

## **ONLINE CLASSES DURING COVID-19 PANDEMIC: A STUDY OF DEGREE STUDENTS IN TELANGANA STATE**

**By**

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### **ABSTRACT**

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The entire world is grappling with Corona Virus which is having catastrophic consequences on all the activities. The COVID-19 has affected more than 200 countries across the world and is described as one of the worst global crisis since World War-II. Education Sector has been one of the most badly hit sectors across the World and India due to COVID-19 led Lockdowns. With a view to contain the spread of COVID-19, Hon'able Prime Minister of India Sri. Narendra Modi announced the Lockdown from 25<sup>th</sup> March, 2020 and extended upto 31<sup>st</sup> May, 2020 in India. This Lockdown has seriously disrupted the education sector in India and forced the Students and Teachers to stay at home and continue with remote learning/online learning. In India, over 320 million students have been affected by the COVID-19 led Lockdown. In Telangana State, Commissioner of Collegiate Education formally initiated Online Classes from 15<sup>th</sup> April to 15<sup>th</sup> May, 2020 in order to cover the left over UG Courses syllabus of 25 – 35%. The present paper is an attempt to study and analyze the perception of Degree Students towards Online Classes in Telangana State. It is also aimed at exploring the issues and challenges of Online Classes. The Online Survey was carried out with the help of Google Form and collected responses from about 900 Degree Students of Government as well as Private Colleges in Telangana State. It is found that majority of the Degree Students used Smartphones for attending Online Classes. Low Internet bandwidth, Streaming and Voice disturbances, power interruptions, lack of clarity of lectures, lack of effective live interaction, isolated learning environment, missing human connect, lack of interest and absence of collaborative learning were identified to be the major issues and challenges of Online Classes. It is suggested that Central and State Governments and Authorities should take effective steps to address the various issues and challenges of Online Learning such as rural-urban divide, broadband connectivity, and power cuts and to provide devices – smartphones or tablets to the students in order to make Online Learning more effective in the days to come.

**Keywords:** *COVID-19 Pandemic, Online Classes, Higher Educational Institutions, Degree Students, Issues and Challenges of Online Classes.*

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## INTRODUCTION

The entire world is grappling with Corona Virus which is having catastrophic consequences on all the activities. The COVID-19 has affected more than 200 countries across the world and is described as one of the worst global crisis since World War-II (ILO, Monitor-II, May, 2020). It is considered as the global worst crisis since Great Depression of 1930 (IMF, May, 2020). Many Countries across the world are striving to contain the spread of COVID-19. In order to contain the spread of the Corona Virus, most of the countries resorted to Lockdown as weapon to control the contagious disease. Consequently, all the economic activities across the World have come to a standstill and grinding halt. The transport facilities paused, manufacturing activities were shut down, tourism and hospitality management disrupted, global supply chain severely disrupted and Schools, Colleges and Universities across the world were locked down. Education Sector has been one of the most badly hit sectors across the World and India due to COVID-19 led Lockdowns. As a result, Schools, Colleges and Universities have been closed and students were forced to stay at home to avoid the spread of virus.

The COVID-19 pandemic has affected more than 157 Crore students in almost 191 Countries across the world that account for 91 per cent of the world student population (UNESCO, April, 2020). All the educational institutions have been closed down in several countries to curb the spread of COVID-19 contagion.

With a view to contain the spread of COVID-19, Hon'ble Prime Minister of India Sri. Narendra Modi announced the Lockdown from 25<sup>th</sup> March, 2020 and extended upto 31<sup>st</sup> May, 2020 in four phases in India. The Lockdown imposed in India especially during 25<sup>th</sup> March to April 14<sup>th</sup> was considered to be one of the most stringent lockdowns in the World. This COVID-19 induced Lockdown led all the economic activities in the Country to a grinding halt. Prior to announcement of Lockdown, almost all the educational institutions – Schools, Colleges and Universities- across the Country have been closed with the guidelines given by the Ministry of Home Affairs to contain the spread of Corona Virus. This Lockdown has seriously disrupted the education sector in India and forced the Students and Teachers to stay at home and to continue with remote

learning/online learning. In India over 320 million students have been affected by various restrictions and the COVID-19 led Lockdown.

In order to turn these COVID-19 challenges of closure of Educational Institutions into opportunities for learning, the Ministry of Human Resource Development (MHRD) initiated a host of measures to continue their education. As part of these initiatives, Higher Educational Institutions (HEIs) –Universities and Colleges have kick-started online classes across the Country. By the time when the Lockdown was imposed, about 25-30% of the syllabus was left over. With a view to complete this syllabus, most of the Universities and Colleges across the nation have started Online Classes to finish the left over syllabus and to continue the education by remote learning.

Following the initiations of MHRD, in Telangana State, Commissioner of Collegiate Education formally initiated Online Classes from 15<sup>th</sup> April to 15<sup>th</sup> May, 2020 in order to cover the left over UG Courses syllabus of 25 – 35%. Enthusiastically, more than 93% of the Degree College Teachers swiftly adapted to new method and conducted Online Classes. Interestingly, it was reported that more than 60% of the students have attended the Online Classes with help of various apps such as Zoom, Google Meet etc. However, about 40% of the students more specifically rural students could not attend the Online Classes due to a gamut of reasons such as lack of device, lack of internet facility and poor financial position etc. In Telangana State, more than 6 lakh students are pursuing non professional under graduation courses in about more than 1100 Degree Colleges including 125 Govt. Degree Colleges during the Academic Year 2019-20.

#### **ISSUES AND CHALLENGES OF ONLINE CLASSES:**

Comparing face-to-face learning with online learning, it brings forth significant deficiencies in the Online mode such as lack of human connect, absence of opportunities of collaborative learning, teacher supervision and the most glaring being lack of opportunities for hands on learning in science and mathematics subjects (Rashmi Chary, 2020, May). Other issues and challenges are digital divide, low internet bandwidth, power interruptions, technical issues, high screen time, lack of sustained interest, lack of motivation, not all teachers are tech savvy, lack of standardized content, lack of formality, ineffective teaching methods and lack of active collaboration of students, lack of training to teachers and attending online classes by staying at isolated place etc.

Martin D. Beer and Francis Slack (2015) have highlighted the five challenges of e-learning such as learning style and cultural challenges, pedagogical e-learning, technology, technical training and time management challenges. There are four issues in online learning such as Digital Literacy, Technical Issues, Time Management and Motivation (Purdue University, Global, , 2019, May).

### **DIGITAL DIVIDE:**

Online Classes conducted during COVID-19 induced Lockdown highlighted digital divide in India which is a major stumbling block for remote learning. According to the 75<sup>th</sup> Round of National Sample Survey conducted between July 2017 and June 2018, only 10.7 per cent of the Indian households have access to computers which is just 4.4 per cent in rural and 14.4 per cent in urban areas. Shockingly, about 23.8 per cent of the Indian households have access to the Internet. Only 14 per cent of rural households and about 42 per cent of urban households have access to the Internet facility. According to the Telecom Regulatory Authority of India (TRAI), in September, 2019, India had 687.62 million internet subscriptions out of 1.38 billion population. Half of the Indian population has no access to internet facility. Further, Urban areas have more than 104 internet subscriptions per 100 people (many have dual SIM cards with internet connectivity), while the figure for rural areas was a little over 27. According to Internet and Mobile Association of India (IAMAI) report which came out in 2019 that all India shows that only 33 per cent of the women have access to internet and in rural areas it was just 28 per cent.

According to National Sample Survey 2014, interestingly, data shows that even in households which have at least one member attending higher education, as many as 30 per cent do not have access to internet and about 56 per cent do not have access to any kind of device. Further, about 55 per cent of students pursuing higher education live in rural areas where uninterrupted power supply is an additional problem. The NITI Aayog in its 'Strategy for New India@75' report highlighted that about 55,000 villages in the Country are without mobile network.

In 2011, the BharatNet project was launched to connect about 2.5 lakh panchayats through optical fibre (100 MBPS) and connect India's villages. Its implementation began in 2014 and as of now about 1.2 lakh panchayats have been connected. The initial deadline which was March, 2019 has now been extended to August, 2021. These figures highlight the extent of India's rural –urban digital divide which is a major bottleneck for implementation of Online Education in India.

## REVIEW OF LITERATURE

The summary of review of various studies relating to Online Classes during the COVID-19 Lockdown period in Higher Educational Institutions (HEIs) in India has been placed hereunder.

**Amit Arora and Srinivasan, R (2020)** have made a research on the impact of Lockdown on the Teaching-Learning process and to assess the adoption rate of virtual classes and to determine the various benefits, challenges and reasons for non-adoption of virtual classes. The study found that among those who adopted virtual mode, the mean of actual benefits was significantly less than the mean of expected benefits. Network issues, lack of training and lack of awareness were stated to be the major challenges faced by them. The study further identified that less attendance, lack of personal touch and lack of interaction due to connectivity issue were found to be the significant drawbacks of virtual classes.

**Amita (2020)** in her research study has made an endeavor to seek online feedback of the higher education institution students regarding their experience about e-learning methods used by their faculty and institute. Responses of about 882 students of various higher education institutions (HEIs) in Haryana State were gathered online during 22<sup>nd</sup> and 23<sup>rd</sup> April, 2020 by using a small questionnaire. The study highlighted that the faculty has done their best in this crisis period as the online tools have helped the students in covering the major part of their syllabus despite some difficulties. The study found that the learners have encountered several problems such as poor internet connectivity, problem in choosing best source among many, non-availability, non-affordability for resources, lack of technical skills and electricity issues etc. in learning with online modes. The study suggested that familiarize the students about e-learning, keep the students morale high, relevancy and quality of the study material, the faculty to prepare the video lectures and ensuring proper structured and scheduled pattern for making the online teaching more effective and inclusive for all.

**Atul Stood and Ayesha Kidwai (2020)** have conducted a survey among 131 teachers of Jawaharlal Nehru University (JNU) who taught online classes. The survey results showed that about 40 per cent JNU students could not attend online classes during the lockdown for reasons such as internet connectivity issues, lack of personal gadgets, loss of family livelihood and domestic burden etc. The survey investigated that in all the courses with low attendance, students

faced internet connectivity issues, lack of library access, anxiety/depression and increased domestic burden, unavailability of personal computer/laptop/tablet/smartphone. Interestingly, about 35 per cent of the teachers reported that over 50 per cent of the students in their classes do not have stable Internet or access to libraries. The study has pointed out that only 35.6 per cent of male students and 29.7 per cent of female students participated in online education due to a lack of access to the Internet, stable bandwidth and requisite devices.

**Vinod Pavarala and Vasuki Belavadi (2020)** have administered an online survey among the students at University of Hyderabad to elicit information about access to the Internet and their views on online classes. Interestingly, a whopping 2,500 students have responded to the survey making it perhaps the largest such survey conducted in house by any Indian University. The survey results revealed that about 90 per cent of the students have access to Internet at least some time, with about three-quarters of them doing so by using their mobile data packages, with the rest using WiFi or fixed internet lines. When asked if they would be able to access the classes online if the University opted for them, about 37 per cent of the students answered with an emphatic 'yes', while 47 per cent said they would be able to do so infrequently and 19 per cent said that they can't access at all. The study also highlighted the concerns expressed by the students about accessing online classes such as reliable connectivity (40%) and cost of data connection (30%) were the most significant, while at least 200 students also cited 'unreliable electricity supply' etc.

**Shatakshi Lall and Nardev Sing (2020)** have made an endeavor to understand the students' perspective, attitudes and readiness about online classes being conducted at the University level and a survey was carried out amongst 200 students. The study found that about 74 per cent of the students liked studying through online classes and the main reasons were flexible study times (49%) and can study any time they want. Lack of co-curricular activities was the most common issue (34%) of online classes as reported by the students. Interestingly about 30 per cent of the students expressed that they prefer their lectures being delivered through a PPT with an audio recording. The study concludes that the Universities should design a plan so that along with studying their regular course, students also get to participate in some fun-loving activities so that they wholeheartedly continue to have an interest in the online lectures.

**Nivedita Sarkar and Anuneeta Mitra (2020)** have strongly argued with pitfalls of Govt. big push for Online Higher Education. The study has pointed out that given the societal structure,

women students may not be in a position to devote uninterrupted time to online classes as they often have to perform household chores. The study argued that the very special experiences of the urban elites with online classes cannot be generalized in a society which draws students from very diverse backgrounds. The study concludes that the adoption of online modes of teaching in higher education will exacerbate the already uneven position of students. Without obsessing over completing the semester on time academic institutions must appreciate their diversity and stand in solidarity with their not-so fortunate stakeholders.

**Pearl Maria D' Souza (2020)** in her article presented the views over online classes during the COVID-19 pandemic. A survey by All India Democratic Students' Organization among 3,980 engineering students from 210 colleges reveals that they fear online classes are alienating poor students from the learning process. The study argued that online education can never be a comprehensive model; it can at best become a monologue lecture one and aid formal education. In India, where many have no access to technology, imposing online teaching will be highly discriminatory and anti-poor.

**Mounika Koul and Jyoti Bhola (2020)** made an effort to assessing the impact of lockdown on undergraduate teaching and evaluated about 700 students' responses. The study has rightly pointed out that there were many issues regarding availability, access and affordability for the students. The study has founded that lack of interaction with teachers and peers is affecting the learning process and many have consequences on the results. The major cause of concern was the examination and evaluation.

## **RESEARCH GAP**

In the backdrop of the aforementioned review of literature, it is found that there have been many research studies carried out on Online Classes during the Pandemic led Lockdown period in various States across the Country in Higher Educational Institutions (HEIs). However, quite a few research studies were undertaken on Online Classes in HEIs in Telangana State. This prompted the researcher's thrust to undertake the present study entitled 'Online Classes during COVID-19 Pandemic: A Study of Degree Students in Telangana'.

## **STATEMENT OF THE PROBLEM**

COVID-19 Pandemic led Lockdown transformed the landscape of Indian Education and forced to adopt Online Education to continue the studies. Many research studies found that there are a host of issues and challenges in Online Classes both for students and teachers besides plethora of opportunities. The present study is an attempt to study and analyze the perception of Degree Students towards Online Classes during the Lockdown period. It also explores the issues and challenges being faced by the Degree Students in attending the Online Classes.

## **NEED AND IMPORTANCE OF THE STUDY**

When Online Classes were initiated by the Commissioner of Collegiate Education, in Telangana formally from 15<sup>th</sup> April to 15<sup>th</sup> May, 2020 more than 93% of the Degree College Teachers swiftly adapted to new method and conducted Online Classes. Interestingly, it was reported that more than 60% of the students have attended the Online Classes with the help of various apps. However, about 40% of the students more specifically rural students could not attend the Online Classes due to a gamut of reasons. While attending the Online Classes students faced some issues and challenges. Hence, it is felt that there is a dire need to study the Degree Students Perception and Issues and Challenges of Online Classes in Telangana State.

Indeed, the outcome of the study will envisage the Governments, Policymakers, Administration and Teachers to devise suitable steps and strategies to address the issues and challenges being faced by the Students and to conduct the Online Classes in an effective manner in the days to come.

## **OBJECTIVES OF THE STUDY**

1. To study and analyze the perception of Degree Students towards Online Classes in Telangana State.
2. To explore the issues and challenges of Degree Students in attending Online Classes in Telangana State.



## **RESEARCH METHODOLOGY**

The present study is an analytical and descriptive type of research in nature. It is based on both primary and secondary data. The primary data has been collected from a sample of 900 Degree Students in Telangana State by administering the structured and pretested questionnaire. Simple Random Sampling Technique was adopted in selecting the sample respondents. The Online Survey was carried out with the help of Google Form through WhatsApp and Khaizala from 1<sup>st</sup> to 10<sup>th</sup> April, 2020 across the Telangana State. On the other hand, the secondary data for the study has been collected from various sources such as UNESCO Reports, UGC Circulars, and Articles published in Magazines, Journals and Newspapers etc. The statistical tools like percentages and averages, Chi Square and ANOVA have been used with the help of SPSS.

## **RESULTS AND DISCUSSION**

The Online Survey was carried out with the help of Google Form through WhatsApp and Khaizala from 1 to 10<sup>th</sup> April, 2020 across the Telangana State. The primary data has been collected from a sample of 900 Degree Students from different Degree Colleges across the Telangana State on Online Classes conducted during COVID-19 pandemic period. The results and discussion of the data collected has been presented here.

## **DEMOGRAPHIC AND SOCIO-ECONOMIC PROFILE OF THE RESPONDENTS**

The data pertaining to Demographic and Socio-Economic Profile of the Degree Student Respondents has been depicted in the Table 1. It is clearly evident from the Table 1 that the majority of students are of Male which account for 52.4 per cent, followed by the Female Students that account for about 47.6 per cent. As far as the Groups of the Students are concerned, an overwhelming majority of the respondents are from B.Com which account for about 51.2 per cent, followed by B. Sc (BZC & MPC) that accounts for 38.8 per cent, B.A about 6.2 per cent and BBA/BBM which account for 3.8 per cent. With regard to type of College, a whopping 67.1 of the respondents are from Govt. Degree Colleges and about 28.1 per cent of them are from Private Degree Colleges. The students from other Colleges include TSWREI Degree Colleges (3%) and Govt. Aided Degree Colleges (1.8%).

**Table 1: Demographic and Socio-Economic Profile of the Degree Student Respondents**

Sl.No	Variable	Classification	Frequency	%
1	Gender	Male	472	52.4
		Female	428	47.6
2	Group	B.A`	56	6.2
		B.Sc (BZC&MPC)	349	38.8
		B.Com	461	51.2
		BBA/BBM	34	3.8
3	Type of College	Govt. Degree Colleges	604	67.1
		TSWREI (Gurukul) DCs	27	3.0
		Private Degree Colleges	253	28.1
		Govt. Aided Degree Colleges	16	1.8
4	Affiliation	Osmania University, Hyderabad	261	29.0
		Kakatiya University, Warnagal	216	24.0
		Satavahana University, Karimnagar	227	25.2
		Telangana University, Nizamabad	82	9.1
		Mahatma Gandhi University, Nalgonda	19	2.1
		Palamuru University, Mahaboobnagar	95	10.6
5	Place	Urban	460	51.1
		Rural	440	48.9
6	Parents' Occupation	Agriculture	392	43.6
		Business	98	10.9
		Govt. Employee	62	6.9
		Pvt. Employee	97	10.8
		Own Profession	73	8.1
		Others	178	19.8
<b>Total</b>			<b>900</b>	<b>100</b>

Source: Primary Data

It can be seen from the Table 1 that while about 29 per cent of the respondents are from the Degree Colleges affiliated to Osmania University, followed by about 25.2 per cent of respondents are from the Colleges affiliated to Satavahana University and 24 per cent of them are from Colleges affiliated to Kakatiya University. The respondents from other Colleges affiliated to Palamuru University account for 10.6 per cent, Telangana University 9.1 per cent and Mahatmagandhi University 2.1 per cent. Interestingly, about 51.1 per cent of the respondents are

from urban areas of Telangana State and 48.9 per cent of them are from rural areas. When it comes to the Parents' Occupation, majority i.e., 43.6 per cent of the respondents' parents Occupation is Agriculture, followed by Parents with Business account for 10.9 per cent and Parents with Own Profession account for 8.1 per cent. Interestingly, about 10.8 of the students Parents Occupation is Private Employment and about 6.9 per cent of the students' parents occupation is Govt. Employment.

**AVAILABILITY OF DEVICES:** Having device is pre-requisite to attend the Online Classes and type of device also plays a significant role in better understanding of Online Classes. Smartphone, Desktops, Laptops and Tabs are used to attend Online Classes. The information relating to availability of Device, Type of Device and Whose Device has been placed in the Table 2.

**Table 2: Availability and Type of Device to attend Online Classes**

Sl.No	Particulars	Response	Frequency	%
1	<b>Have you had any device to attend online classes during pandemic?</b>	<b>Yes</b>	<b>800</b>	<b>88.9</b>
		<b>No</b>	<b>100</b>	<b>11.1</b>
		<b>Total</b>	<b>900</b>	<b>100</b>
2	<b>If yes, what type of device you had?</b>	<b>Smartphone</b>	<b>766</b>	<b>95.8</b>
		<b>Desktop(Computer)</b>	<b>10</b>	<b>1.3</b>
		<b>Laptop</b>	<b>17</b>	<b>2.1</b>
		<b>Tab</b>	<b>7</b>	<b>0.8</b>
		<b>Total</b>	<b>800</b>	<b>100</b>
3	<b>Whose device you have used for Online Classes?</b>	<b>My Own</b>	<b>560</b>	<b>62.2</b>
		<b>Parent's</b>	<b>240</b>	<b>26.7</b>
		<b>Other's</b>	<b>100</b>	<b>11.1</b>
		<b>Total</b>	<b>900</b>	<b>100</b>

Source: Primary Data

Analysis of the data shown in the Table 2 clearly reveals that when the Students were asked whether they had device to attend Online Classes during the Lockdown Period, a whopping 88.9 per cent of the respondents elicited an emphatic 'yes' and about 11.1 per cent said 'no'. As far as type of Device is concerned, an overwhelming majority of the students i.e., 95.8 per cent used

Smartphone and about 1.3 per cent used Desktops, about 2.1 per cent used Laptops and only about 0.8 per cent used Tabs for attending Online Classes. Enthusiastically, majority of the Students i.e., 62.2 per cent opined that they have used their Own Device, followed by 26.7 per cent of them said that they have used their Parents' Devices and about 11.1 per cent of them depended on other's Devices for attending Online Classes.

## INTERNET DATA

Another essential requirement to attend Online Classes is seamless Internet Data. Table 3 shows the data relating to the Type of Data used for attending Online Classes. Retrospection of Table 3 reveals that large number of Students i.e., 87.4 per cent adopted the Mobile Internet Data used for attending Online Classes. About 4 per cent of the students utilized broadband based Internet Data and about 8.6 per cent of the Students used both Mobile and broadband internet data for attending Online Classes. It can be inferred that overwhelming majority of Students depended on the Mobile Data for attending Online Classes during the Lockdown period.

**Table 3: Type of Data used for attending Online Classes**

Particulars	Frequency	%
Mobile Data	787	87.4
Broadband	36	4.0
Both	77	8.6
<b>Total</b>	<b>900</b>	<b>100.0</b>

Source: Primary Data

## ONLINE VIDEO CONFERENCING APPS

As soon as the COVID-19 induced Lockdown, many Online Video Conferencing Apps were made available which made the remote learning easier. There have been a good no of Online Video Conferencing Apps to conduct Online Classes freely to some extent. The data with regard to Online Video Conferencing Apps used for attending Online Classes has been placed in the Table 4.

**Table 4: Online Video Conferencing Apps used for Online Classes**

Particulars	Frequency	%
ZOOM	686	76.2
Google Meet	36	4.0
Cisco Webex	37	4.1
Go To Meeting/Webinar	11	1.2
Skype	32	3.6
MS-Team	8	.9
WhatsApp	62	6.9
Any Other App	28	3.1
<b>Total</b>	<b>900</b>	<b>100.0</b>

Source: Primary Data

It is clearly evident from the Table 4 that an overwhelming majority i.e., 76.2 per cent of the respondents used ZOOM App for attending Online Classes as it has become more handy not only for students but also for the Teachers as compared to that of other Apps. Other Online Video Conferencing Apps used by the Students to attend Online Classes are WhatsApp (6.9%), Cisco Webex (4.1%), Google Meet (4%) and Skype (3.6%) etc.

## SCREEN TIME OF ONLINE CLASSES

The data regarding duration of Online Classes (Screen Time) per day has been shown in the Table 5.

**Table 5: Duration of Online Class (Screen Time) per day**

Particulars	Frequency	%
Less than 2 Hrs	462	51.3
2 to 4 Hrs	295	32.8
4 to 6 Hrs	114	12.7
More than 6 Hrs	29	3.2
<b>Total</b>	<b>900</b>	<b>100.0</b>

Source: Primary Data

Analysis of the data depicted in the Table 5 shows that most of the students i.e., 51.3 per cent stated that per day duration of Online Classes was about 2 hours per day, followed by 32.8 per cent of the students who attended upto 2 to 4 hours a day and about 12.7 per cent of the Students

attended Online Classes for a duration of 4 to 6 hours a day. Surprisingly, about 3.2 per cent of the students expressed that they attended Online Classes more than 6 hours a day.

## ONLINE TEACHING METHODS

The method used for online Teaching plays increasingly important role in making the students understand the concept clearly. Table 6 depicts the data relating to kind of teaching methods more liked by the students during Online Classes.

**Table 6: Kind of Teaching Methods liked more during Online Classes**

Particulars	Frequency	%
Oral Teaching	221	24.6
Using Black/White Boards	283	31.4
Using PPT	46	5.1
Both Oral & PPT	284	31.6
Others	66	7.3
<b>Total</b>	<b>900</b>	<b>100.0</b>

Source: Primary Data

It can be analyzed from the Table 6 that about 31.6 per cent of the respondents very much liked both Oral and Power Point Presentation (PPT) teaching, closely followed by about 31.4 per cent of the respondents who liked teaching with the help of Black & White Boards and about 24.6 per cent of the Students shown interest towards Oral Teaching. However, merely using PPT is liked by only 5.1 per cent of the Students. It is to say that Oral Teaching with the help of PPT remained the interesting method which was liked by most of the Students during Online Classes.

**Hypothesis 1:** The following hypothesis is formulated and tested with the help of SPSS.

Ho: There is no significant association between Gender of the Students and Kind of Teaching Method liked by the Degree Students during Online Classes

The results of the Chi-square test have been shown in the Table 7 as below.

**Table 7: Chi-Square Test- Gender and Kind of Teaching Methods liked by the Degree Students**

Test	Value	df	Sig. (2-sided)
Pearson Chi-Square	9.316 <sup>a</sup>	4	.054
Likelihood Ratio	9.435	4	.051
Linear-by-Linear Association	.107	1	.744
N of Valid Cases	900		

Source: Calculations on SPSS

It can be analyzed from the Table 7 that the Pearson Chi-Square value is 9.316 at 4 df and P value is less than 0.05 at 5 per cent level of significance. Hence, the null hypothesis has been rejected as the p value is less than 0.05. Thus, it can be inferred that there is a statistically significant association between Male and Female Degree Students and the kind of teaching method liked by the Students during Online Classes. It means that both Male and Female students liked same kind of teaching during the Online Classes.

## TYPE OF ONLINE LECTURES

The information pertaining to the type of Online Lectures that the Students enjoyed more during Pandemic has been placed in the Table 8.

**Table 8: Type of Online Lectures that the Students enjoyed during the pandemic**

Particulars	Frequency	%
Direct Online Lectures	479	53.2
Recorded Video Lessons	51	5.7
YouTube Video Lessons	89	9.9
Audio Lessons	13	1.4
Both Direct & Recorded Video Lectures	268	29.8
<b>Total</b>	<b>900</b>	<b>100.0</b>

Source: Primary Data

It is clearly evident from the Table 8 that the majority of the Students i.e., 53.2 per cent enjoyed Direct Online Lectures and about 29.8 of the Students enjoyed both Direct and Recorded Video Lectures. The other lectures liked by the Students are YouTube Video Lectures account for 16.6 per cent and Audio Lectures which account for 1.4 per cent.

## OBSTACLES OF ONLINE CLASSES

The data relating to disturbances or obstacles that the Students faced during Online Classes has been depicted in the Table 9. Retrospection of the Table 9 shows that most of the Students faced low Internet Bandwidth during the Online Classes which account for about 43.9 per cent, followed by about 29.4 per cent of the Students expressed that they faced Voice Disturbances and about 8.4 per cent of them suffered with Operational disturbances. Other obstacles faced by the Students are Video Streaming disturbances account for 7.3 per cent, Electricity Problems account for 2.2 per cent and other disturbances which account for 8.7 per cent.

**Table 9: Obstacles faced by the Students during Online Classes**

Particulars	Frequency	%
Voice Disturbances	265	29.4
Low Internet Bandwidth	395	43.9
Inadequate Internet Data	76	8.4
Video Streaming Disturbances	66	7.3
Electricity Problems	20	2.2
Other Disturbances	78	8.7
<b>Total</b>	<b>900</b>	<b>100.0</b>

Source: Primary Data

## ISSUES AND CHALLENGES OF ONLINE CLASSES

Many research studies found that there are many issues and challenges in Online Classes which are need of the hour during the Lockdown period. Table 10 demonstrates the data regarding the issues and challenges of Online Classes.

**Table 10: Issues and Challenges of Online Classes**

Particulars	Frequency	%
Lack of Clarity of Lectures	406	45.1
Lack of Human Connect	76	8.4
Absence of Collaborative Learning	78	8.7
Lack of Teacher Supervision	44	4.9
No hands on Learning	46	5.1
Lack of Effective Live Interaction	132	14.7
Attending by Staying at Isolated Environment	118	13.1
<b>Total</b>	<b>900</b>	<b>100.0</b>

Source: Primary Data



It can be analyzed from the Table 10 that the major issues and challenges of the Online Classes are lack of clarity of Lectures due to various reasons which account for about 45.1 per cent, followed by lack of effective live interaction that account for 14.7 per cent and attending by staying at isolated environment that account for 13.1 per cent. The other issues and challenges include absence of Collaborative Learning which account for 8.7 per cent, Lack of Human connect that account for 8.4 per cent, No Hands on Learning account for 5.1 per cent and Lack of Teacher Supervision account for 4.9 per cent.

**Hypothesis 2:** The following hypothesis is formulated and tested with the help of SPSS.

Ho: There is no significant association between Gender of the Students and Issues and Challenges of Online Classes.

The results of the Chi-square test have been shown in the Table 11 as below.

**Table 11: Chi-Square Test- Gender and Issues and Challenges of Online Classes**

Test	Value	df	Sig. (2-sided)
Pearson Chi-Square	15.898 <sup>a</sup>	6	.014
Likelihood Ratio	16.208	6	.013
Linear-by-Linear Association	3.375	1	.066
N of Valid Cases	900		

Source: Calculations on SPSS

It can be analyzed from the Table 11 that the Pearson Chi-Square value is 15.898 at 6 df and P value is 0.14 at 5 per cent level of significance. Therefore, the null hypothesis has been rejected as the p value is less than 0.05. Thus, it can be stated that there is a statistically significant association between Male and Female Degree Students and issues and challenges being faced during Online Classes.

## CONTINUITY OF ONLINE CLASSES

Table 12 shows the information pertaining to continuity of Online Classes. It is very clear from the Table 12 that when the respondents were asked to respond on how long they wanted the Online Classes to be continued, a whopping 74.2 per cent of respondents clearly stated that these Online

Classes could be continued till the COVID-19 Pandemic comes under control and about 25.8 per cent opined that Online Classes may be continued regularly during post COVID-19 period as well.

**Table 12: Continuity of Online Classes**

Particulars	Frequency	%
Till End of COVID-19 Pandemic	668	74.2
Continue Regularly	232	25.8
<b>Total</b>	<b>900</b>	<b>100.0</b>

Source: Primary Data

## EFFECTIVE METHODS OF LEARNING IN NEW NORMAL

There are two important methods of Teaching-Learning such as Face to Face and Online Learning. Another method is evolved in the recent past i.e. Blended learning which is the hybrid of Face to Face and Online Learning method. The data pertaining to the effective method of Learning in New Normal has been depicted in the Table 13.

**Table 13: The Most Effective Methods of Learning in New Normal Days**

Particulars	Frequency	%
Face to Face Learning	457	50.8
Online Learning	191	21.2
Blended Learning	252	28.0
<b>Total</b>	<b>900</b>	<b>100.0</b>

Source: Primary Data

As shown in the Table 13 that 50.8 per cent of the students elicited their opinion as the Face to Face learning is the best and evergreen method, followed by about 28 per cent stated that it is blended learning and about 21.2 per cent of the Students opted for Online Learning because of the flexibility in the New Normal Days. Though the face to face learning is the best way, students are also showing interest towards Blended Learning which is going to be the best learning in the New Normal Days in future.

## OPINION TOWARDS ONLINE CLASSES

The Opinion of Degree Students towards Online Classes collected on Likert's Five Point Scale ranging from Strongly Agree to Strongly Disagree and placed in the Table 14.

**Table 14: Opinion of Degree Students towards Online Classes**

Sl. No	Variable	Measures	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
1	Online Classes helped you stay at home during COVID-19 Pandemic	Frequency	309	379	137	38	37	900
		%	34.3	42.1	15.2	4.2	4.1	100
2	Online Classes cannot replace the face to face classes	Frequency	332	312	185	38	33	900
		%	36.9	34.7	20.6	4.2	3.7	100
3	Online Classes need of the hour during this pandemic	Frequency	230	407	176	55	32	900
		%	25.6	45.2	19.6	6.1	3.6	100
4	Online assessment is not upto the desired level	Frequency	225	331	246	68	30	900
		%	25.0	36.8	27.3	7.6	3.3	100

Source: Primary Data

Interestingly, about 42.1 per cent and 34.3 per cent respondents opined that they agree and strongly agree respectively with the statement of Online Classes helped them stay at home during COVID-19 Pandemic. As far as Online Classes cannot replace the face to face classes, about 36.9 strongly agreed and 34.7 per cent agreed while about 20.6 per cent of the respondents were neutral. Majority of the respondents i.e., 45.2 per cent expressed that they agree with Online Classes were need of the hour during the Pandemic and about 25.6 per cent of the respondents strongly agreed with that statement. With regarding to the statement of Online Assessment is not upto the desired level, about 36.8 per cent agreed and 27.3 per cent remained neutral. About 25 per cent of the Students strongly agreed that online assessment is not upto the desired level.

**ANALYSIS OF VARIANCE (ANOVA)**

The following hypothesis is framed and tested with the help of SPSS

**Hypothesis 3:** Ho: There is no statistically significant difference between Gender and Opinion of Degree Students towards Online Classes.

**Table 15: ANOVA Results: Gender and Opinion of Degree Students towards Online Classes**

Variable		Sum of Squares	df	Mean Square	F	Sig.
<b>1. Online Classes helped you stay at home during COVID-19 Pandemic</b>	Between Groups	13.055	1	13.055	12.775	.000
	Within Groups	917.695	898	1.022		
	Total	930.750	899			
<b>2. Online Classes cannot replace the face to face classes</b>	Between Groups	2.422	1	2.422	2.259	.133
	Within Groups	962.707	898	1.072		
	Total	965.129	899			
<b>3. Online Classes need of the hour during this pandemic</b>	Between Groups	3.078	1	3.078	3.122	.078
	Within Groups	885.251	898	.986		
	Total	888.329	899			
<b>4. Online assessment is not upto the desired level</b>	Between Groups	1.076	1	1.076	1.023	.312
	Within Groups	944.137	898	1.051		
	Total	945.212	899			

Source: Calculations on SPSS

The results of the ANOVA test have been shown in the Table 15. It is evident from the Table 15 that the p-value for about 1 variable such as '**Online Classes helped you stay at home during COVID-19 Pandemic**' shown in the above table is less than 0.05 at 5 per cent level of significance and hence the null hypothesis has been rejected. Hence, it can be inferred that there is a statistically significant difference between Male and Female Degree Students opinion towards online classes.

On the other hand, it can be analyzed from the Table 15 that the p-values for about 3 variables such as ‘**Online Classes cannot replace the face to face classes**’ ‘and ‘**Online Classes need of the hour during this pandemic**’ and ‘**Online assessment is not upto the desired level**’ as depicted in the above table are more than 0.05 at 5 per cent level of significance and hence the null hypotheses of these variables have been accepted. Therefore, it can be concluded that there is no statistically significant difference between Male and Female Degree Students Opinion towards Online Classes.

## OVERALL OPINION TOWARDS ONLINE CLASSES

Table 16 depicts the information relating to the Overall Opinion towards Online Classes

**Table 16: Overall Opinion on the Online Classes**

Particulars	Frequency	%
Excellent	92	10.2
Good	475	52.8
Fair	160	17.8
Poor	173	19.2
<b>Total</b>	<b>900</b>	<b>100.0</b>

Source: Primary Data

It can be seen from the Table 16 that majority of the students i.e., 52.8 per cent expressed Good and about 17.8 per cent of the respondents opined ‘Fair on Overall Opinion on the Online Classes. However, 19.2 per cent of the Students said that Online Classes are poor due to various technical snags.

**Hypothesis 4:** The following hypothesis is formulated and tested with the help of SPSS.

Ho: There is no significant association between Gender and Overall opinion on Online Classes.

The results of the Chi-square test have been shown in the Table 17 as below.

**Table 17: Chi-Square Test- Gender and Response towards Delay in Govt. Subsidies**

Test	Value	df	Sig. (2-sided)
Pearson Chi-Square	30.375 <sup>a</sup>	3	.000
Likelihood Ratio	30.687	3	.000
Linear-by-Linear Association	8.453	1	.004
N of Valid Cases	900		

Source: Calculations on SPSS

It can be seen from the Table 17 that the Pearson Chi-Square value is 30.375 at 4 df and P value is less than 0.05 at 5 per cent level of significance. Hence, the null hypothesis has been rejected as the p value is less than 0.05. Therefore, it can be inferred that there is a statistically significant association between Gender of Degree Students and overall opinion on Online Classes.

## FINDINGS OF THE STUDY

- It is found that majority of the Degree Students i.e., 88.89 per cent, have device to attend the Online Classes and most of them have used Smartphones (95.8%), while about 62.2 per cent of the Students have their own devices to attend Online Classes. However, about 11.11 per cent of the Degree Students depended on Others' devices to attend the Online Classes.
- Interestingly, an overwhelming majority of the Students i.e., 87.4 per cent have used Mobile Internet Data and a whopping 76.2 per cent of them attended Online Classes on Zoom Online Video Conferencing App as it is user friendly for both Teachers and Students.
- With regard to duration of Online Classes (Screen Time) per day, about 51.3 per cent of Students have less than 2 hours screen time per day and about 32.8 per cent of them had 2 to 4 hours screen time per day.
- It is examined that most of the Students evinced interest on Oral Teaching coupled with PPTs which account for 31.6 per cent and about 53.2 per cent of the Students have shown interest on Direct Online Teaching rather than Recorded Video and Audio Lectures shared on different platforms.
- It is observed from the analysis that having low Internet bandwidth was the major obstacle (43.9%) and other obstacles include Voice Disturbances (29.4%), Operational Disturbances (8.4%), Video Streaming Disturbances (7.3%) etc.

- It is found that Lack of Clarity of Lecture (45.1%) was the major issue and challenges of Online Classes and other issues and challenges were lack of effective live interaction (14.7%), attending by staying at isolated environment (13.1%), absence of collaborative learning (8.7%) and lack of human connect (8.4%) etc.
- About 74.2 per cent of the Students wanted Online Classes till the COVID-19 Pandemic comes under control and around 50.8 per cent strongly felt that face to face learning is the best method ever and forever.
- An overwhelming majority of the students agreed (42.1%) and strongly agreed (34.3%) about the statement that Online Classes helped them stay at home during COVID-19 Pandemic and majority of the students (36.8%) agreed that Online Assessment is not upto the desired level.
- Enthusiastically, it is found that about 52.8 per cent of the Students expressed that Online Classes were good and however about 19.2 per cent of the Students elicited their opinion as 'poor' over Online Classes.

## **SUGGESTIONS**

- As about 40 per cent of Students were away from Online Classes and among those who have attended Online Classes about 11.11 per cent depended on others' devices for Online Classes, it is high time to take immediate measures by the Government to provide devices or EduTabs with Internet Data to make the Online Classes successful.
- Teachers are required to teach Online Classes effectively by using latest innovative methods such as gamification and interactive sessions, quiz programmes and active involving of every student in Online Classes.
- Proper training shall be imparted to Teaching fraternity for effective and smooth handling of Online Video Conferencing Apps for Online Classes and to address the obstacles being faced during the Online Classes.
- Regular live lectures through TV Channels like MANA TV and DD Yadagiri to be made available to the rural students who could not attend Online Classes and could not afford to devices for want of money.
- Governments both Central and State Government should provide Smartphones and Educational Tabs to the students more particularly to the rural students with internet data so as to make them part of the Online Classes as blended learning may be continued in future as well.

## **CONCLUSION**

COVID-19 Pandemic has increasingly changed the landscape of Indian Higher Education and forced it to Online Learning. The study has focused on perception of Degree Students towards Online Classes in Telangana State and explored issues and challenges of Online Classes. It is to conclude that the majority of the Degree Students used Smartphones for attending Online Classes and most of the Students evinced interest on Oral Teaching coupled with PPTs rather than Recorded Video shared on different platforms. Low Internet bandwidth, Streaming and Voice disturbances, power interruptions, lack of clarity of lectures, lack of effective live interaction, isolated learning environment, missing human connect, lack of interest and lack of collaborative learning were identified to be the major issues and challenges of Online Classes. Interestingly, majority of the Students opined that Online Classes helped them stay at home and continue their studies during this COVID-19 Pandemic crisis and expressed that these Online Classes shall be continued till pandemic comes under control. It is suggested that the Central and State Governments and Authorities should take effective steps to address the various issues and challenges of Online Learning such as rural-urban divide, broadband connectivity, and power cuts and to provide devices – smartphones or tablets to the students in order to make Online Learning more effective.

## **LIMITATIONS AND SCOPE FOR FUTURE RESEARCH**

The present study is confined to Online Classes conducted by Higher Education Institutions in Telangana State and to Degree Students only. This is aimed at understanding perception of Degree Students towards Online Classes and exploring the obstacles, issues and challenges faced by the Degree Students. Indeed, there is an enormous scope for further research on Online Learning by professional Under Graduate Students and Post Graduate Students in Telangana State.



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