

ANALYSIS OF CHANGE IN SCENARIO OF EDUCATION DURING THE PERIOD OF COVID-19 PANDEMIC

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Abstract:

To assess the impact of Covid-19 on undergraduate students of GIET University, Gunupur, an online survey was conducted from 1st Sept, 2021 to 9th Sept, 2021, to collect the information. A structural questionnaire was prepared using 'google forms' and was shared among the students through email. A total of 251 students provided information regarding the survey. A simple percentage distribution was used to assess the learning status and problems faced by the study participants. During the lockdown period around 80% of learners were involved in e-learning throughout India. Most of the learners were using smartphones to access the study material and lectures. Students have been facing various problems such as headache, irritation in eyes, depression, anxiety, poor internet connectivity, and unfavourable study environment. People were facing financial crisis due to cut-outs in wages and other factors. This study suggests targeted interventions to create a positive space for study among students from the vulnerable section of society. Strategies are urgently needed to build a resilient education system in the state that will ensure to develop the skill for employability and the productivity of young minds.

1. Introduction

With the outbreak of the covid-19 pandemic in the year 2019 worldwide, the whole world had to face difficulties in almost every sector. Through this scenario, organizations, government bodies, institutions and individuals had to bring some profound changes. The Educational bodies had also brought many changes in their education system.

By mid-April, there was a global shut down of schools affecting nearly 1.6 billion students in 191 countries (UNESCO, 2020). This was done to help flatten the curve of virus transmission. Many countries have resorted to online classes and assessments for their students. The lectures have been switched to online mode and practical labs for professional courses were shifted to online simulators which were developed by some open-source groups, research organizations and institutes of national importance like IITs.

In India exams for almost a year and half were conducted online or students were promoted on some other new assessment methodologies. With the arise of these hard times Information and Communication Technologies emerged as a boon to the world which played their part in conducting the daily odds and the emergency needs. "Necessity is the mother of invention", and we had seen this since we saw so many video conferencing applications with some great unimaginable features which gave the liberty to bring the real world virtually online. IT firms like Zoom, Google, Microsoft and many others brought new innovations to bring out products to use during this period and now it has been an integral tool for the industry. The pharma and healthcare sectors were however able to manage the situations from getting worse. There were also some plus points of this nationwide lockdown people got to spend much time with their families, followed their interests and hobbies, got some new skills etc. while the cons were affecting the people too.

The shift to online teaching methods has become a necessity rather than an option. But how far are countries geared up for this challenge is something that has not been audited. Some countries are wondering if e-learning will become a norm following the pandemic. At this critical juncture, it is important to evaluate if these current online teaching methods are feasible, acceptable, and as effective as in-class teaching.

We aim to analyse the changes in the scenario of the new normal ways in the education system after the emergence of covid-19. In this study we have aimed to explore the following aspects: (1) the practicability of online education (2) the health issues arising from online classes, and (3) the current methods used for e-teaching, (4) attitudes and preferences of students, (5) financial aspects (5) lifestyle changes.

2. Data and Methods

2.1. Subjects

This is an online survey-based study of the 251 undergraduate and postgraduate students studying at GIET University, Gunupur, Odisha.

2.1. Data collection and procedure

An online survey was conducted from 1 Sept to 9 Sept 2021 to collect the information. A structural questionnaire link using 'Googleform' was sent to students' through WhatsApp and E-mail. Participants were provided full consent before participation in the online survey. A total of 251 students provided complete information regarding the survey.

2.3. Data analysis

Descriptive statistics were carried out to understand the distribution of study participants. Simple percentage distribution was estimated to assess the learning status, mode of learning, and opinion on educational decisions, lifestyle changes and problems related to study due to the lockdown. All the analyses were performed using the Panda library and Pandas profiling.

3. Results and Discussions

3.1. Participant's Characteristics

Table 1 displays the profile of the study participants. Of 251, almost two-third of them was aged between 19-20 years with a median age of 20 years. The number of female students was 54 (21.51%) and the number of male students was 197 (78.48%). Nearly two-third of the students belonged to the 'general' category in the social group. The majority of them were affiliated to the Hindu religion (92.03%), resided in urban areas (56.97%), and had a family income in the range of INR 20,000 – 40,000 (41.04%). Most of the students were undergraduates enrolled in professional courses like B.Tech and BBA.

Table-1

Characteristics of the study participants (n-251)

Characteristics		frequency	%
Age	18	41	16.33
	19	79	31.47
	20	86	34.26
	21	31	12.35
	22	14	5.57
	Median age: 20		
Gender	Female	54	21.51
	Male	197	78.48
	Gen	152	64.4

Social Groups	OBC	68	28.81
	SC/ST	16	6.77
Religion	Hindu	231	92.03
	Sikh	3	1.19
	Muslim	6	2.39
	Christian	2	0.79
	Other	9	3.58
Residential Area	Urban	143	56.97
	Rural	108	43.02
Monthly income of the family	Below 20,000	51	22.27
	20,000 - 40,000	94	41.04
	Above 40,000	84	36.68

3.2. Learning status and academic sphere during the lockdown

Several questions were asked to trace out the learning status during lockdown that includes modes of learning, coverage of syllabus, time spending for study, access to device, type of device, effectiveness of online classes, mental health, and status of grades. In this period of pandemic with the changes adopted in education system, 49.16% of the students preferred the conventional classroom based learning in campus with proctored in-campus assessments when asked, 24.16% of them preferred *virtual classes with online assessments*, 23.33% students preferred *Classroom based learning with online assessments*, and 3.33% preferred *virtual classes with proctored in campus assessments*. 84.6% had a personal device working perfectly to attend the online classes, 13.3% had it with some issues existing it while 2.1% shared with other people. Majority of the students used either a smartphone or a laptop to attend online classes, rest accessed it over a desktop or a tablet.

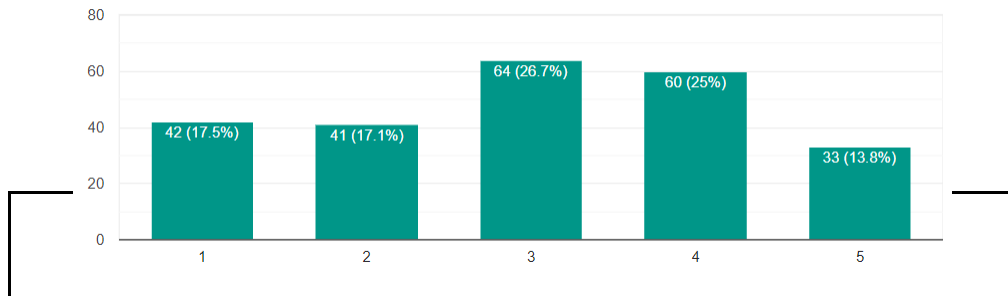
32.1% of the students found online learning moderately effective, 22.6% found it slightly effective whereas 21% found it not at all effective and 4.90% were in a dilemma and couldn't say anything over it. Considering the examination aspect majority of them found it a good way, 42.60% students observed a slight increase in their grades. Majority of them wanted online exams to be continued in the upcoming time. Considering the level of understanding 26.7% (majority) of the students rated 3/5 points. 33.80% enjoyed learning remotely, while 35% enjoyed it but also wanted to recommend a few changes, 18.30% faced a few challenges while 12.90% students didn't like the online education at all. 49.90% students found their teachers to be much helpful in the online mode while 31.50% found them to be average rest 19.50% faced challenges in receiving help from the faculty during the online mode. When asked about any semester delay 68.20% reported that the session was running on time 28.10% reported a slight delay while 3.70% reported it to have been delayed by 1 semester or more. While being asked about the online evaluation of papers 31.90% faced moderate issues while 4.60% were extremely disappointed whereas the rest 63.40% did not face any challenges with the online evaluation process.

Table-2
Learning status and academic sphere during lockdown

<i>Variables</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Preferred mode of education</i>		
Classroom based learning in campus with proctored in-campus assessments	118	49.16
Classroom based learning in-campus with online assessments	56	23.33
Virtual classes with online assessments	58	24.16
Virtual classes with proctored in-campus assessments	8	3.33
<i>Access to a device for learning online</i>		
Yes	204	84.6
Yes, but it doesn't work well	32	13.3
No, I share with others	5	2.1
<i>Type of device used more often</i>		
Smartphone	127	50.59
Laptop	114	45.41
Desktop	3	1.19
Tablet	7	2.78

<i>How effective is it learning through online classes?</i>		
Not at all	51	21
Slightly	55	22.6
Moderately	78	32.1
Very much	30	12.3
Extremely	17	7%
Cannot say	12	4.90%
<i>How do you feel about online exams?</i>		
Very bad	23	9.40%
Somewhat bad	13	5.30%
Neither good nor bad	66	27%
Good	45	18.40%
Excellent	97	39.75%
<i>Change in grades after online evaluation</i>		
Decreased a lot	8	3.30%
Slightly decreased	9	3.70%
Almost the same	91	37.60%
Increased a bit	103	42.60%
Increased a lot	31	12.80%
<i>Level of content delivery in online classes</i>		
Very poor	21	8.60%
Poor	43	17.70%
Average	118	48.60%
Good	30	12.30%
Excellent	31	12.80%
<i>Considering the aspect of examinations and results in the online mode how favourable are you for online exams?</i>		
Not favourable at all	21	8.80%
Not favourable	17	7.10%
Neither favourable nor critical	62	25.90%
Favourable	90	37.70%
Extremely favourable	49	20.50%

Considering the quality and level of understanding how much will you prefer the online mode of understanding?



Do you enjoy learning remotely?		
Yes, absolutely	81	33.80%
Yes, but I would like to change a few things	84	35%
No, there are quite a few challenges	44	18.30%
No, not at all	31	12.90%
How helpful are your teachers while studying online?		
Not at all helpful	13	5.40%
Slightly helpful	34	14.10%
Moderately helpful	76	31.50%
Very helpful	89	36.90%
Extremely helpful	29	12%
Is your institution able to carry-on your session on the scheduled time?		
Yes	165	68.20%
Yes, but with a slight day	68	28.10%
No it has been delayed by 1 semester or more	9	3.70%
Challenges faced (if any) in evaluation of papers for the online exams.		
No	151	63.40%
Yes, faced some challenges	76	31.90%
Yes, had too many issues	11	4.60%

3.2. Time management and health status

When questions related to time management and health status were asked, 45.41% of the participants reported that they were facing minor health issues such as irritation in eyes, headache, insomnia, stress etc., 39.16% of them reported to have no such health issues, whereas 15.41% reported that they were not sure if they have developed some issues or not but they might develop one since the severity of it was too less. The severity of these health issues were as such that the majority was ranging between slight to moderate, and a few cases experienced severe issues regarding health. The average duration spent the majority of the students had to sit near the screen was in between 6 – 12 hours. It was also recorded through our study that 50.42% (majority) of them were unable to manage time for self-study whereas 35.71% were able to take out time for self study and other work, while 13.86% were able to manage some days and not able to take out time otherwise. In the meantime when we asked them about their vaccination status a majority (64.01%) of them were partially vaccinated and were expected to get their second jab by the end of October.

Table-3

Characteristic	Variable	Frequency	Percentage
Health Issue faced at Online classes	Yes	109	45.41
	No	94	39.16
	May be	37	15.41
Duration of attending Online classes	4-8 hr	104	43.33
	8-12 hr	97	40.41
	0-4 hr	25	10.41
	12-16 hr	12	5
	16 above	2	0.83
Sufficient time for Self-Study	No	120	50.42
	Yes	85	35.71
	May be	33	13.86
Vaccination Status	Partially	153	64.01
	Fully	80	33.47
	No	6	2.51

3.3. Impact of Covid-19, lockdown on Economic conditions

41.04% of the people's monthly family income ranged in between 20,000 – 40,000 INR, while 36.68% were having a monthly family income of >40,000 INR whereas 22.27% had it below 20,000 INR. When asked about the relief provided from the institution over fees and other things 71.12% said they received it by means of reduction in some charges whereas 28.81% reported to not have received any. When asked about how satisfied they were with these reductions in charges a majority (37.87%), around 35% were a bit satisfied while the rest 15% were satisfied with these compensations. The study depicts that around 25% people have already taken a student loan for their education and around 12% are planning to take one whereas 63% didn't have any debts. The data shows that 64.15% of the people have taken educational debts ranging between 4 lakhs – 6 lakhs INR while, 15% of those taken lies between 2 lakhs – 4 lakhs, and an 11% of those taken is between 6 lakhs – 7 lakhs. 59.83% of students reported to have been facing some kind of financial crisis. 43.64% of the undergraduates are expecting to receive a pay band of 3.6-7.5 LPA (in INR), while 41.94% are expecting to receive a pay band of

above 7.5LPA, 9.74% are expecting themselves to have a salary of 2.0 – 3.6 LPA and the rest 4.66% believes to have a salary package below 2 LPA.

73.72% of the people involved in the study admitted the pandemic affecting their economic condition while 36% said to be unaffected, while 11% were not so sure of its impact on their economic conditions. 47.47% of the people inferred that low family income might affect their education, whereas 21% were under the impression of it probably affecting their education.

Table-4

Characteristics	Variable	Frequency	Percentage
Monthly Family Income	below 20,000	51	22.27
	20,000-40,000	94	41.04
	40,000 above	84	36.68
Has your institution provided with any subsidies/reduction during the pandemic	Yes	168	71.12
	No	68	28.81
How satisfied are you with the above decisions?	Not Satisfied	89	37.87
	Slightly Satisfied	64	27.23
	Moderately Satisfied	44	18.72
	Satisfied	28	11.91
	Extremely Satisfied	10	4.25
Do you have or planning to have a student loan for you?	No	149	63.13
	Yes	59	25.51
	May be	28	11.36
Loan amount	200000-400000	8	15.09
	400000-600000	34	64.15
	600000-800000	11	20.75
Are you facing any financial crisis?	Yes	146	59.83
	No	89	36.47
	Missing	9	3.68
Expected salary from placements (in INR)	3.6 - 7.5 LPA	103	43.64
	7.5 above LPA	99	41.94
	2.0 -3.6 LPA	23	9.74
	Below 2 LPA	11	4.66
Do you think that the economic condition of your family will be affected by COVID19 pandemic?	Yes	174	73.72
	No	36	15.25
	Maybe	26	11.01
Do you think that low family income would affect your education?	Yes	113	47.47
	No	64	26.89
	Maybe	61	25.63

3.4. Lifestyle and Environment

51.46% reported of not having a separate reading room while attending the online classes, 44.53% had it, while 4.2% were probably occupying it on availability. The majority of the students were eager for classes to resume in the back then normal mode while a few also liked the ongoing online mode to be continued. Around 45% of students were able to contact their friends frequently while the rest were able to talk to them less frequently. 47.67% of them claimed to have a favourable environment to study at home while the rest had some issues in existence. 33% felt sad, 19% were feeling happy, 35% were worried, 24% were depressed, 27% were lonely, 16% were anxious, 6% were feeling contented, while 34% were not aware of how they were feeling each day during the lockdown or during the pandemic.

Table-5

Characteristics	Variable	Frequency	Percentage
Do you have a separate reading room?	No	123	51.46
	Yes	106	44.53
	Maybe	10	4.2
How eager are you for offline classes to begin?	Not at all	39	16.2
	Slightly	39	16.2
	Moderately	58	24.1
	Very much	61	25.3
	Extremely	44	18.3
How frequently are you in touch with your friends?	Not at all	9	3.8
	Slightly	48	20
	Moderately	65	27.1
	Quite a bit	86	35.8
	Extremely	32	13.3
Do you have a favourable environment to study at home without any disturbances?	Yes	113	47.67
	No	64	27
	Maybe	60	25.81
How do you feel these days more often?	Happy		33.60%
	Sad		19.10%
	Worried		35.30%
	Depressed		24.30%
	Lonely		27.70%
	Anxious		16.60%
	Contented		6%
	Unable to express		34.20%

4. Concluding remarks

The lockdown amidst COVID-19 has made significant disruptions in the academic activities. The present study assessed the learning status of undergraduate students and problems faced by them in addition to the change in social life they've brought in. For most of them using digital platforms was stressful and the learning curve was too small, while a few others liked it as well.

Our study suggests the following recommendations for policy makers that a well organised educational structure must be designed with considering the aspects of delivering interactive, quality theory as well as practical education. Considerable relaxations could be provided by institutions to students in such cases where charges of unused facilities like electricity, internet, food, bus facilities and similar amenities can be reduced.

We've also observed that at this period the ICT medium has grown itself and established it's prominence with time. And certain alternative which came during this period have now been adopted as a regular means.

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