data analysis. RS and PM have collaboratively drafted the manuscript.

### **Acknowledgements**

Not applicable

### **Authors' information:**

RS holds a Ph.D. in Education and is a teacher educator engaged in training aspiring teachers in the metropolitan city of Mumbai. RS is affiliated with the full time as well as distance education institutions with an experience of over 5 years. PM is a Computer Scientist and an educationalist working in the field of Education for a premium Distance and Open Learning institution with an experience of over 11 years. She has knowledge and skills of two fields (Computer Science and Education) and is a Teacher Educator for aspiring Teacher Educators.

### **Disclosure of potential conflicts of interest**

The authors state that there are no conflicts of interest.

### **Research involving human participants and/or animals**

This article does not contain any studies involving animals performed by any of the authors.

### **Informed consent**

Informed consent was obtained from all individual human participants involved in the study.

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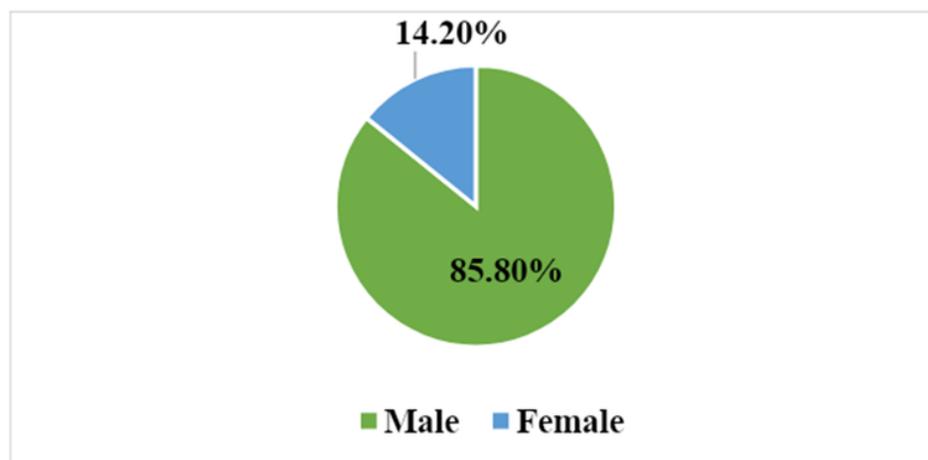
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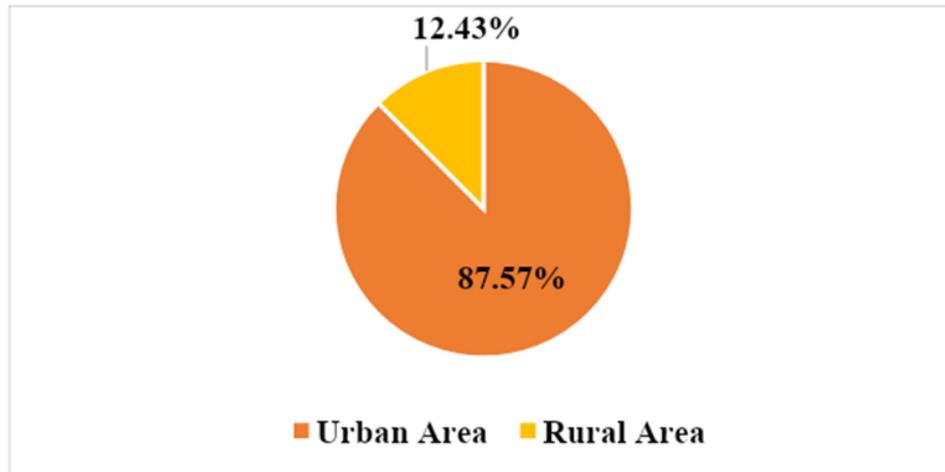
## Figures



**Figure 1**  
**Pie Chart Representing Sample Size Based on Gender**

**Figure 1**

Pie Chart Representing Sample Size Based on Gender



**Figure 2**

**Pie Chart Representing Sample Size Based on Location of Educational Institute**

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