Chapter 3
Engagement of Higher Education Teachers During COVID-19 Pandemic in India

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3.1 Introduction

The outbreak of COVID-19 has impacted the world economy, and education sector is not an exception of this. Change is inevitable, and this pandemic taught the whole world to adopt the changes and explore the opportunities. As a result, the education sector has also faced a quick and sudden transformation and opted digital mode to ensure the continuous teaching–learning, research, community engagement, etc. by using different online tools and techniques which has added struggle and stress both to the work–life balance of the teachers. When the students' learning was on stake, teachers have taken up the challenge. They adopted digital mode of teaching–learning pedagogy and started delivering lectures online for the students. To attain this modern education technology and be equipped with them, teachers need to develop new learning environment for all the stakeholders including teacher, student, parent, administrator, etc. In Indian context, mostly, the traditional methods were followed in higher education institutes to fulfill the teaching–learning criteria. But this pandemic has forced to adopt the digital alternatives to make the teaching–learning takes place in an uninterrupted way. This sudden embracement of online teaching–learning pedagogy has changed the traditional teaching pedagogy to blended teaching–learning pedagogy, wherein students are learning both in online live classes and also in offline mode, where they are going through the contents as uploaded by the teachers. The teachers are adopting both synchronous and asynchronous ways of teaching pedagogy for implementing this.

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In the present chapter, the researchers identified the various factors responsible for the teacher's engagement of higher education institute (HEI) during this pandemic through literature review and peer discussion. Also some strategies have been suggested at the end so that teachers can continue with the success of blended model of teaching–learning environment for both teachers and students. This will also help and make Indian teaching environment more dynamic, and all the stakeholders, including the parents associated with this, can visualize a new teaching–learning environment, especially in case of higher education sector.

3.2 Literature Review

Education plays the major role as a predictor of overall development of any country. Providing effective and quality manpower is the basic requirement to promote the industrial and economic growth. The COVID-19 crisis has changed the definition of "Education." The pedagogical shift from primitive to modern approach has affected the culture of formal education in higher education institute (HEI). Previously online teaching rather no direct interaction was supposed to be considered as the non-formal mode of education but in this present scenario, it is going to gradually replace the formal education system in the new normal scenario.

Ahmed and Ikram Khan (2020**)** mentioned the success story of The School of Business Administration (NCBA&E), its students, faculty, and staff and how the institution has carried on its semester despite the disruption caused by COVID-19 which works as an evidence to the new education system. **Dhawan (**2020**)** in his study mentioned the changing model of education where EdTech Startups are coming up with a scope of exploring the modern education world in this pandemic associated with online teaching–learning. **Tartavulea (**2020**)** discussed that the institutional support, the trust in the online system, and the perceived effectiveness of formative assessment are the different factors that are positively associated with the impact and effectiveness of online education. **Rapanta (**2020**)**, in the article, focused on certain pedagogical content knowledge (PCK) which is important to create better learning environment with different digital technologies. **Mishra (**2020**)** discussed on the holistic view of online teaching–learning activities to establish the bridge between change management and online teaching–learning process. **Bao (**2020**)** focused on the six specific instructional strategies which were presented to summarize the online teaching experiences for teachers. The study concludes with five high-impact principles for online education: (a) high relevance between online instructional design and student learning, (b) effective delivery on online instructional information, (c) adequate support provided by faculty and teaching assistants to students; (d) high-quality participation to improve the breadth and depth of student's learning, and (e) contingency plan to deal with unexpected incidents of online education platforms. Johnson (2020) focused on the primary areas where faculty and the administrators identified a need for assistance which were related to student support, greater access to online digital materials, and guidance

for working from home. Carrillo and Flores (2020) discussed on the online teaching and learning practices those are related to social, cognitive and teaching presence. It was also highlighted that the need of a holistic approach of the pedagogy of online education that integrates technology to support teaching and learning. Yen (2020) aimed at verifying the procedures and effects of flipped classroom for online teaching. Shenoy (2020) revealed the loopholes in online education system and some positive aspects of offline or classroom teaching.

In the Indian context, the Government of India has also started working on embracing the ICT enabled teaching learning pedagogy in the Indian Education System. The apex regulatory body of higher education, University Grants Commission (UGC) has already put efforts to combat with the situation and ensured to complete the semesters, examinations, etc. in a timely manner.

The educational scenario of India is going to be different in the new normal life where the role of the teacher will be more and more important because their engagement can only be the channel between the technology and students. This will ultimately help the overall teaching–learning environment to grow in India and will help to develop more skilled youth.

3.3 Research Methodology

The present study was based on the quantitative data to find out the engagement of faculty members of higher education institutions during COVID-19 pandemic in India. The primary data has been collected through a structured questionnaire. Data was captured through Google Forms which was circulated online through different professional network and emails among the teachers of HEI in India. The sample size considered for the study is 67. Random sampling technique has been used to collect the samples.

The collected data is analyzed using exploratory factor analysis, and the items of the derived components are prioritized using multiple regression. The IBM SPSS (version 19) is used for the purpose.

3.4 Main Results and Discussion

Table 3.1 is derived from the rotated component matrix output of exploratory factor analysis. It creates components using the factor loadings which is derived from all the independent variables used in the questionnaire.

In the first component, there are five variables V2, V3, V4, V6, and V10 (explained in Table 3.1), and all the variables are describing the academic flexibility as provided by an institute for the faculty members. So the component is named as "**Academic Flexibility**."

Table 3.1 Output of the exploratory factor analysis with respect to the items of teacher engagement

V2	Conducting online classes is equally effective like a regular class in offline mode	Academic flexibility
V3	Students' involvement during online classes	
V4	Students are examination ready through this online classes	
V6	Teacher's mentorship is important for helping student overcome this pandemic situation	
V10	Contribution toward the overall development of the institute during lockdown period	
V7	Pandemic is going to impact the overall academic cycle of the institute	Working style
V8	Involvement in the community engagement activities during this pandemic	
V9	Exhausted during your work from home period	
V11	Lockdown period can be utilized to increase the API score	Job enrichment
V12	Security in the current job role during this pandemic	
V1	Time spent on taking online classes	Job involvement
V5	Teacher should constantly be in touch with their students	

Table 3.2 Regression analysis for academic flexibility with respect to teacher's engagement

Coefficients[a]						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(constant)	2.725	0.610		4.469	0.000
	V2	0.140	0.162	0.151	0.865	0.390
	V3	−0.210	0.154	−0.240	−1.362	0.178
	V4	−0.006	0.150	−0.007	−0.039	0.969
	V6	0.102	0.113	0.114	0.899	0.372
	V10	0.254	0.128	0.278	1.986	0.052

[a]Dependent variable: V13
Source: SPSS output

The second component consists of three variables V7, V8, and V9 (explained in Table 3.1) which are associated with the new working style of teachers in the new normal era. So it is named as "**Working Style**."

The variables V11 and V12 (explained in Table 3.1) discuss about the enrichment of teachers' job role. This states that the teachers are getting new opportunities to explore their skills. So the third component is named as "**Job Enrichment**".

Similarly, V1 and V5 (explained in Table 3.1) are grouped together based upon the values of factor loading. All the variables are discussing about the involvement of teachers with respect to their job. So the component is named as "**Job Involvement**."

The various variables in each of the components are prioritized using multiple regression and the results are summarized in Table 3.2.

The output furnishes the following regression model:

$$V13 = 2.725 + 0.140\ V2 + (-0.210)V3 + (-0.006)V4 + 0.102V6 + 0.254V10$$

V13 is the teacher's engagement during the work from home period.

We know that the standardized regression coefficients (beta) is a measure of how strongly each predictor variable influences the criterion variable, and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The regression table reveals that the beta value for V2 is 0.151, V3 is −0.240, V4 is −0.007, V6 is 0.114, and V10 is 0.278. It states that V10, i.e., "**Contribution towards the overall development of the institute during lockdown period**," has the highest influence on the criterion variable, whereas V3, i.e., "**Students involvement during online classes**," has the least influence on the criterion variable, i.e., "**Academic Flexibility**" (Table 3.3).

The output furnishes the following regression model:

$$V13 = 4.041 + (-0.173)V7 + 0.127V8 + 0.035V9$$

where V13 is the teacher's engagement during the work from home period.

We know that the standardized regression coefficients (beta) is a measure of how strongly each predictor variable influences the criterion variable, and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The model reveals that the beta value for V7 is −0.207, V8 is 0.158, and V9 is 0.044. It states that V8, i.e., "**Involvement in the community engagement activities during this pandemic**," has the highest influence on the criterion variable, whereas V7, i.e., "**Pandemic is going to impact the overall academic cycle of the institute**," has the least influence on the criterion variable, i.e., "**Working Style**" (Table 3.4).

The output furnishes the following regression model:

$$V13 = 2.725 + 0.087V11 + 0.216V12$$

where V13 is the teacher's engagement during the work from home period.

Table 3.3 Regression analysis for working style with respect to teacher's engagement

Coefficients[a]						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(constant)	4.041	0.501		8.060	0.000
	V7	−0.173	0.108	−0.207	−1.611	0.112
	V8	0.127	0.105	0.158	1.202	0.234
	V9	0.035	0.102	0.044	0.342	0.734

[a]Dependent variable: V13

Source: SPSS output

Table 3.4 Regression analysis for job enrichment with respect to teacher's engagement

Coefficients[a]						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(constant)	2.725	0.544		5.014	0.000
	V11	0.087	0.130	0.088	0.669	0.506
	V12	0.216	0.117	0.243	1.852	0.069

[a]Dependent variable: V13
Source: SPSS output

Table 3.5 Regression analysis for job involvement with respect to teacher's engagement

Coefficients[a]						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(constant)	3.679	0.538		6.833	0.000
	V1	0.292	0.114	0.313	2.575	0.012
	V5	−0.093	0.122	−0.093	−0.763	0.448

[a]Dependent variable: V13
Source: SPSS output

We know that the standardized regression coefficients (beta) is a measure of how strongly each predictor variable influences the criterion variable, and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The model reveals that the beta value for V11 is 0.087 and V12 is 0.216. It states that V12, i.e., "**Security in the current job role during this pandemic**," has the highest influence on the criterion variable, whereas V11, i.e., "**Lockdown period can be utilized to increase the API score**," has the least influence on the criterion variable, i.e., "**Job Enrichment**" (Table 3.5).

The output furnishes the following regression model:

$$\mathrm{V13} = 3.679 + 0.292\,\mathrm{V1} + \left(-0.093\right)\mathrm{V5}$$

where V13 is the teacher's engagement during the work from fome period.

We know that the standardized regression coefficients (beta) is a measure of how strongly each predictor variable influences the criterion variable, and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The model reveals that the beta value for V1 is 0.313 and V5 is −0.093. It states that V1, i.e., "**Time spent on taking online classes**," has the highest influence on the criterion variable, whereas V5, i.e., "**Teacher should constantly be in touch with their students**," has the least influence on the criterion variable, i.e., "**Job Involvement**."

3.5 Conclusion

The swift changeover from a physical classroom to virtual classroom was altogether a new experience for the teachers. Even very experienced teachers have also experienced the cultural shock in terms of physical world to digital world. The thirst of learning digital tool for survival in the digital era is the need of the hour.

Engaged employees always work harder, and they are more likely to go above the requirements and expectations of their work (**Lockwood,** 2007). This pandemic has proved the teacher's engagement only made it possible for students, administration, parents, and all other stakeholders to cope up with the digital world.

They have learned to use different online platforms like Zoom, Microsoft Team, Google Meet, Google Classroom, Moodle Learning Management System, etc. to make the learning environment easy for the students. They are not only keeping themselves engaged, rather the efforts are also toward the engagement of students as well through online assignments, taking online tests, conducting webinars, conducting online projects, providing training, engaging students with different leisure activities like skit, song, poem, video making, poster making, etc.

Apart from teaching their students, teachers were constantly engaged by attending online faculty development programs (FDP), some are also developing online courses, writing good research articles, etc. Teachers have faced a lot of challenges while during their work from home period mainly student's mindset, poor network connection in remote areas, the work life balance, lack of digital gadgets to attain the online classes, etc.

Through this study, the researchers have tried to find out different factors which are responsible for teacher's engagement. Using exploratory factor analysis, it was observed that the following component factors such as academic flexibility, working style, job enrichment, and job involvement influence teachers' engagement. Higher education institutes can focus on the above-mentioned factors which can keep teachers more engaged into their basic job role of teaching with a new pinch of digital flavor into it. Further initiatives such as providing the teachers opportunity to contribute for the overall development of the organization, providing opportunity for the interested teachers to contribute for community development, providing job security, and facilitating them so that the teachers can teach in an online environment can be implemented to make the teachers more engaged. The mentioned engagement factors will help in building a cohesive environment in the new normal era, even if the pandemic may end soon, but the existence of online teaching learning environment is going to co-exist.

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