Review Article

Post-Pandemic Research on Students Perception towards Online Education Environment

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Abstract

After the Right to Education was passed in 2009, India is continuously working on strengthening its education sector, offering free and compulsory education and this progress is significantly affected by the outbreak of Covid-19 pandemic. Education during Covid-19 was totally dependent on the digital infrastructure that include internet, laptops and smartphones along with the edtechs'. This change brings an opportunity for every stakeholder of education system to adopt new and innovative techniques to rebuild and reshape education system. Digital format of education system did not stop post Covid-19, however it has an addition to the traditional teaching pedagogy. During the pandemic it was a forced implementation and post pandemic it has become the New Normal. This research paper tries to identify the post COVID perception of students toward online teaching learning environment of the B-Schools. Six factors of B-Schools environment are considered in this research and the factors are teaching and learning through online mode and its effectiveness, evaluation process, institutes administration, teacher as a facilitator and extracurricular activities. The descriptive study is conducted and data was collected from 430 management students of various B-Schools of Madhya Pradesh. Hypothesis has been framed keeping in loop all the six factors of B-School environment. The research concludes the positive perception of students toward online teaching learning environment of the B-Schools thus irrespective of pandemic the online education system could be implemented in the New Normal.

Keywords: Online Education, Technology, Covid-19, B-Schools, Education Environment

Introduction

Education is the basic human right and foundation to build peace and sustainable development. Several exciting trends and technologies have been introduced in the 21st century's education ecosystem. This renewal is the result of Covid-19 outbreak. Technology driven education has enabled communication, collaboration & learning to the distant location too. The Covid-19 has impacted each and every sector & so on the education sector as well. Unexpected influx of this pandemic shut down the institute & forced to transit from contact to online learning. In a diminutive period, every industry is exposed to the online platform as per the demand of prevailing circumstances.

Many of the education institutes begun to offer education remotely (Kamanetz 2020). Learning cannot be stopped so, irrespective of the outcome massive adoption and innovation is done by the educators and into the education system. As a consequence, a lot of innovation & creativity has stimulated into the education sector. Reach of the technology to the weaker section of

the society is the major concern of this modern ecosystem.

COVID-19, in other ways, can be considered an opportunity for real changes. The pandemic was global & affected severely to all parts of the world. This provides an opportunity for educators & learners to rethink & reshape the education opposite to the outdated model. Without taking much time, everything was implemented in a short span of time & with rapid adoption. This crisis-driven opportunity should bring significant transformation in all aspects of education, such as teacher, learner, assessment, location, platforms, and so on.

Due to the pandemic educators & learners both were not available at contact places so, the E-education imparted in synchronous and asynchronous mode (Agarwal et al. 2020). In the synchronous mode, teachers and students meet online at the same time and on the same platform, ignoring the geographical distance. The systematic time table is followed and teaching learning process takes place with real time knowledge sharing and immediate access to all the information and queries (Amiti, F. 2020). Asynchronous mode is more flexible in comparison to synchronous mode. In this mode of E-learning ready to study material is provided to the students in form of video lectures, articles & ppt's on various online platform like Moodle. This material is accessible anytime anywhere. Along with the ready to study material, assessment is also conducted through giving a submission time frames by using e- assessment platforms such as Testmoz & Google Doc. Questionnaires. To cope with these changes were not easy at early stages of E-education implementations. However, with guidance & mentoring from the experts and practicing these platforms made the path easy & comfortable (Bashir et al. 2021).

Covid-19 has significantly changed the entire ecosystem. A rare opportunity of implementation of tech-based education has been seen during these circumstances. Fundamental changes are instigated in school & college education so as the behaviour of educator & learner has also changed. Covid-19 was first identified December 2019 in Wuhan, China as a respiratory infection disease. Gradually the Covid-19 outbreak outstretched all over the world & complete lockdown is ordered by the Government of India as well. The situation was under controlled and slowly the lockdown was open in phases however the education institutes were still on an online mode.

In April 2021 again a new variant of Covid-19 i.e., delta variant has been found, a complete lockdown in declared in India and it lasted till June 2021 after the vaccination drive started for 18 & above citizens. However, the vaccination for below 18 years was started from Jan. 2022. The colleges have been started with 50 per cent capacity at a time and 50 per cent on online platform & the same is implemented for senior secondary school students. Finally, the academic session July 2022 started with contact classes for school & college students. These fluctuations in education sector have changed the mindset of educators and learners. The entire system such as teaching & learning, evaluation process, filed visits, practical session witnessed the changes during Covid-19 & post Covid-19 too. Thus, this study is an attempt to understand the students' perception towards B-School education environment in post Covid-19 scenario. The study identified certain factors such as teaching and learning through online mode and its effectiveness, evaluation process, institutes administration, teacher as a facilitator and extracurricular activity; students' perceptions on these factors of education environment is analysed.

The paper discusses the most recent experiences of transition period of education system due to Covid-19. These tech-based changes could not get a grip if implemented before this pandemic.

Literature Review

To find the research gap & to uphold the objective of current research, the review of literature is conducted. The study of previous researches helped to identify the impacting factors of Covid-19 on education environment. The review is summarised and discussed in this section of the study.

Covid-19 & Education Environment

India, the country has immense opportunity in each and every domain & to grab the opportunities special set of skills to be inculcated in an individual through proper education. Education environment includes school, colleges, teachers, learners, courses, extra-curricular activities etc (Lawrence et al. 2021). Unpredictable changes in educational environment have been seen that have been proposed before COVID-19 but were never executed completely (Zhao & Watterston 2021). Due to number of factors the new regimes in education system are not completely implemented especially in India.

Significant changes are reflected during Covid-19 and post Covid-19 in education scenario and conclusion can be drown that socio-economic factor is playing important role in the tech-based education system. Deprived segment of the society may be under stressed due scarcity of the tech-based resources (Di Pietro et al. 2020). Reimagining education & executing the same has been only possible with this pandemic. However, this technology driven education should not undermine the privacy & shall connect to all corners of the planet ignoring the caste, gender, economic status etc. (Zhao & Watterston 2021). As the rise of digital world in education sector has removed all the geographical barriers so, this age of smart machines requires more dynamic and creative students to meet the global competencies (Zhao 2012).

Education environment as a whole has several aspects and together these aspects complete the entire education of a student. As already discussed, that a significant change in education system has been seen during Covid-19 and these changes are to be continued post Covid-19 as well to some extents.

So, to analyses the students' perception on education environment several aspects such as teaching and learning process, online mode and its effectiveness, evaluation process, institutes administration, teacher as a facilitator and extracurricular activity have been studied in the literature review.

Three major developments have been seen over traditional teaching learning process i.e. Distance learning, E-learning & Online learning (Moore et al., 2011).E-Learning and Online teaching & learning is elaborated as a paradigm of education based on technology. The teaching fraternity is eager to know the impact & outcome of the modern methodology on academic achievements of the students.

Covid-19 did not give enough time to teachers and learners to shift from offline to the online mode. Teachers had not use the technical pedagogical tools frequently before this pandemic (Rice & Deschaine, 2020). Several challenges emerged due to abrupt digital renovation in the education and some of the prominent were lack of technological infrastructure, lack of digital competency, inequality in education and compatibility with some of the subjects such as sports, music &

dance (Adedoyin and Soykan, 2020).

Effectiveness of online teaching could be evaluated with the students' academic performance. More authentic learning of the students can be evaluated through various assessments that includes formative and summative both (Arella, 2016). So, the process of the assessment shall include during the course assessment (formative assessment) to monitor the gradual performance of the student and at the end (summative assessment) to evaluate the entire learning of the student to measure the attainment of learning outcomes of the educational programme (Rust, O'Donovan, & Price, 2005). The online evaluation process has become a concern due to its significant role in the education system. In the absence of physical interaction between teachers and students, limited options for assessing the students online are left in the hand of teachers (Abduh 2021). Learning interest influences the performance of the student in the assessment process and educator plays a pivotal role to make the teaching and learning interesting be it online or offline. Thus, online evaluation becomes one of the strong parameters which influence students' perception for online education environment.

The satisfaction in the e-learning process is also influenced by the service quality, which is measured by some specific elements such as institute administration on the entire process & supporting services, instructor quality & accuracy of the teaching process, course material quality & newness, security & privacy (Phem et. al., 2018).

The teacher or the instructor is the core element of teaching and learning process. Their role has become more difficult in online education as it needs a lot of effort to involve students in participative learning. Teacher self-efficacy, i.e., the teacher's belief that he/she can affect student success plays a significant role in students' active involvement. Teachers' command over technology & digital tools will encourage students to learn actively (Corry & Stella, 2018).

A variety of activities outside the formal curriculum are referred to as extracurricular activities (Keen and Hall, 2009). Many researches have shown evidence of the positive influences of extracurricular activities towards students' development and academic affairs (NG. 2021). Even though extracurricular activities are not considered for academic performance, they play an important role in intellectual skill development and holistic grooming of the learner. Therefore, it has become an important element of the education system (Samat et al. 2020). Social networking sites & artificial intelligence platforms were used to involve students in such kind of activities during Covid-19. Students have also participated actively in such platforms due to several reasons, such as the topic being interesting, being a technology enthusiast, teachers' recommendations & zeal to learn about digital platforms or AI-based knowledge (NG. 2021).

Rationale of the Study

The most significant impact of Covid on the education industry was a loss of classroom teaching. Online teaching learning was becoming the only option for the situation. During the pandemic, online learning is considered a temporary way of teaching. But, the forceful implication of online learning during the pandemic become the choice of today. In my experience, E- platforms were found to be very creative, flexible and comfortable for learning. After the pandemic, the question was whether online teaching would be able to replace classroom teaching and whether there

was a need to redesign the teaching and learning by the education industry. The paper tries to identify the answer to these questions from the student's perspective. This research paper tries to identify the perception of college students toward the COVID education environment in college.

Objective of the Study

1. To study the various components of education environment of b-schools of India.

2. To study the students' perception towards post COVID-19 education environment of b-schools.

Research Methodology

Research Methodology provides a road map to any research. Research is vast area of study and therefore making a smooth roadmap is always makes journey easy. Present research tries to define view points and attitude of management students towards online education environment post covid and so based on descriptive type of research design.

With the help of literature review six factors are extracted to conduct the research further on online education environment. These six factors are:

1. Online Mode and its Effectiveness

2. Teaching and Learning Process

3. Evaluation Process

4. College Administration

5. Extracurricular Activities

6. Teachers as a facilitator

Above factors are considered as the components of education environment and were again divided into various sub-factors. There were 8 sub-factors of Teaching and Learning Process, 7 sub-factors of College Administration, 6 sub-factors were considered for online mode and its effectiveness and also for evaluation process, and 5 sub-factors were in to the consideration for extracurricular activities and teachers as a facilitator.

Students of various management colleges of undergraduate and post graduate courses of Madhya Pradesh were taken as a population for the study. Sample from this population is selected with the convenient sampling method. Primary data was collected with the help of questionnaire method. Questionnaire was constructed on the basis of 5 pointer Likert Scale. Before colleting the final data pilot study was also done. Total 42 questions were constructed in questionnaire. These questions were constructed on the basis of sub-components of education environment. For pilot study questionnaire were circulated among 50 students, out of which 47 responses were received. On the basis of pilot study 6 questions were omitted and 36 questions were considered for final questionnaire. Questionnaire was then circulated among 500 management students out of which got responses from 430 students only. Reliability was tested for each and every component of college environment.

Hypothesis were framed to identify the analytical differences between the perceptions of students towards the components of education environment. Total six hypothesis were formed and checked statistically with the help of one sample t- test. One sample t – test was used to found the mean difference between the perception of students with the population. Before applied the one sample t test reliability of data was checked with the help of Cronbach.

Data Analysis & Interpretation

Table-1: Reliability Table

S. No.	Item	Value of Cronbach Alpha	No. of Items
1.	Online mode and its effectiveness	0.98	6
2.	Teaching and learning process	0.88	8
3.	Evaluation process	0.89	6
4.	Institute's administration	0.76	7
5.	Extracurricular activities	0.78	5
6.	Teacher as a facilitator	0.84	5

Reliability of data measures to obtain the consistency of data set. Research used primary data set and hence the reliability check helps to prove that how much extent data will provide stable and consistent result. Table 1 shows the value of reliability for different components of education environment. The value of Cronbach Alpha obtained for components Online mode and its effectiveness is 0.98, for teaching and learning process it is 0.88, for evaluation process is 0.89, Institute's administration it is 0.76, extracurricular activities it is 0.78 and for teachers as a facilitator it is 0.84. All the values of Cronbach are greater than 0.75 which shows the high reliability of data.

Hypothesis:

Ho1: There is no significant difference between the perceptions of students towards Effectiveness of Online classes.

Ho2: There is no significant difference between the perceptions of students towards Teaching and Learning Process.

Ho3: There is no significant difference between the perceptions of students towards Evaluation Process.

Ho4: There is no significant difference between the perceptions of students towards Institute's Administration.

Ho5: There is no significant difference between the perceptions of students towards extracurricular activities.

Ho6: There is no significant difference between the perceptions of students towards Teacher as a facilitator

Table 2: T-Test: Online Class Effectiveness

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Online Classes Effectiveness	430	3.891219891219992	.491921885825524	.023722579850884

One-Sample Test

	Test Value = 3					
	t	Df	Sig. (2-tailed)	Mean Difference Lower	95% Confidence Interval of the Difference	
					Upper	
Online Classes Effectiveness	37.568	429	.000	.891219891219992	.844592944102778	.937846838337205

Interpretation: Hypothesis H_O1 is tested with the help of one sample t test. The value of t obtained is 37.568 at 5 per cent level of significance. The p value for the test is 0.00 < 0.05 which shows that null hypothesis H_O1 is rejected. There is a significant difference exist for the perception of students towards online classes. Mean value shows that students are having positive perception toward the online classes.

Table 3: T-Test: Teaching and learning Process

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Teaching and learning Process	430	3.537878787878888	.632461465325176	.030500000195340

One-Sample Test

	Test Value = 3					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Teaching and learning process	17.635	429	.000	.537878787878888	.477930759244412	.597826816513363

Interpretation: Hypothesis H_O2 is tested with the help of one sample t test and rejected at 5 per cent level of significance. The t value obtained for one sample t test is 17.635 and p value is 0.00 < 0.05. This shows that H_O2 is rejected, i.e. there is a significant difference between the perception of students towards teaching and learning process. Since the mean value is higher than 3 it also shows post COVID positive perception of students towards teaching and learning process.

Table 4: T-Test: Evaluation process

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Evaluation process	430	4.019813519813618	.335939410728378	.016200436950887

One-Sample Test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Evaluation process	62.950	429	.000	1.019813519813618	.987971413190669	1.051655626436566

Interpretation: Table shows that the p value is less than 0.05 at 5 per cent level of significance. Ho3 is rejected on the basis of p value. We can conclude that the perception of students towards evaluation process of online classes is having significant difference. Mean value obtained is 4.019 which show positive perception of students towards online evaluation system.

Table 5: T-Test: Institute's administration

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Institute's administration	430	3.577422577422679	.590235176148368	.028463667709099

One-Sample Test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference Lower	95% Confidence Interval of the Difference	
					Upper	
Institute's administration	20.286	429	.000	.577422577422679	.521476978867320	.633368175978038

The mean value for the component Institute's administration is 3.577 which is greater than 3 shows that post pandemic Institute's administration

plays a very significant role towards education environment. The p value obtained from one sample t test is 0.00 < 0.05, hence the result of one sample t test rejected the H04 which shows that perception of students on the component is significantly different than the average perceptions towards Institute's administration. This tends towards the rejection of hypothesis H04

Table 6: T-Test: Extracurricular activities

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Extracurricular activities	430	3.131468531468632	.612734280060209	.029548670845774

One-Sample Test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference Lower	95% Confidence Interval of the Difference	
					Upper	
Extracurricular activities	4.449	429	.000	.131468531468632	.073390349349682	.189546713587583

The p value obtained from one sample t test is 0.00 < 0.05, hence the result of one sample t test shows that perception of students on component is significantly different than the average perceptions towards extracurricular activities. This means that the null hypothesis H05 is rejected. Mean value obtained is 3.13 shows the positive perception of students towards extracurricular activities after COVID.

Table 7: T-Test: Teacher as a facilitator

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Teacher as a facilitator	430	3.177156177156277	.599253868894511	.028898587693318

One-Sample Test

	Test Value = 3					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Teacher as a facilitator	6.130	429	.000	.177156177156277	.120355739404172	.233956614908383

The mean value for the component Teacher as a facilitator is 3.577 which is greater than 3 shows that during pandemic Teacher plays a very significant role towards education environment. The p value obtained from one sample t test is 0.00 < 0.05, hence the null hypothesis H06 is rejected, resulted that the perception of students on this component is significantly different than the average perceptions towards Teacher as a facilitator.

Findings, Conclusion & Limitations

For the betterment of the educational system and approaches of institutions need changes. To maintain continuity in learning and to share the knowledge with the students, it is recommended to the institutions to adopt the technology and engage the students in learning The contribution of technology in education during Covid-19 is remarkable and even after post Covid-19 there will be a pivotal role of technology in this field.

Institutions need to change positively for the betterment of the educational system. With the help of technology sharing of knowledge and continuity of learning become easy. Technology alone will not be able to bring the desirable changes but using it at the right time, for the right purpose and with the right people will certainly change the education system of the country. The present study concludes that students have positive perceptions towards various factors of education environment in online mode such as teaching and learning process, online mode and its effectiveness, evaluation process, institutes administration, teacher as a facilitator and extracurricular activity.

During the pandemic, the entire education system shifted to the virtual world, and institutes tried their best to perform well in this online teaching-learning process. The education environment faced the challenges however worked hard to overcome. The quick shift from offline to online mode of teaching learning process is also given the same importance along with all the other supporting activities. The research concludes that there is a positive change in the perception of the students toward the new dimension of education environment. And from the discussion it can be recommended that hybrid mode of teaching shall be adopted as the students and teachers both are now adjusted with the online classes. This modern system of teaching learning process will surely bring tremendous changes in the Indian education environment. The government must take initiatives for the successful implementation of tech-based education to connect with the remote area population as well and create new ray of hopes.

The study examines the pre and post COVID 19 education environments with a special focused on online education system. The sample drawn for this study is the management students of Madhya Pradesh however, further expansion of this research can be done to pan India students of various streams. The further research can be conducted on future of online education considering the various parameters of education environment which are included in this research.

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