Research Paper

The New Era of Education amidst COVID-19 Lockdown

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ABSTRACT

Novel Corona Virus Disease (COVID-19) pandemic has immensely affected each and every aspect of human life. Due to spreading of the virus world-wide and that too at an alarming rate, education system has been badly hit since the arrival of Corona virus. It has made the schools and colleges to shut down and has compelled them to adopt the online mode of education. According to a UNESCO report, more than 157 crores students across 191 countries had been severely affected by the closure of educational institutions throughout the globe due to COVID-19. Efforts are being taken to identify and investigate the challenges that presently our higher education system is facing due to COVID-19 disruption. There are opportunities that need to be explored for the upcoming global teaching and learning after COVID-19. There had been a lot of anxiety and uncertainty regarding opening of schools and colleges as previously there was no vaccine for the corona virus. This paper attempts to study how different categories viz. Administration, Students and Teachers in the educational sector have been affected by the lockdown keeping in view the cancellation of exams, study plan, examination, career and classes. For the analysis, primary data has been collected through a questionnaire in which a total of 116 numbers of responses have been recorded.

Keywords: Schools, Colleges, Institutions, Universities, Online education, Education, COVID-19, Lockdown

INTRODUCTION

According to a review report on higher education by the Ministry of Human Resource Development, Government of India found out that there are over 993 universities, 39,931 colleges and 10,725 stand-alone institutions registered in the country. Under them, the learner density as per the survey is nearly 37.4 million and has made educational institutions to adopt online mode of teaching and learning programmes. The transfer from offline education to online education has been done to ensure that students should not suffer any loss in studies and their progress in study is being recorded on timely basis. The pandemic has compelled all of us to switch to virtual mode, to adopt the technological innovation and advancements. Universities and college campus are places where students come in close proximity with each other while studying. The entirely new technology facilitated education can be labelled as education 4.0 after the first series of education system that has evolved in excess of 2000 years of civilization –the Gurukula system, the traditional university system and distance learning. Online learning cannot be stated as a library of video lectures and E-books that converts class notes into PDFs. It is the new tools including the emerging sciences of artificial intelligence (A.I.) as well as deep learning models that can benefit us to create and adapt to new learning plans and methods

REVIEW OF LITERATURE

The International Association of Universities is observing the magnitude of effect of COVID 19 on the education

system throughout the world. It made a review on the impact of COVID-19 on higher education in order to categorise the major challenges faced by various universities as well as other higher educational institutions faced by them in this crisis and after that crisis also.

The World Bank published the policy paper "COVID-19 Crisis Response: Supporting tertiary education for continuity, adaptation, and innovation" stating that education is a never ending process and adoption of technology is the need of innovation and invention. During this crisis, response from different areas is essential to find out the solution regarding various issues and challenges arising from the impact of corona virus on higher education.

The UGC has surveyed higher educational institutes across India including colleges, universities etc. to conduct research-based study connecting to coronavirus. In a circular by the Commission, it requires Vice Chancellors (VCs) of universities and Principals of their affiliated colleges to adopt about 5-6 adjoining villages and conduct a relevant study in the particular area.

According to the MHRD, steps are being taken to monitor and promote the mental health issues and concerns of students and teachers and to assist in reporting the mental health as well as psychological aspects during the lockdown conditions and after.

OBJECTIVES

1. To study how different categories viz. Administration, Students and Teachers in the educational sector are satisfied with the decision regarding cancellation of examinations.
2. To study how the lockdown has affected the different categories in terms of study plan, examination, career and classes.
3. To study the revolution caused in the educational sector due to the pandemic
4. To provide suggestions for facing the challenges of higher education system.

HYPOTHESIS

- H0= There exists no significant level of satisfaction among the different categories viz. Administration, Students and Teachers in the educational sector regarding Cancellation of examinations.
- H0= The lockdown has not affected the different categories viz. Administration, Students and Teachers in the educational sector in terms of study plan, examination, career and classes.

RESEARCH METHODOLOGY

Sources of Data- For the analysis and testing of hypothesis, primary source of data has been collected through conduct of a survey with the help of a semi-structured questionnaire. Besides, secondary data has also been collected from various websites and publications.

Sample Respondents- A total of 116 responses were collected which comprised of administration, teachers and students from the educational sector. The targeted respondents were mainly from administrative, teaching and learning people involved in the educational sectors.

Statistical tools- The data so collected has been analysed with the help of Microsoft Excel ANOVA Single factor analysis. Besides, various charts and graphs are used to represent the data.

Scope of the Study- The scope of the paper is limited to the different categories viz. Administration, Students and Teachers in the educational sector. It might not reveal the overall impact on the educational sector.

DATA ANALYSIS AND INTERPRETATION

For this part, an open survey was conducted through a questionnaire and responses of 116 samples were collected. From the responses so collected, it included different categories viz. Administration, Students and Teachers in the educational sector. Adding to that, the samples of different categories i.e., Administration, Students and Teachers comprised of 14

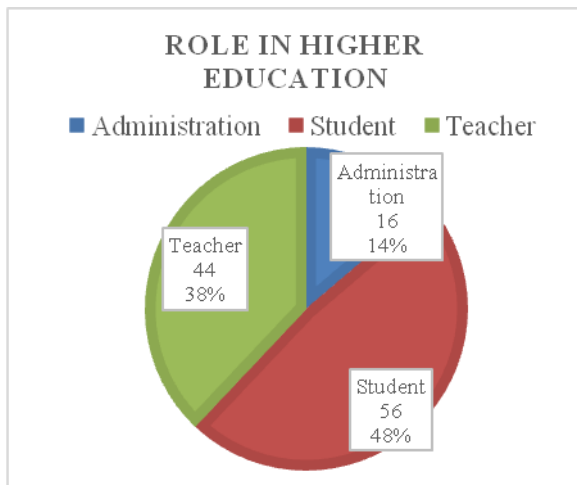percent, 38 percent and 48 percent respectively (Refer Figure 1).

Figure 1- Different Categories in Higher Education (Responses= 116)

The data regarding different age groups of the different categories of educational sector viz. -Administration, Students and Teachers was also collected so that a balanced and unbiased result would be interpreted. The different age groups (Refer to Figure 2) comprised of Below 20 (12 percent), 21-30 (53 percent), 31-40 (17 percent), 41-50 (10 percent), 51-60 (5 percent) and Above 60 (3 percent).
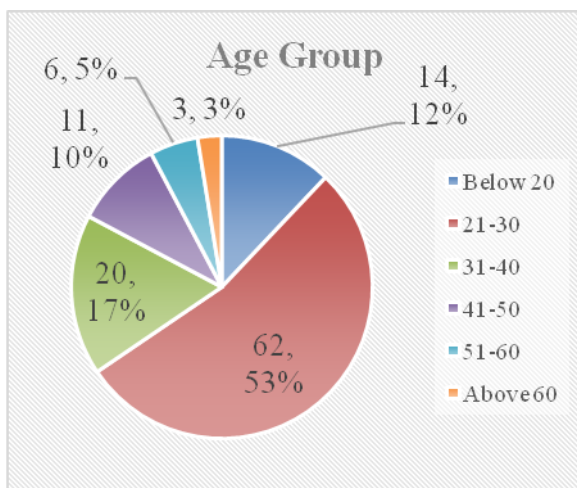

Figure 2- Age Group of Different categories (Responses-116)

Hypothesis 1-
H0= There exists no significant level of satisfaction among the different categories viz. Administration, Students and Teachers in the educational sector regarding cancellation of examinations.
H1= There exists significant level of satisfaction among the different categories viz. Administration, Students and Teachers in the educational sector regarding Cancellation of examinations.

To prove the above hypothesis, ANOVA single factor has been adopted to find out if there is more or less level of satisfaction among the different categories viz. Administration, Students and Teachers in the educational sector regarding Cancellation of examinations.

Analysis Regarding Cancellation of Exams

As shown in Table 1- Analysis Regarding Cancellation of Exams, the average values of responses in case of students stands at 2.696428571, which represents that students are most satisfied with the decision regarding cancellation of exams. However, the other two categories including administration and teachers average responses shows 1.9375 and 2.454545455 respectively, which represents that only the people in administration were more dis-satisfied regarding the cancellation of exam. This might be because of the concern regarding the career and future of the students.

Additionally, to test the hypothesis, taking the value of Probability (P-value) i.e., 0.0559 at a 5 % level of significance (α), it is shown that value of P is greater than the level of significance (α),
Mathematically, $0.0559 > 0.05$,

Also, if the calculated value (of ANOVA Single factor F) 2.958409116 is considered, that is less than the critical value i.e. 3.0765743 which proves that the Null Hypothesis (H0) is accepted, i.e., there exists no significant level of satisfaction among the different categories viz. Administration, Students and Teachers in the educational sector regarding Cancellation of examinations.

Table 1- Analysis Regarding Cancellation of Exams

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Teacher	44	108	2.454545455	1.369978858		
Student	56	151	2.696428571	1.160714286		
Administration	16	31	1.9375	1.129166667		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	7.31412	2	3.657061688	2.958409116	0.055935	3.0765743
Within Groups	139.686	113	1.2361582			
Total	147	115				

Hypothesis 2

H0= The lockdown has not affected the different categories viz. Administration, Students and Teachers in the educational sector in terms of Study plan, examination, career and classes.

H1= The lockdown has affected the different categories viz. Administration, Students and Teachers in the educational sector in terms of Study plan, examination, career and classes.

Effect of Pandemic lockdown on Study Plan

As shown in Table 2 (i) -Analysis Regarding Effect of Pandemic lockdown on Study Plan, the average values of responses in case of students stands at 3.1607143, which represents that students are least affected with the effect of lockdown on their study plans. However, the other two categories including administration and teachers' average responses shows 3.5625 and 3.2045455 respectively, which represents that the teachers responded that the lockdown has badly affected the study plans. The reason might be regarding the future plans of the students.

Again, to test the hypothesis, taking the value of P i.e., 0.36467 at a 5 % level of significance, it is shown that P is greater than the level of significance (α),

Mathematically, P-value $0.36467 > 0.05$,

Also, if the calculated value 1.0178141 is considered, that is not more than the critical value i.e. 3.07657431 which proves that the Null Hypothesis (H0) is accepted, i.e., the lockdown has not affected the different categories viz. Administration, Students and Teachers in the educational sector in terms of Study plan.

Table 2 (i)- Effect of Pandemic lockdown on Study Plan and Exam

SUMMARY		Study plan			Exam		
Groups	*Count*	*Sum*	*Average*	*Variance*	*Sum*	*Average*	*Variance*
Administration	16	57	3.5625	0.6625	62	3.875	0.25
Student	56	177	3.1607143	1.046429	175	3.125	1.238636
Teacher	44	141	3.2045455	1.096723	157	3.56818	0.669662

Table 2 (ii)-ANOVA Analysis of Effect of Pandemic lockdown on Study Plan and Exam

	Study Plan						Exam				
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*	*SS*	*MS*	*F*	*P-value*	*F crit*
Between Groups	2.06535	2	1.03	1.0178141	0.36467	3.08	9.08817	4.544083	5.10062	0.00757	3.07657
Within Groups	114.65	113	1.01				100.671	0.890889			
Total	116.716	115					109.759				

Effect of Pandemic lockdown on Exams

As shown in Table 3- Analysis Regarding Effect of Pandemic lockdown on Exams, the average values of responses in case of students stands at 3.125, which represents that students are least affected with the effect of lockdown on their exam. But, the other two categories including administration and teachers average responses shows 3.875 and 3.568181818 respectively, which represents that the teachers responded that the lockdown has severely affected the exams. The reason might be regarding the academic ranking and marking system.

Again, to test the hypothesis for the effect of pandemic lockdown on exams, taking the value of Probability i.e., 0.00757

at a 5 % level of significance, it is shown that value of P is less than the level of significance (α),
Mathematically, P-value 0.00757 < 0.05,

Also, if the calculated value 5.100617 is considered, that is less than the critical or tabulated value i.e. 3.07657 which proves that the Null Hypothesis (H0) is rejected, i.e., the lockdown has affected the different categories viz. Administration, Students and Teachers in the educational sector in terms of exams.

Table 3- Effect of Pandemic lockdown on Exam

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Administration	16	62	3.875	0.25		
Student	56	175	3.125	1.238636		
Teacher	44	157	3.568181818	0.669662		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	9.088166	2	4.544083072	5.100617	0.00757	3.07657
Within Groups	100.6705	113	0.890888978			
Total	109.7586	115				

Effect of Pandemic lockdown on Class

As shown in Table 4- Analysis Regarding Effect of Pandemic lockdown on Class, the average values of responses in case of students stands at 3.2142857, which represents that students are least affected with the effect of lockdown on their attendance in classes. But, the other two categories including administration and teachers average responses shows 3.625 and 3.4545455 respectively, which represents that the teachers responded that the lockdown has badly affected the conduct of classes. The reason might be the sudden non-adoption of online classes which hampered the theoretical and practical knowledge of students, besides covering the academic syllabi.

To test the hypothesis on the effect of pandemic lockdown on class, taking the value of P i.e., 0.27808 at a 5 % level of significance, it is shown that P- value is greater than the level of significance (α),
Mathematically, P-value 0.27808 > 0.05,

Also, if the calculated value 1.2944402 is considered, that is less than the critical or tabulated value i.e. 3.076574 which proves that the Null Hypothesis (H0) is accepted, i.e., the lockdown has not affected the different categories viz. Administration, Students and Teachers in the educational sector in terms of conduct of classes.

Table 4- Effect of Pandemic lockdown on Class

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Administration	16	58	3.625	0.65		
Student	56	180	3.2142857	1.225974		
Teacher	44	152	3.4545455	0.9513742		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	2.70544	2	1.3527206	1.2944402	0.27808	3.076574
Within Groups	118.088	113	1.0450236			
Total	120.793	115				

Effect of Pandemic lockdown on Career

As shown in Table 5- Analysis Regarding Effect of Pandemic lockdown on Career, the average values of responses in case of students' stands at 3.232143, which represents that students are somehow more affected with the effect of lockdown on their career. This is mainly due to the delay or cancellation of exams which further results in delay in declaration of results. Moreover, the pandemic has lessened the scope of employment in various sectors. On the other

hand, the other two categories including administration and teachers average responses shows 3.0625 and 2.931818 respectively, which represents that the teachers are more concerned about the effect of the lockdown on the career of the students.

To test the hypothesis on the effect of pandemic lockdown on career, taking the value of P i.e., 0.3382 at a 5 % level of significance, it is shown that P- value is greater than the level of significance (α), Mathematically, P-value 0.3382 > 0.05,

Also, if the calculated value 1.094599 is considered, that is less than the critical or tabulated value i.e. 3.07657 which proves that the Null Hypothesis (H0) is accepted, i.e., the lockdown has not affected the different categories viz. Administration, Students and Teachers in the educational sector in terms of career to a great extent.

Table 5- Effect of Pandemic lockdown on Career

Anova: Single Factor						
SUMMARY						
Groups	***Count***	***Sum***	***Average***	***Variance***		
Administration	16	49	3.0625	1.2625		
Student	56	181	3.232143	0.94513		
Teacher	44	129	2.931818	1.041755		
ANOVA						
Source of Variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	2.2418	2	1.1209	1.094599	0.3382	3.07657
Within Groups	115.715	113	1.024027			
Total	117.957	115				

Hence, in the Hypothesis 2, it has been observed that the lockdown has not significantly affected the different categories viz. Administration, Students and Teachers in the educational sector in terms of conduct of classes, study plan and career. But, the conduct of examinations in colleges and Universities has been affected due to the lockdown caused by the contagion.

SUGGESTIONS

❖ Adoption of online mode of education should be made more effective like offline mode of education.
❖ The syllabus for education should be reduced during this crisis so that all parts of it could be covered keeping in view the necessity of the courses to be completed at under-graduate or post graduate level of education.
❖ Virtual counselling sessions may be organised for students to keep their mental conditions in balanced form and keep them motivated and optimistic.
❖ Various institutions should provide online training for teachers as well as students on how to use the online platform for effective education and make traditional methods of teaching digitally driven.
❖ Universities and colleges should enhance their Infrastructural facilities with the required internet connectivity for proper use of virtual mode of education.
❖ Along with live sessions, E- content should be developed and provided to the students for future use.

CONCLUSION

In the present survey, it has been found that the different categories viz. Administration, Students and Teachers in the educational sector are not much affected in terms of study plan, classes and career due to the lockdown. The reason might be said that for study plan, they could get an online aid which can be favourable on the part of students to plan their studies according to their needs. Additionally, the pause in conduct of offline classes also didn't affect much as many institutions are in the process of adopting online or virtual classes. Moreover, in terms of career, the students are somehow affected in particular due to the cancellation of exams. Being stated that, it has been proved that the

different categories viz. Administration, Students and Teachers in the educational sector have responded that the lockdown has affected the conduct of examinations, but the students have not stated to be much affected for non-conduct of exams because they are happy to not face the exams like the typical students' phobia. However, they don't foresee the impact of the same on their career and that's why they have responded to be not much affected in terms of career even due to the lockdown.

Only 45 crores individuals of the total population of the country are having access to the internet and various e-learning platform. Universities are encouraging students to adapt to the current requirements and needs of the education system. They have advised faculty members to deal with the situation wisely and sensibly. Groups should be created for online classes and they also should be motivated and proper counselling sessions should be arranged in this crisis. Teaching students about their well-being of mind-set, current state of crisis, depression, fears, emotions not only helps them but also makes them aware of how to manage themselves in this pandemic. They will be equipped with better emotional intelligence along with UGC Guidelines on providing psychological support to the students which will surely transform the educational system in a good way. This pandemic lockdown situation has been acting as a catalyst for the educational institutions in order to grow and adopt various platforms and techniques that they haven't thought or used before. The UGC recommended that universities develop virtual classroom and video conference facilities, give staff training in the systems and upload materials to websites, with the aim of shifting about 25 per cent of syllabi online. The UGC also urged flexibility in modes of conducting exams, which could be done in-person or online. Assessments could be based half on various evaluations and half on the previous semester's performance.

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