



## A COMPARATIVE ANALYSIS ON DIFFERENT TEACHING MODES FOLLOWED DURING THE PANDEMIC PERIOD (COVID -19)

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*‘No faith; only validation’*

- Anonymous

### ABSTRACT

*The present study is comparative in nature. In this study, the researcher compared the students' attendance in each of the three modes s.t. conventional mode, audio conferencing mode using whats'app, and video conferencing mode using zoom app. In the context of my department, it was found that more students were attended the online classes using whats' app next to video conferencing mode. More girls were attended online classes than boys. Interestingly the rate of attendance through online mode especially using whats' app was found amazing since more students participated in online teaching activities than the traditional mode. Therefore, it is concluded from the study that, online learning activities helped more students, then conventional mode. It is also suggested to prepare more self study materials to overcome such situations and our syllabus should include atleast 25% self guided contents which can be clarified from concerned faculty member in case of necessity.*

**Key words:** *Audio Conferencing Mode, Conventional Mode, COVID-19, Pandemic, Teaching Learning Activities, Video Conferencing Mode.*

### INTRODUCTION

The current lethal situation caused by the Covid – 19 viruses affected almost each and every country of the world. India also not escaped from these dangerous viruses which forced the Indian Union Government to impose lockdown in the country to save its citizen from Corona virus infected diseases, 2019. The Union government imposed lockdown from 24<sup>th</sup> February, 2020 in the country, which created major challenges at every sphere of human life. The lockdown created challenges for teaching learning process in the educational systems including higher education of the country. Keeping eye on this crisis, the University Grant Commission (UGC) directed to all universities and other higher educational institutions to start online teaching learning activities using e-resources and

learning applications which are mainly available for the benefits of learners. The Arunachal University of Studies also followed the UGC notification issued

for online classes. Initially, the management instructed us to take classes using Whats' App during the month of April, 2020 and latter we instructed to take classes through video conferencing mode using zoom applications from 1<sup>st</sup> May, 2020 onwards. This is a comparative study and aimed to analyse the students' attendance during this lockdown situation. The researcher compared students' attendance in three modes of study, s.t. Conventional Mode, Audio Mode (using what's app) and Video Conferencing Mode (using zoom application).

## PROBLEM STATEMENT

The title of a study draws a barrier to it and demarked its scope. The current problem in hand is worded as 'A Comparative Analysis on Different Teaching Modes Used During the Pandemic Period (Covid -19)'

## SIGNIFICANCE OF THE STUDY

The pandemic situation forced to initiate the online teaching learning process for students and the researcher started the process to overcome the difficulties raised for conventional teaching method due to lockdown amid Covid – 19. The researcher felt the necessity to know the impact of online classes on her students though it was new for them. This encouraged the researcher to do a comparative study to know the pros and cons between the conventional teaching method and online teaching methods and the interest of students towards online teaching method.

## OBJECTIVES OF THE STUDY

1. To analyse the rate of students' attendance during conventional and online mode of teaching activities.
2. To analyse the students attendance and easy access to online teaching process.
3. To study the numbers of students participate during both conventional and virtual mode of teaching learning process.
4. To study the gender wise students' attendance in the teaching learning processes during the lockdown period (Covid - 19)

## HYPOTHESIS OF THE STUDY

The study moves around the hypothesis. Hypotheses help the researcher to proceed in right direction. Hypothesis of the study were given below.

1. There is no difference between the rate of students' attendance during conventional and online teaching process.
2. There is no difference between the rate of students' attendance in online classes using Whats' App mode, and Video conferencing mode.
3. There is no significant difference in numbers of students' participation with respect to online and conventional mode of classes.

4. There is no significant difference between students' attendance with respect to their gender.

## DELIMITATION OF THE STUDY

1. The study is limited to the 2<sup>nd</sup> Semester students of Bachelor of Special Education (Visual Impairment) studying at the department of special education of the university.
2. Students attendance of the months of February, 2020 (conventional teaching), April, 2020 (teaching through Whats' App), and May, 2020 (teaching through Zoom App) only, were taken for the study.

## METHOD OF THE STUDY

### *Participants*

Participants were 29 B.Ed in Special Education 2<sup>nd</sup> semester students [18 girls (62.07%) and 11 (37.93%) boys] from the departments of special education. All participants belong to visual disabilities specific specialization.

### *Variables and measurement instruments*

To measure the impact of the online teaching practices, data taken from the student's attendance register. The attendance of students in three mode of study is taken in to consideration during analysis. Students attendance were analysed with respect to their gender.

### *Procedure of data analysis*

Given that the preliminary analysis carried out using a standard procedure for estimating the result of the study. The research scholar carried out an analysis of means and standard deviations. One way ANOVA test and t-test are implemented to reach at the final conclusion.

## RESULT AND DISCUSSION

### **1.0 Comparison of Students' Attendance with respect to Conventional and Virtual Classes**

The attendance data in teaching mode are analysed for total sample with the help of t-test and obtained results were discussed in below sections

### 1.1 Assessment and Comparison of Students' Attendance in between Conventional Mode, and Audio Conferencing Mode using Whats' App

The data in respect of analysis of attendance scores of total students were obtained from the attendance register. The data analyzed with the help of t-test and results are given in the table -1.1

**Table -1.1**

**Analyses of Attendance Scores of Sample Students with respect to Conventional and Audio Mode using Whats' App**

Mode of Teaching	No	d.f	Mean	SD	t- value
Conventional	29	28	07.724	08.564	2.884**
Whats' App (Audio)	29		15.069	10.710	

\*\* Significant at 0.01 level

The analysis of the students' attendance during lockdown period revealed that, the calculated t-value (2.884) is greater than the critical table value and hence significant at the level 0.01 with the degree of freedom 28. It refers that there is significant difference in students' attendance between the conventional mode of teaching and online teaching using Whats' App. It means that the later mode of teaching became more helpful since significant numbers of students could able to participate through online (Audio) classes. In the light of this the null hypothesis that, 'there is no difference between the rate of students' attendance during conventional and online teaching process.' is rejected. Therefore, the teaching learning process using whats' app became helpful for our students than the conventional classroom during the lockdown period. Hence, it is concluded that, online mode of teaching became helpful for student studying during the pandemic situation raised by COVID – 19 viruses.

### 1.2 Assessment and Comparison of Students' Attendance in between Conventional Mode, and Video Conferencing Mode using Zoom App

The data in respect of analysis of attendance scores of total students were obtained from the attendance register. The data analyzed with the help of t-test and results are given in the table -1.2

**Table -1.2**

**Analyses of Attendance Scores of Sample Students with respect to Conventional and Video Conferencing Mode using Zoom App**

Mode of Teaching	No	d.f	Mean	SD	t- value
Conventional	29	28	07.724	8.564	2.235*
Zoom App(Video)	29		13.000	9.392	

\* Significant at 0.05 level

It is seen from the attendance analysis of the students during lockdown period that, the critical table value is smaller than the statistical t-value (2.235) and hence significant at the level 0.05 with the degree of freedom 28. It referred that there is significant difference in students' attendance between the conventional mode of teaching, and online teaching using Zoom App. It means that the online teaching through video conferencing mode became more helpful since significant numbers of students could able to participate in the class. In the light of this the null hypothesis that, '*there is no difference between the rate of students' attendance during conventional and online teaching process.*' is rejected. Therefore, the teaching learning process using zoom app through video conferencing mode became helpful for students than the conventional classroom during the lockdown period. Hence, it is concluded that, majority of students got benefited from online teaching through video conferencing mode compare to the traditional face to face mode of teaching learning process during the lockdown period imposed by the union government of India amid COVID – 19 viruses.

## 2.0 Comparison of Students' Attendance with respect to Audio Conferencing Mode of Teaching and Video Conferencing Mode of Teaching

The data in respect of analysis of attendance scores of total students were obtained from the attendance register. The data analyzed with the help of t-test and results are given in the table -2.0

**Table -2.0**  
**Analyses of Attendance Scores of Sample Students with respect to**  
**Conventional and Video Conferencing Mode using Zoom App**

Mode of Teaching	No	d.f	Mean	SD	t- value
Whats' App (Audio)	29	28	15.069	10.710	0.782 <sup>NS</sup>
Zoom App(Video)	29		13.000	09.392	

<sup>NS</sup> :Significant at 0.05 level

The comparative analysis of the students' attendance revealed that, the calculated t-value is smaller than any value with the degree of freedom 28 and hence is not significant. It means that there is not significant difference between the student attendances in both the online mode of teaching. In the light of this the null hypothesis that, '*there is no difference between the rate of students' attendance in online classes using Whats' App mode, and Video conferencing mode*' is accepted. But the mean attendance scores indicated that, more students were attended the online class using whats' app (15.069) than the online class using zoom app (13.0). Therefore, the students got benefited from both types of teaching learning process using whats' app and zoom app, up to same extent; yet teaching using whats' app could be accessible to more students during the lockdown

period. Hence, it is concluded that, online mode of teaching became helpful for student studying through online classes.

### 3.0 Detailed Analysis on Participation of Numbers of Students in Each of the Classes during All Modes of Teaching Learning Process

The detailed attendance of students were analysed to clarify the participation of students in daily basis were obtained and analyzed with the help of ANOVA-test and results are given in the table - 3.1 below.

**Table – 3.1**

**Analysis of Participation of Numbers of Students in Each Class  
During Every Mode of Teaching Learning Process**

Source of variance	No	df	SS	MSS	F- value
Mode of Teaching (k)	03	02	237.372	118.686	4.763*
Number of Participants (n)	57	54	1345.571	24.918	
Total	-	-	1582.943		

\*: Significant at .05 Level

The analysis of students' attendances during three modes of teaching learning processes presented in the above table. It is seen that, the statistical F-value for students' attendances during three types of teaching is 4.763 and is greater than the critical table value (3.17) with the degree of freedom (2, 54) at the level of 0.05. It indicated that, the F- value is significant at the level of 0.05. This means that, the mean numbers of students scores of three types of teaching differ significantly. It refers that numbers of students participated in conventional mode, Audio mode (using whats' app) and video conferencing mode (using zoom app) differed significantly. In the light of this the hypothesis that, '*there is no significant difference between low qualified and highly qualified parents with respect to awareness for habit problems exist in their children*' is rejected. Therefore, it is concluded that more numbers of students' participated the online classes taught using whats' app and zoom app, and significantly differed from traditional mode of teaching.

Further analysis is done to find out to which mode of teaching attracted more students out of three different types of teaching learning processes and numbers of students differed significantly; the researcher implemented t- test to find out the highly interactive teaching mode. The results of this analysis have been given in following section.

### 3.1 Teaching Learning Mode wise Analysis of Students Participation during Three Modes of Teaching Learning Process

The data in respect of analysis of responses received from all samples were obtained and analyzed with the help of t-test and results are given in the table - 3.2 below.

**Table – 3.2**  
**Teaching Mode wise analysis of Students Participation in**  
**Teaching Learning Process**

Mode of teaching	No	Mean	SD	Calculated t – values			
				d.f	Whats' App	d.f	Zoom
Conventional	17	13.18	7.213	13	4.731**	13	2.745**
Audio / Whats' App	20	21.85	3.617	-	-	38	3.098*
Video / Zoom	20	18.25	3.731	-	-	-	-

\* : Significant at 0.05 Level

\*\* : Significant at 0.01 Level

The three modes of teaching learning processes were compared with respect to numbers of students participated, and the result of analysis revealed that, the statistical t-value (4.731) is greater than the critical table value at the degree of freedom 13 at the level of 0.01. It indicated that, the statistical t-value is significant at d.f =13. It means that, the mean numbers of participants from these three modes of teaching learning activities differ significantly. It refers that significantly more numbers of participant attended the online classes than the earlier traditional teaching learning mode. In the light of this the hypothesis that, *'there is no significant difference in numbers of students' participation with respect to online and conventional mode of classes is differed significantly'* is rejected. Therefore, it is concluded that numbers of students' participation in online teaching learning mode using whats' app is more than the conventional teaching mode and differs significantly.

The calculated t-value between the conventional and online video conferencing mode (using zoom app), were analysed and it is found that, the calculated t-value (2.745) is greater than the corresponding critical table value with the degree of freedom 13 at the level of 0.01. This means that, the mean numbers of students' participation scores of conventional and online using zoom differ significantly. It refers that numbers of students participated through video conference mode of teaching differed significantly. In the light of this the hypothesis that, *'In the light of this the hypothesis that, 'there is no significant difference in numbers of students' participation with respect to online and conventional mode of classes is differed significantly'* is rejected. Therefore, it is decided that numbers of students' participation in online classes

through video conferencing mode using zoom app is more than the conventional teaching mode and differs significantly.

The calculated t-value between the number of students participated in each class conducted using whats' app and Zoom App , were analysed and it is found that, the calculated t-value (3.098) and is greater than the corresponding critical table value with the degree of freedom 38 at the level of 0.05. It indicated that, the t- value is significant at the level of 0.05. This means that, the mean attendance score of students attending two types of classes differ significantly. It refers that attendance in class using whats app differed significantly. In the light of this the hypothesis that, '*there is no significant difference in numbers of students' participation with respect to online and conventional mode of classes is differed significantly*' is rejected. Therefore, it is concluded that numbers of students' participation in Online classes using whats app' is more than the numbers of students participating Online classes using zoom app' and differs significantly.

#### 4.0 Analysis of Participation of Students with respect to their Gender in three mode of Teaching Learning Process

The data in respect of analysis of pre-test and post-test scores of over all samples were obtained before and after treatment. The data analyzed with the help of t-test and results are given in the table -4.0

**Table -4.0**

##### **Analyses of Participation of Students with respect to their Gender**

Mode of Teaching Learning Process	Gender	No	d.f	Mean	SD	t- value
Conventional	Girl	18	18	7.500	7.771	0.580 <sup>NS</sup>
	Boy	11		9.364	9.384	
Whats' App (Audio)	Girl	18	20	16.500	10.645	0.794 <sup>NS</sup>
	Boy	11		13.180	11.400	
Zoom App (Video Conferencing)	Girl	18	21	13.750	10.526	0.545 <sup>NS</sup>
	Boy	11		11.545	10.624	

<sup>NS</sup>: : Not Significant at any Level of Study

The gender wise comparative analysis of the students' attendance resulted that, the statistical t-value is not significant for each of the classes. It means that there is not significant difference between the student attendances with respect to gender. It means that both girls and boys were participated classes irrespective of their gender. In the light of this the null hypothesis that, '*there is no significant difference between students' attendance with respect to their gender*' is accepted. But the mean attendance scores i.e. girls' attendances (16.500 & 13.750)



versus boys' attendances (13.180 & 11.545) for online classes using whats' app & zoom respectively indicated that, girls were amazingly out numbered boys, though it is not significant. Therefore, it is concluded that, online mode of teaching became helpful for student studying at the department of Special Education irrespective of their gender.

## FINDINGS OF THE STUDY

Objective wise finding of the study were discussed below:

- 1.0** To analyse the rate of students' attendance during conventional and online mode of teaching activities.
  - 1.1** It is found that, the teaching learning process using whats' app became helpful for our students than the conventional classroom during the lockdown period. Hence, it is concluded that, online mode of teaching became helpful for student studying during the pandemic situation raised by COVID – 19 viruses.
  - 1.2** The analysis revealed that, the teaching learning process using zoom app through video conferencing mode became helpful for students than the conventional classroom during the lockdown period. Hence, it is concluded that, majority of students got benefited from online teaching through video conferencing mode compare to the traditional face to face mode of teaching learning process during the lockdown period imposed by the union government of India amid COVID – 19 viruses.
  - 1.3** It is seen from the analysis that, the students got benefited from both types of teaching learning process using whats' app and zoom app, up to same extent. But the mean attendance scores indicated that, more students were attended the online class using whats' app (15.069) than the online class using zoom app (13.0). Hence, it is decided that, online mode of teaching became helpful for student studying through Online classes.
  - 1.4** Therefore, the study revealed that, especially at the department of Special Education, students more benefited from online class irrespective of their place, and timing of the teaching learning process.
- 2.0** To study the numbers of students participate during both conventional and virtual mode of teaching learning process.
  - 2.1** From the result of ANOVA test, it is concluded that, more numbers of students' participated the

online classes taught using whats' app and zoom app, and significantly differed from traditional mode of teaching. The researcher implemented t- test to find out the highly participated teaching learning activities.

**2.2** It is concluded that numbers of students' participation in online teaching learning mode using whats' app is more than the conventional teaching mode and differs significantly.

**2.3** The analysis resulted that, numbers of students' participation in online classes through video conferencing mode using zoom app is more than the conventional teaching mode and differs significantly.

**2.4** It is decided that numbers of students' participation in online classes using whats app' is more than the numbers of students participation in online classes using zoom app' and differs significantly.

**3.0** To study the gender wise students' attendance in the teaching learning processes during the lockdown period (Covid - 19)

**3.1** The mean attendance scores i.e. girls' attendances (16.500 & 13.750) versus boys' attendances (13.180 & 11.545) for online classes using whats' app & zoom respectively indicated that, girls were amazingly out numbered boys, though it is not significant. Therefore, it is concluded that, online mode of teaching became helpful for student studying at the department of Special Education irrespective of their gender.

## CONCLUSION OF THE STUDY

The Mankind solved each difficulties faced to survive in this world. This bad and darkness caused due to Covid-19 also will be eliminated in due time. During these lethal pandemic days, we have to stay home and remain safe. Online class is the only alternative to this situation for teaching learning activities. In the present study we saw that, online learning activities helped more students, then conventional mode. It is also suggested to prepare more self study materials to overcome such situations and our syllabus should include atleast 25% self guided contents which can be clarified from concerned faculty member in case of necessity.

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