Blended Learning: The New Normal Teaching - Learning Pedagogy Post COVID-19 Pandemic

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Abstract

The pandemic of COVID-19 has been declared a Public Health Emergency and is of International concern. In the 21st century, everyone is a global citizen. Keeping in mind that the teachers are powerful agents of change and caregivers for the next generation of scientists and doctors, their professional needs cannot be compromised due to the uncertainties that will occur post-pandemic. Sustaining safe school operations or reopening schools after a closure requires many considerations. Similarly, the professional growth of teachers of all types of educational institutions also needs reconsideration. The present situation (of the year 2020) in the world demands teachers and educators to adopt blended learning teaching practices. These practices will not just be for teaching but also for learning. There are several digital educational resources, such as the SWAYAM MOOCs and NPTEL courses are available for the teachers. Along with, many premium global institutions are conducting skill development webinars, short term courses, etc to train and better equip teachers with e-learning tools and technologies. The present study addresses the attitude of 313 teachers towards blended learning approach and its six dimensions viz. learning flexibility, online learning, study management, technology, classroom learning and online interaction as a strategy to meet their professional needs post COVID 19 pandemic era. The present study investigated the attitude of male and female teachers towards blended learning and its dimensions. Also, the study aimed to find the difference in attitude of teachers teaching in English medium institutes and those teaching in institutes having other languages like Hindi, Marathi, Telugu, Kannada, Tamil, etc as their medium of instruction. The results indicated that the attitude of male teachers is greater than that of female teachers with respect to online learning. Also, teachers teaching in English medium institutes have a positive attitude towards Learning Flexibility dimension of blended learning when compared to those teaching in institutes having other medium of instruction. There is a need for a paradigm shift in the education system to create and enable technology dependent learning environments post COVID-19 pandemic which will help in maintaining safety and enhance learning experiences not just for students but for teachers' professional growth.

Introduction

The year 2020 has led most of the sectors of the society to come to a halt. All educational institutions have also been declared shut in order to handle the further spread of the Covid-19 virus. The ongoing lockdown has suddenly compelled all teachers to adopt online, teaching-learning practices (Olivier, 2020). With a global health crisis in process, the world has begun to look at the future considerations of the present scenario. Reopening of educational institutions is highly unpredictable and hence, blended learning will become the future of educational society. The prolonged period of forced closure has pushed educators throughout the globe towards more extensive use of technology to grant their learners continuity in acquiring knowledge without suffering loss. Post pandemic with the opening of educational institutes, especially schools, blended learning will be important to prioritise the health and wellbeing of not only students but teachers as well. Similarly, the professional growth of teachers will also have to be reconsidered. Priorly, it was possible through various seminars, conferences, refresher courses held by

institutions at various localities but things will be different post-pandemic. Hence, a blended learning approach for professional growth of school teachers would be recommended where social norms laid by the government are also considered.

During the time of lockdown in the year 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 software as teachers but also have had an experience of using these as a student. The sudden move to online learning has required new investment in devices, learning platforms, connectivity, training and more. Continuing ahead with blended learning will help in taking full advantage of this investment. By continuing to use the devices and online tools, learners will stay comfortable with technology as part of their education—while educators can continue to explore the potential of online learning. 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. Blended learning is a model that implements an online and offline approach to teaching and learning with help of technology which will make the learning process more enhanced and will help in catering to a wide audience especially to those who wish to attend but can't due to geographical distance. This is what will make blended learning a viable model post COVID-19 pandemic (Education Trends, 2020). 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 as dominant in females, has a different experience of blended learning. 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.

For blended learning to work, all learners would need to have the technology and connectivity they need. The institutions conducting professional growth programs for teachers will have to evaluate and adjust their methodologies and curriculums for a blended learning environment that would be flexible for teachers teaching in educational institutes having other languages as medium of instruction apart from English. The teachers have now become learners where they are striving hard to adapt to the new teaching-learning pedagogies in order to help education prosper. Hence this paper emphasis on the comparison of the male and female in-service teachers' attitude towards adapting blended learning approaches for their professional needs.

Background Of The Study

Several researches globally including that of Hirata Yoko et al (2008) identified that most of the students preferred the online learning to the traditional classes and the combination of online learning and face-to-face learning was advantageous for learners. The study identified that some instructional factors, such as flexibility, goal-focused approach, as well as closely connected relationships between in-class and online instructions are indispensable for students to acquire a set of skills and strategies for successful language learners in hybrid learning environments.

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 et al(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 determinant of student satisfaction, perceived learning, and sense of community" (Garrison, 2007).

Hwang and Arbaugh (2006) examined student feedback seeking behavior of the students enrolled in seven blended undergraduate HR and management courses. They assessed that the students who seek positive behaviour tended to participate more actively in discussion forums and seek feedback both inside and outside of class meetings, whereas students having negative feedback-seeking behaviour tended to seek instructions outside of the classroom and participate in more discussion forums but with less intensity.

Raturi R. et al (2011) found that the learners in their sample were keen and enthusiastic about the use of technology. The study revealed that the group was found to be technology. The study also found a high level of digital awareness among female learners and their good access to tools; technology and experience make them capable of studying in blended-learning or e-learning mode. The cohort mentioned in the study indicated its readiness for e-learning, and indicated the emergence of e-learning as a preferred mode of delivery for postgraduate students. This background covers several aspects of blended learning where most of the studies show positive and promising learner and teacher acceptance to this mode of teaching learning.

The challenges and conditions are mostly faced globally by apex institutions of the countries where the high speed internet, tablet/laptop are basic essentials is a problem and often even a scarcity. With several Indian institutions that are following global curriculums have picked up the cut of blended learning from their international parent set-ups. For the local schools, in the present situations, a new mode of learning environment is a need of the 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 which consists of 313 teachers teaching in various educational institutes like schools, colleges, teacher education institutes, management schools, law colleges, etc all over India. Data was collected by circulating google forms due to COVID 19 pandemic. Out of the total in-service teachers 221 were females and 92 were males. 250 teachers were working in educational institutes having English language as their medium of instruction whereas 63 were teaching in institutes having other medium of instruction like Hindi, Marathi, Urdu, Telugu, Kannada, Tamil, etc. 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). Learning flexibility reflected issues such as access to learning materials and freedom to decide where and when to study and at what pace. Online learning included items on how comfortable teachers felt about self-directed learning. Study management referred to how motivated teachers are to organize their time when studying on-line for their courses. Technology consisted of items that reflected teachers' familiarity with digital technologies and software. Online interaction refers to teachers' ability to use web technologies to collaborate with other members of the learning community for assignments and to interact with the lecturer. Classroom learning focused on teachers' preferences for face-to-face interaction with other teachers and the lecturer during training programs and conferences, seminars or symposiums. Relevant descriptive and inferential analysis was done using 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 medium of instruction of educational institutes where the teachers are presently working.

Table 1
Sample size for the Present Study based on Gender and Medium of Instruction of Educational Institutions

	Variable	N	Percentage	Total
Gender	Male	92	29.39%	313
	Female	221	70.69%	
Medium of Instruction	English	250	79.87%	313
	Others	63	20.13%	

The above pie chart indicates that out of 313 in-service teachers 29.39% were males and 70.69% were females.

The above pie chart indicates that out of 313 in-service teachers 79.87% teach in English medium institutes and 20.13% teach in institutes following other medium of instruction like Hindi, Marathi, Urdu, Telugu, Kannada, Tamil, etc.

Hypothesis Testing And Interpretation

Following null hypotheses were framed for the present study. Statistical analysis was done using the IBM Statistical Package for Social Scientists (SPSS-26) in order to find out the attitude of male and female in-service teachers from educational institutes and those teaching in english medium and other medium educational institutes towards blended learning and its dimensions. Tables 2 and 3 represent relevant statistical measures used to analyse the data.

Hypothesis 1

There is no significant difference in the attitude of male and female in-service teachers towards blended learning and its following dimensions:

- Learning Flexibility
- Online Learning
- Study Management
- Technology
- Classroom Learning
- Online Interaction

Table 2
Attitude of in-service teacher towards blended learning
and its dimensions based on gender

		Mean	t value	Sig. (2-tailed)
BL	Male	127.42	.349	.727
	Female	126.21		
F1	Male	14.33	.738	.461
	Female	14.78		
F2	Male	33.07	1.945	.053*
	Female	31.21		
F3	Male	16.57	1.273	.204
	Female	15.91		
F4	Male	14.79	.216	.829
	Female	14.90		
F5	Male	17.73	1.586	.114
	Female	18.74		
F6	Male	30.91	.266	.791
	Female	30.66		

(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 male and female in-service teachers for Online learning was found to be 1.945. The p value was found to be 0.53 which is significant at 0.05 level. Therefore, the null hypothesis for the online learning dimension of BL is rejected. Hence, there is a significant difference in the attitude of male and female teachers towards the online learning dimension of blended learning. The mean score for male teachers was 33.07 and for female teachers was 31.21. Thus, it can be concluded that male in-service teachers have a positive attitude towards blended learning when compared to female teachers.

The t value and p value for blended learning and other five dimensions of BL was not significant when gender is considered, thus the null hypothesis is accepted. Therefore, both male and female teachers have similar attitudes towards blended learning and its five dimensions viz. Learning Flexibility, Study Management, Technology, Classroom Learning and Online Interaction.

Hypothesis 2

There is no significant difference in the attitude of in-service teachers towards blended learning and its following dimensions based on medium of instruction of the educational institutes where they are working:

- Learning Flexibility
- Online Learning
- Study Management
- Technology
- Classroom Learning
- Online Interaction

Table 3
Attitude of in-service teacher towards blended learning and its dimensions based on medium of instruction of educational institute

		Mean	t value	Sig. (2-tailed)
BL	English	126.37	.243	.808
	Others	127.33		
F1	English	14.94	2.390	.017*
	Others	13.507		
F2	English	31.456	1.379	.169
	Others	32.952		
F3	English	15.976	1.080	.281
	Others	16.619		
F4	English	14.916	.372	.710
	Others	14.698		
F5	English	18.452	.055	.956
	Others	18.412		
F6	English	30.623	.474	.636
	Others	31.412		
(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 in-service teachers based on the medium of instruction of the educational institute for Learning Flexibility was found to be 2.309. The p value was found to be 0.017 which is significant at 0.05 level. Therefore, the null hypothesis for Learning Flexibility dimension of BL is rejected. Hence, there is a

significant difference in the attitude of in-service teachers teaching in institutes having English language as medium of instruction and teachers teaching in institutes having other languages like Hindi, Marathi, Urdu, Telugu, Kannada, Tamil, etc towards Learning Flexibility dimension of blended learning. The mean score for in-service teachers teaching in institutes having English language as medium of instruction was 14.94 and teachers teaching in institutes having other language as medium of instruction was 13.507. Thus, it can be concluded that teachers teaching in English medium institutes have a positive attitude towards Learning Flexibility dimension of blended learning when compared to those teaching in institutes having other medium of instruction.

The t value and p value for blended learning and other five dimensions of BL was not significant when the medium of instruction of educational institutes is considered, thus the null hypothesis is accepted. Therefore, both teachers teaching in institutions having English and other mediums of instruction have similar attitudes towards blended learning and its five dimensions viz. Online Learning, Study Management, Technology, Classroom Learning and Online Interaction.

Discussion And Conclusion

Based on the finding of this study, male students had a more positive attitude towards online learning than female students. Similar findings were also reported by studies conducted by Yau and Cheng (2012), Shashaani and Khalili (2001) and Birbal et al (2018) who also found that males have more confidence in using technology for learning than female learners. The differences in attitudes of male and female teachers may be because female teachers have a lower computer self-efficacy which could be a result of cultural factors whereby females are made to believe that computers are the domain of males as far as Indian culture is considered. Also, the present study found that teachers teaching in English medium institutes have a positive attitude towards Learning Flexibility of dimension blended learning when compared to those teaching in institutes having other medium of instruction. Teachers teaching in English medium institutions enjoyed the flexibility of blending learning which afforded them the opportunity to study at their own pace and decide when and where to study without facing any difficulty as far as language is considered as most of the webinars/conferences/workshops/FDPs conducted were in English. The medium of instruction could be an obstruction for teachers teaching in other mediums of instruction as far as learning flexibility is considered.

As more education institutions are moving towards implementing blended learning as a means of enhancing teachers' professional growth where teachers play the role of learners, it is important to understand their readiness for engaging in adopting this approach. From the present study it is evident that male teachers have a positive attitude towards online learning but the fact cannot be ignored that the education field is female dominant as far as Indian society is considered. Thus, it is essential to develop a positive attitude among female teachers also in order to adopt this approach effectively. Learning flexibility can be enhanced among teachers teaching in institutes having other languages as medium of instruction by encouraging them to seek help from experts who can help them and also initiatives can be taken to organize webinars/workshops/conferences/ FDPs in common language which can be helpful to

them and also for their career enhancement. Blended learning is not much applied as far as teachers are considered as learners, thus more research is needed on blended learning and especially in Teacher Education programmes to prove its importance post COVID-19 pandemic.

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.

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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.

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Research involving human participants and/or animals: This article does not contain any studies involving animals performed by any of the authors.

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Figures

Figure 1: Pie chart representing Male and Female in-service teachers

Figure 1

Pie chart representing Male and Female in-service teachers

Figure 2: Pie chart representing Teachers Teaching in Educational Institutes having English and Other Medium of Instruction

Figure 2

Pie chart representing Teachers Teaching in Educational Institutes having English and Other Medium of Instruction