Chapter IV

DATA ANALYSIS AND CONCLUSION

4.1 Introduction

This chapter is devoted to analysis of data collected from the key stake holders of school education namely teachers, students, parents seeking their perception on different aspects of online education such as orientation of teachers on online education, complications faced, time and duration of classes, attendance rate of students, use of technology tools, Pedagogical practices etc. The data are collected with the help of questionnaires for teachers and face-to-face mode with interview schedule for parents; and focus group discussions with the students. The result of the analysis are presented objective wise in the subsequent sections: 4.2, 4.3, 4.4 and 4.5.

Section 4.2 is devoted to the result pertaining to objective 1 of the study that reads:

To study the perceptions of following stakeholders on implementation of online education during pandemic at their schools:

      a. Teachers

      b. Parents

      c. students

Section 4.5 is devoted to the result pertaining to objective 2 of the study that reads:

To study the suggestions given by stakeholders on effective implementation of online education in future.

4.2 Perception of Teachers about Online Education

In this section, the results pertaining to the perception of 30 teachers over different rural schools of Cuttack district about implementation of online education have been presented. Several dimensions of online teaching such as orientation of teachers on online education, complications faced, time and duration of classes, attendance rate of students, Use of technology tools, Pedagogy practices, Teaching and learning materials used, Assessment

of learners has been taken into consideration. The results depicted below has been analyzed with reference to these dimensions.

4.2.1 Training Of Teachers on Online Education

Table 4.1 presents results, as revealed through the data collected from the teachers with the help of a questionnaire, pertaining to the perception of teacher about the mode through which they got oriented on online education.

Table 4. 1: Percentage of Teachers Oriented on Online Education through Different Modes

			N=30
SL NO.	Mode of orientation	Frequency	Percentage of Teachers
1	Oriented by schools/state/ organization	25	83.33
2	Self-oriented by means of online courses/attending webinars etc.	12	40
3	Oriented by dint of friends/relatives/ acquaintances etc.	7	23.33
4	Not oriented	3	10

The results of table 4.1 show that more than two-third of the teachers (83.33%) have been oriented on online education by School/ state/ organization. The corresponding percentages of teachers oriented themselves by their personal efforts or through online courses/ attending webinars and by friends/ relatives/ acquaintances etc. are 40 and 23.33 respectively.
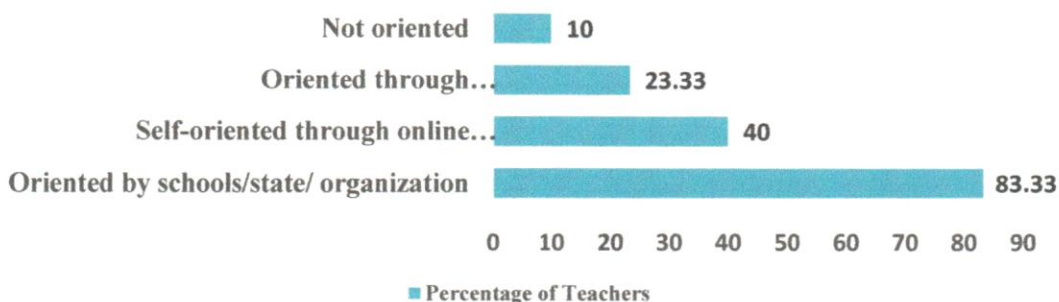
Not oriented — 10
Oriented through... — 23.33
Self-oriented through online... — 40
Oriented by schools/state/ organization — 83.33

■ Percentage of Teachers

Figure 4.1: Responses of teachers regarding mode of orientation

4.2.2 Practical Barriers to Online Teaching

Table 4.2 presents results pertaining to the difficulties faced by the teachers during online/digital education. The results are based on the data collected from the teachers with the help of a questionnaire.

Table 4. 2: Perception of teachers on Practical Barriers to Online Teaching

N=30

SL NO.	Types of Difficulties	Frequency	Percentage of Teachers
1	Lack of training	5	16.67
2	Insufficient training	12	40
3	Unfamiliar about the digital technologies	16	53.33
4	Lack of devices/ gadgets	21	70
5	Lack of confidence	20	66.67
6	Lack of support from school	10	33.33
7	More workload	19	63.33
8	Lack of /Limited internet Connectivity	29	96.67
9	Poor attendance of learners in online classes	23	76.67

The results of table 4.2 show that more than half of the teachers (53.33%) are unfamiliar about online/digital education. The internet connectivity issue affected almost all the teachers (96.67%).The percentage of teachers who face other difficulties during online/digital education, e.g. lack of devices/ gadgets, lack of confidence, more workload, and poor attendance vary between 16.67 and 76.67.
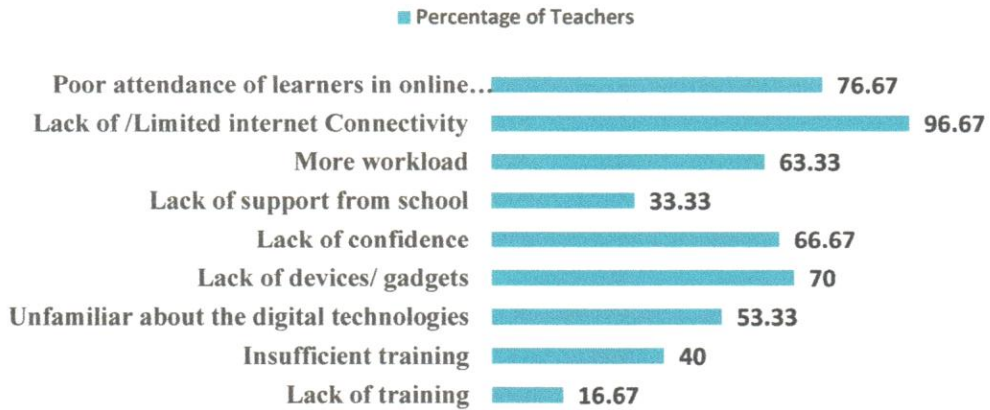
■ Percentage of Teachers

Category	Percentage
Poor attendance of learners in online...	76.67
Lack of /Limited internet Connectivity	96.67
More workload	63.33
Lack of support from school	33.33
Lack of confidence	66.67
Lack of devices/ gadgets	70
Unfamiliar about the digital technologies	53.33
Insufficient training	40
Lack of training	16.67

Figure 4. 2: Responses of teachers on practical Barriers to Online Teaching

4.2.3 Time and Duration of Classes

Table 4.3, 4.4, 4.5 presents results pertaining idea on the sessions, duration of a period and total classes in a day conducted by the teachers.

Table 4. 3: Percentage of teachers on conducting different sessions

N=30

SL NO.	Sessions in a Day	Frequency	Percentage of Teachers
1	Morning session	19	63.33
2	Afternoon session	02	6.67
3	Evening session	00	0
4	Not fixed	9	30

The results of table 4.3 reveals more than half of the teachers prefers to conduct their classes in the morning schedule between 9am to 12 pm (63.33%). While 30% agreed on not having fixed schedule for taking classes.
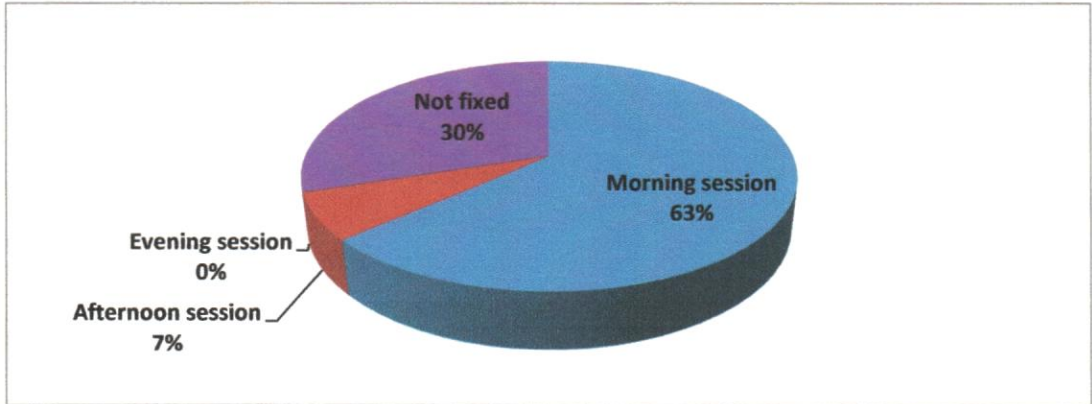

Figure 4. 3: Responses of teachers regarding conducting different sessions

Table 4. 4: Percentage of teachers on duration of each period

			N=30
SL NO.	Duration of periods	Frequency	Percentage of Teachers
1	30 min	09	30
2	45 min	17	56.67
3	1hr	0	0
4	No fixed time limit	04	13.33

The results of table 4.4 reveals the preferable time duration of the periods for online classes. More than half of the teachers (56.67%) are of opinion that the duration of the periods for online classes should be of 45 minutes. Thirty percent teachers are of opinion that the duration of the periods for online classes should be of 30 minutes.
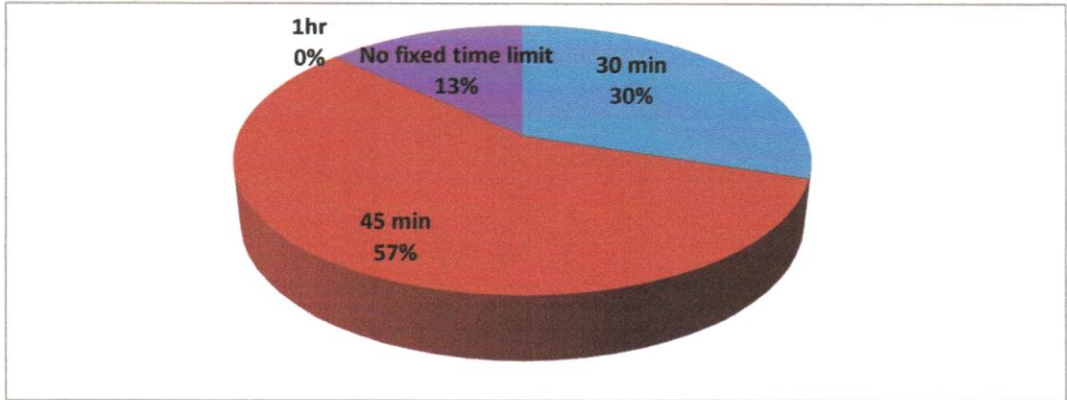
Figure 4. 4: Responses of teachers on duration of period

Table 4. 5: Percentage of teachers on duration of total classes in a day

			N=30
SL NO.	Duration of Classes per day	Frequency	Percentage of Teachers
1	Less than one hour	0	0
2	Between 1 and 2 hours	16	53.33
3	Between 2 and 3 hours	9	30
4	No fixed time limit	5	16.67

The results of table 4.5 discloses around half of the teachers take classes between 1-2hrs in a day(53.33%) where as 26.67% teachers take 2-3hrs and 20% of teachers stated no fixed time limit in taking their classes
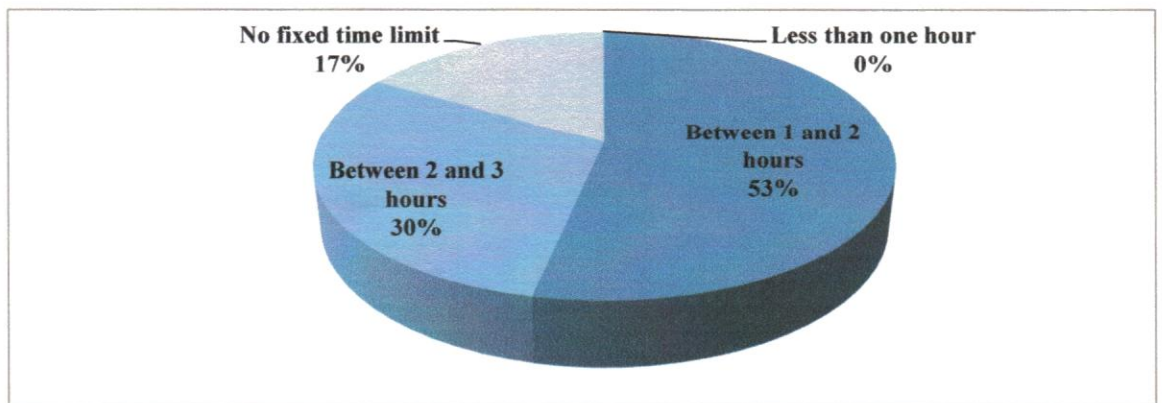

Figure 4. 5: Responses of teachers on duration of total classes in a day

4.2.4 Attendance Rates

The table 4.6 presents the percentage of teachers having different attendance rates of students normally on their online classroom.

Table 4. 6: Percentage of teachers on having different attendance rates in class

N=30

SL NO.	Attendance (%)	Frequency	Percentage of Teachers
1	80-100	00	00
2	60-80	05	16.67
3	40-60	08	26.67
4	20-40	10	33.33
5	below 20	07	23.33

The results table 4.6 discloses that less than one third of teachers (33.33%) have the attendance rates of students in online classes 20-40%. 23% of teachers opined on having very low attendance i.e. below 20% in their classes.
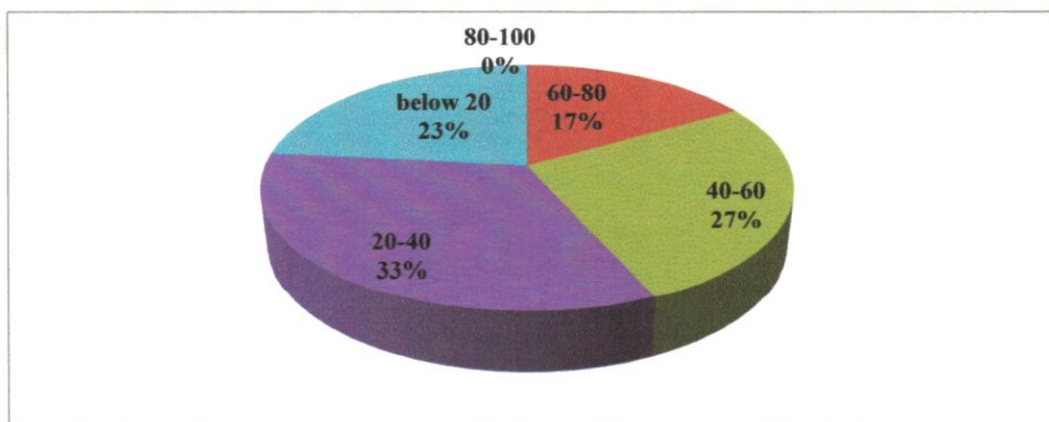

Figure 4. 6: Responses of teachers on having different attendance rates in class

4.2.5 Tools and technologies used

The table 4.7 represents the responses of teachers regarding their usage of electronic gadgets (e.g. smartphone, laptop, computer, etc.) for online education.

Table 4. 7: Perception of teachers on possession of devices

N=30

SL NO.	Use of devices	Frequency	**Percentage of Teachers**
1	smartphone	28	93.33
2	Laptop	02	6.67
3	Others.	00	0

The result of table 4.7 reveals that most of the teachers (93.33%) of teachers prefers smartphone over laptop as the device to be used in the process of online education.
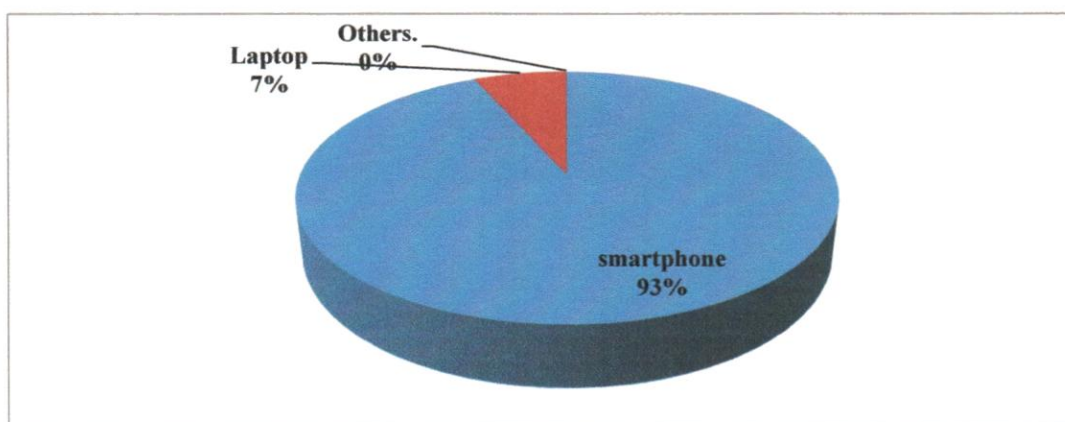

Figure 4. 7: Responses of teachers on possession of devices

Table 4. 8: Perception of teachers on using online platforms for teaching

N=30

SL NO.	**Types of online Platforms**	Frequency	**Percentage of Teachers**
1	Zoom	5	16.67
2	Google meet	12	40
3	WhatsApp	25	83.33
4	YouTube	18	60
5	Any other	1	3.33

Majority of teachers (83.33%) were using WhatsApp for online teaching **followed by** YouTube (60%), Google Classroom (40%), and Zoom (16.67%). WhatsApp might be considered as one of the easiest tools to use for asynchronous learning experiences that is flexible and easily accessible and handled by the teachers.
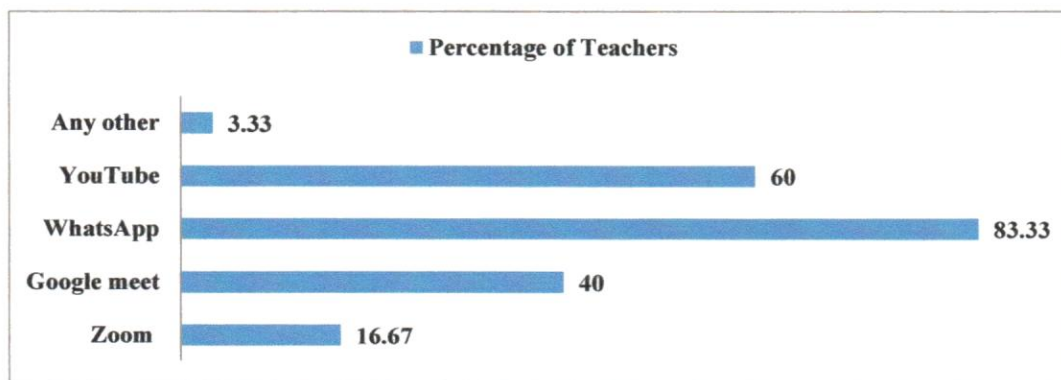

Figure 4. 8: Responses of teachers on online platforms for teaching

4.2.6 Teaching learning resources

The table 4.9 presents the teachers perception on sharing different teaching learning resources to the students during online classes.

Table 4. 9: Perception of teachers on resources shared with students

N=30

SL NO.	Resources shared	Frequency	Percentage of Teachers
1	Self-made notes	28	93.33
2	Textbook chapters	26	86.67
3	Details of TV/ Radio programmes	14	46.67
4	Videos/audios	21	70
5	Web links	4	13.33
6	Any other	7	23.33

The result pertaining to the percentage of teachers sharing different learning resources as in table 4.10 shows that most of the teachers (93.33%) provided students with teacher-made text materials followed by text book chapters(86.67%), Videos/audios on topics(70%), Details of TV/ radio programmes (46.67%). Teacher-made texts and videos are generally tailored in correspondence to the needs and specific features of students.
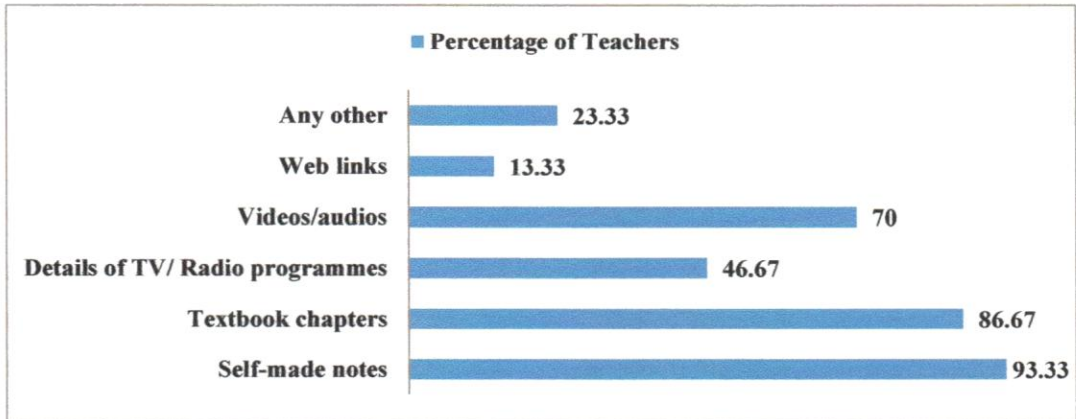

Figure 4. 9: Responses of teachers on resources shared with students

4.2.7 Learner assessment

Table 4.10 represents the perception of teachers in selecting appropriate assessment method adapted by teacher during online learning.

Table 4. 10: Perception of teachers on learner assessment

			N=30
SL NO.	Types of assessment methods	Frequ0ency	Percentage of Teachers
1	Asking oral questions	20	70
2	Conducting discussion sessions after classes	18	63.33
3	By giving them homework	23	76.67
4	Conducting separate live written examination	11	36.67
5	Formulating questions with google forms	1	3.33
6	Any other	6	20

The assessment of learners suggests a great deal in teaching learning process. The results from table 4.10 discloses the perception of teachers in using different assessment criteria highest in use is giving homework to students (76.67%) followed by asking oral questions(70%), conducting discussion sessions after class(63.33%). Around one third of teachers prefers conducting separate live exams for students.
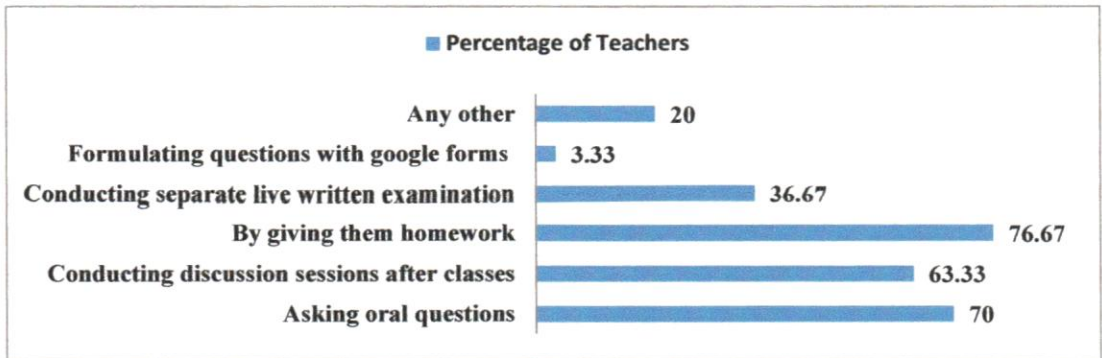

Figure 4. 10: Responses of teachers on learner assessment

4.2.8 Effectiveness of online education

Table 4.11 represents perceptions of teachers on the effectiveness of online classes during pandemic.

Table 4. 11: Perception of teachers on effectiveness of online classes

N=30

SL NO.	Effectiveness of online classes	Frequency	Percentage of Teachers
1	Highly effective	0	
2	Effective	14	46.67
3	Not at all effective	9	30
4	Indifferent	7	23.33

The result shown in table 4.11 reveals that less than half of the teachers (46.67%) opines on online teaching are effective, while 30% believed it is ineffective. Around 23.33% teachers remained indifferent in their opinion on effectiveness on current circumstances.
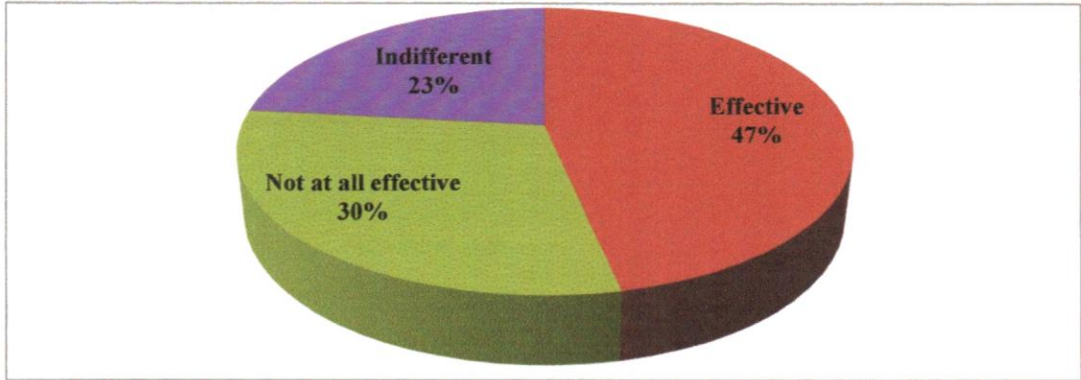
Figure 4. 11: Responses of teachers on effectiveness of online classes

4.3 Perception of Parents about Online Education

In this sections the results concerning perception of parents of certain villages of Cuttack district, Odisha of the ongoing students on implementation of online education have been presented. The opinion of parents were collected regarding to certain dimensions such as ways of learning, availability of resources, engagement period, usefulness of online classes, regularity of classes, difficulties faced, future of online learning, child's response. The result depicted below has been analyzed considering these dimensions.

4.3.1 Ways of learning

Table 4.12 represents the parent's perception on ways their children continue learning in the period of lockdown.

Table 4. 12: Perception of parents on children ways of learning in lockdown

			N=30
SL NO.	**Ways of learning**	**Frequency**	**Percentage of Parents**
1	Did self-study	5	16.67
2	Took tuitions	13	43.33
3	Watched online resources	10	33.33
4	Did not study at all	2	6.67

The results pertaining to table 4.13 reveals less than half of parents (43.33%) reported their children took tuitions in the pandemic period where as 16.67% did self-study, 33.33% watched online resources provided by teachers and YouTube and other sources.
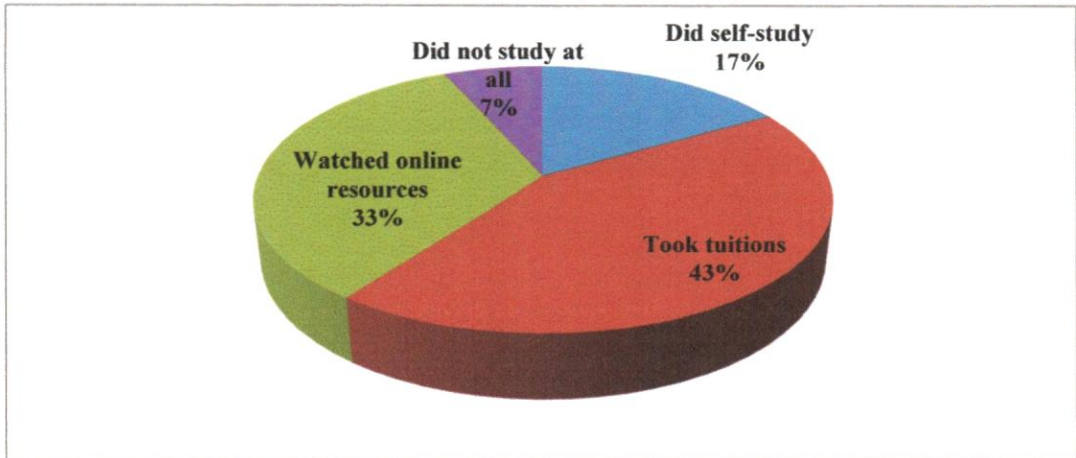

Figure 4. 12: Responses of parents on children ways of learning in lockdown

4.3.2 Availability of resources

Table 4.13 and 4.14 represents the responses of parents regarding the modality used by their children or facilitating resources for online education respectively.

Table 4. 13: Perception of parents on children using different modes of learning

N=30

SL NO.	Modalities used	Frequency	Percentage of Parents
1	Radio	8	26.6
2	Television	5	16.67
3	Teacher/volunteer visiting and taking classes	10	33.33
4	Desktop Computer/ Laptop	2	6.67
5	Smartphone	13	43.33

The result from table 4.13 discloses less than half of the parents (43.33%) opine on the use of smartphones followed by teachers/volunteers visiting and taking classes (33.33%), radio (26.6%), television (16.67%).
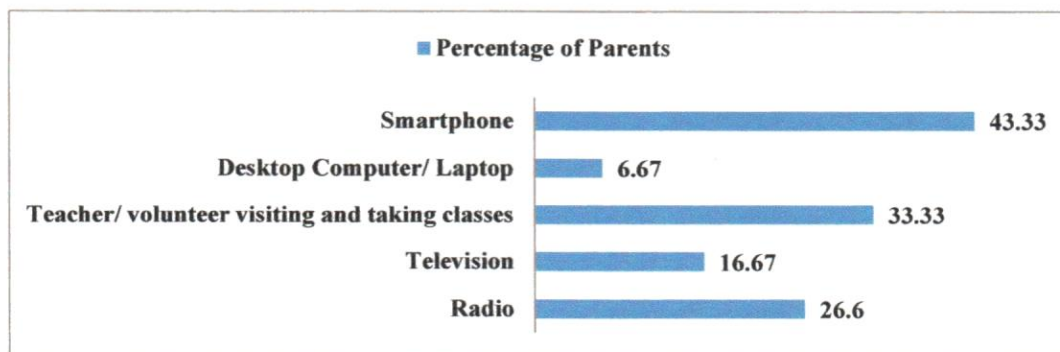

Figure 4. 13: Responses of parents on different modes of learning

Table 4. 14: Perception of parents on facilitating resources

N=30

SL NO.	Types of facilitating resources	Frequency	Percentage of Parents
1	The child has individual device	3	10
2	Bought a new device/ gadget	3	10
3	Share the device for attending alternate classes	4	13.33
4	Providing to the child at the time of classes/exam.	23	76.67
5	Borrowed temporarily	10	33.33
6	Support provided by volunteer	7	23.33
7	Any other	6	20

The result from table 4.14 suggests that, more than two third of parents (76.67%) avail the devices at the time of classes/exam. Whereas, 33.33% parents borrowed gadgets from others, 23.33% supported by volunteer and 13.33% prefers to share devices within their children during classes.
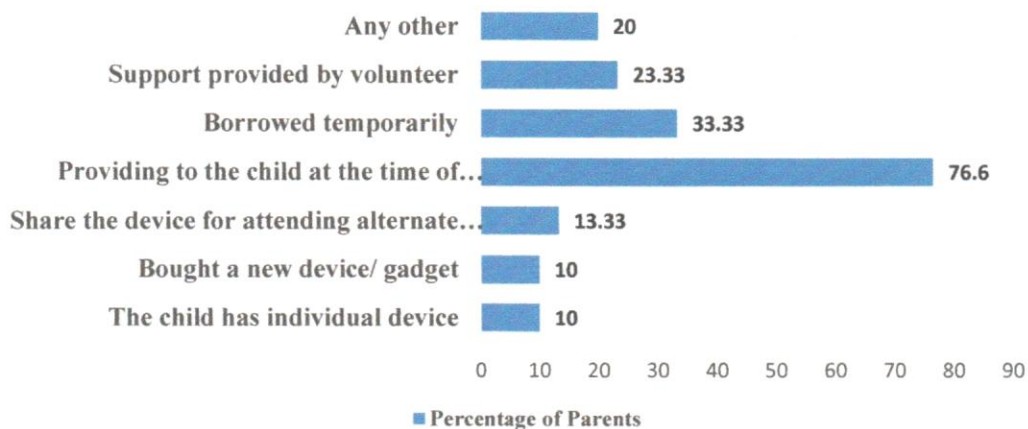
Figure 4. 14: Responses of parents on facilitating resources

4.3.3 Engagement period

Table 4.15 represents the parents perception of duration that child engaged in learning in a day normally.

Table 4. 15: Perception of parents on children's engagement period on online learning

			N=30
SL NO.	**Time period of engagement**	**Frequency**	**Percentage of Parents**
1	Less than 1hr.	8	26.67
2	Between 1-2hrs.	11	36.67
3	Between 2-3hrs.	8	26.67
4	Between 3-4hrs.	3	10
5	Between 4-5hrs.	0	0

The result pertaining to table 4.15 suggests more than one third of parents (36.67%) felt engagement of their children between 1-2hrs. in a day. The opinion parent over period of engagement varies from less than 1hr to 3-4hrs.in a range of 10-26.67%.
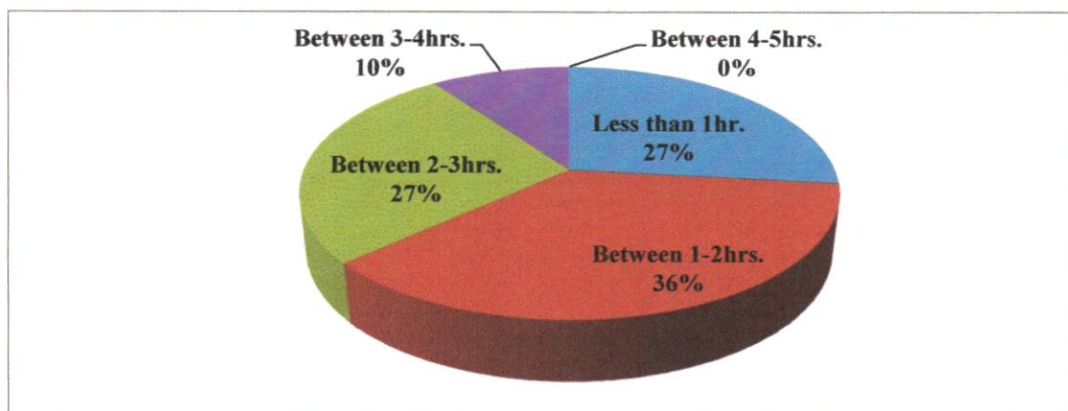
Figure 4. 15: Responses of parents on children's engagement period on online learning

4.3.4 Usefulness of online classes

Table 4.16 represents the perception of parents on the effect of online education on their children's learning.

Table 4. 16: Perception of parents on usefulness of online learning

N=30

SL NO.	CHARACTERISTICS	Frequency	Percentage of parents
1	It saves time took while going to school	8	26.67
2	S/he gets more access to learning material than getting at school	9	30
3	S/he does not study at home at all	13	43.33
4	S/he seemed stressed after doing classes and homework	8	26.67
5	S/he easily grasp the contents by using learning materials	5	16.6
6	Any other	9	30

As the table 4.16 suggests, out of 30 parents, 8 of them (26.67%) thinks it saves time going to the school. 30% parents liked its feature of providing accessibility to content materials.

As most of the parents belong to school education, nearly 43.33% parents insisted on their children do not study at home as in school. 26.67% parents revealed the stress level arise in children in accommodating online classes and the homework.
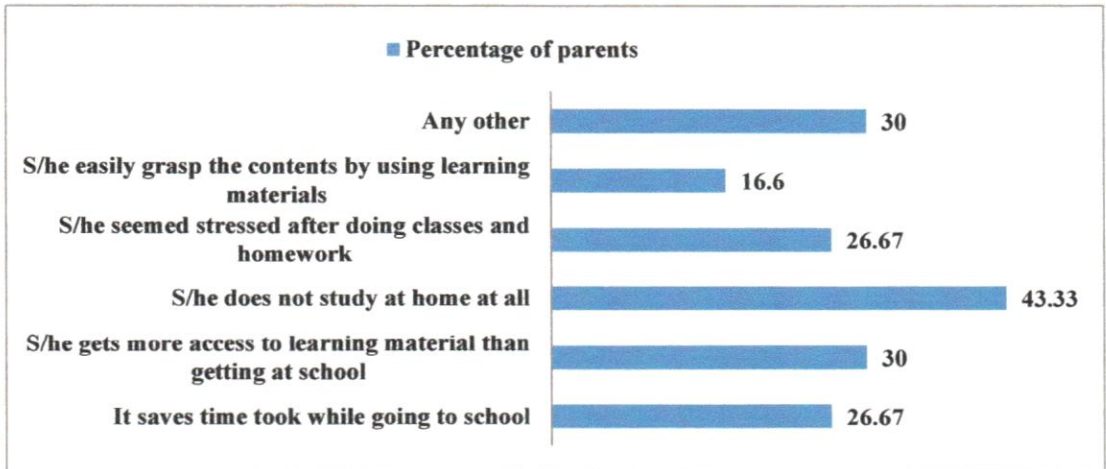

Figure 4. 16: Responses of parents on usefulness of online learning

4.3.5 Regularity of classes

Table 4.17 represents the parent's perception on the weather classes or regular or not.

Table 4. 17: Perception of parents on regularity of classes

			N=30
SL NO.	Regularity of classes	Frequency	Percentage of parents
1	Always regular	8	26.67
2	Sometimes regular	16	53.33
3	Always irregular	6	20

The result pertaining table 4.17 reveals that half of the parents (53.33%) feels classes are sometime regular. While 26.67% and 20% parents agree on classes are always regular and irregular respectively.
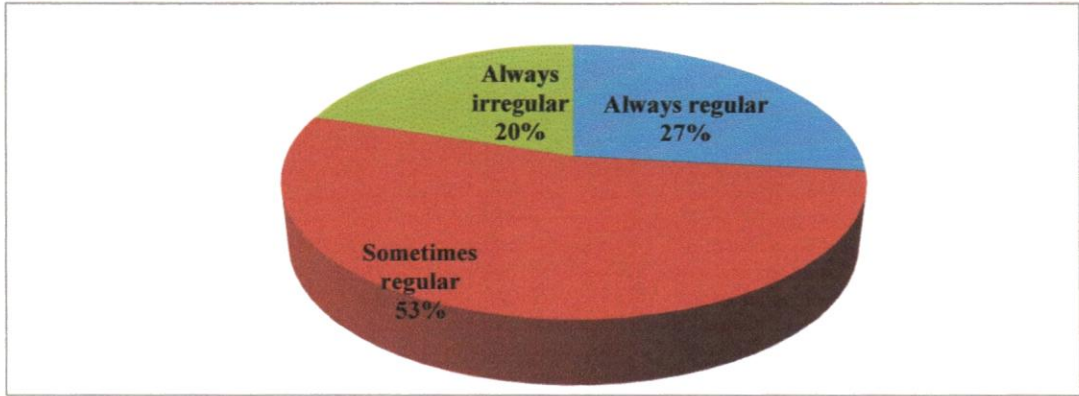
Figure 4. 17: Responses of parents on regularity of classes

4.3.6 Difficulties faced by parents during online/digital education

Table 4.18 presents the percentage of parents facing various types of complications while accommodating to learning of their children.

Table 4. 18: Perception of teachers on difficulties faced during online teaching

			N=30
SL NO.	Type of difficulties	Frequency	Percentage of parents
1	Can't afford to provide phone to my child	18	60
2	S/he get stressed due to study and home tasks	8	26.67
3	S/he overuse the mobile phones	24	80
4	Games and social media distract the child	25	83.33
5	Unfamiliar about the digital technologies	23	76.67
6	Lack of /Limited internet connectivity	27	90
7	Creates disturbance at home and doesn't listen to anyone	24	80
8	Any other	7	23.33

Result pertaining to table 4.18 reveals more than two third parents (90%) faced connectivity and network related issues while learning of their child online. The mentioned responses highlighted the difficulty to get good internet connection and speed

for online classes especially in rural areas. 18% parents reveals they cannot afford to provide phone to my child. On the use of mobile phones, more than two third of parents presents their concern over on their unfamiliarity about digital technology (76.67%), children overuse the mobile phone (80%) and get distracted in games and social media (83.33%) instead of learning.
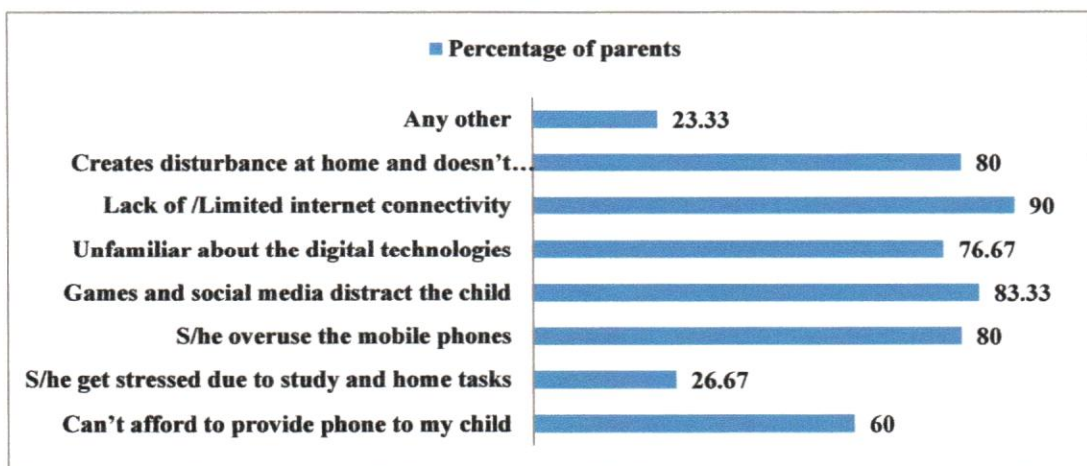

Figure 4. 18: Responses of parents on difficulties faced during online teaching

4.3.7 Future of online learning

Table 4. 19: Perception of teachers on continuation of online education

			N=30
SL NO.	Future of online education	Frequency	Percentage of parents
1	Only face-to-face	20	73.33
2	More of online and less face-to-face	2	6.67
3	More of face-to-face and less online	8	26.67
4	Only online	0	0

The results pertaining to perception of parents regarding continuation of online education beyond the pandemic situations, as shown in table 4.19, reveals that only 6.67% of the parents are of opinion that more online and less face-to-face classes should continue beyond the pandemic situation. As high, as 73.33% of parents opined that only face-to-

face class and 26.67% on more face-to-face and less online classes should continue beyond the pandemic situation.
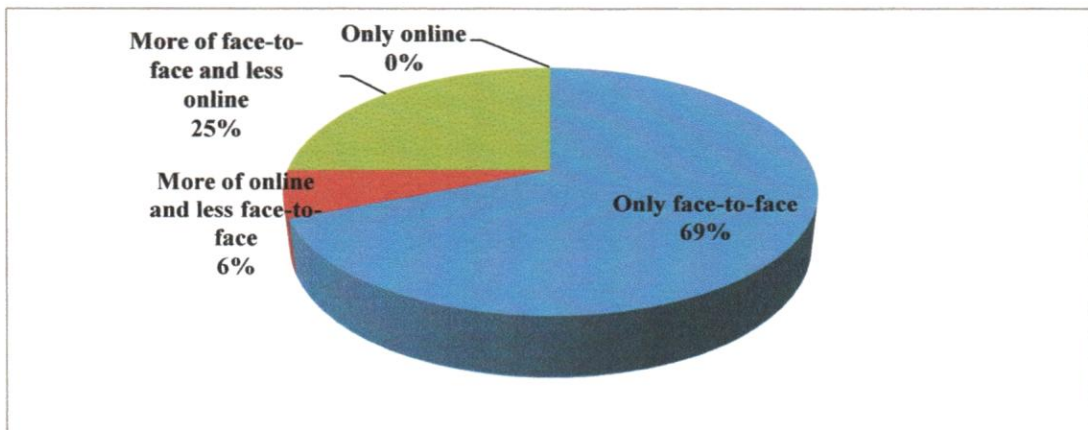

Figure 4. 19: Responses of parents on continuation of online education

4.3.8 Children's response

Table 4.20 represents parent's perception on how their children cope to online learning during this pandemic.

Table 4. 20: Perception of parents on children response to online learning

			N=30
SL NO.	Types of response	Frequency	Percentage of parents
1	Children are enjoying	13	43.33
2	Children are engaged meaningfully	8	26.67
3	Children are stressed	8	26.67
4	Children follow the instructions of teachers carefully	12	40
5	Any other	7	23.33

Results pertaining to table 4.20 reveals that 43.33% parents believe their children enjoys the new learning environment. Parents also reveals they engaged meaningfully in studies (26.67%) and follows their teacher's instruction carefully (40%).23.33% parents gave

their opinion on children about learning new technologies, aware about what happens around the world.
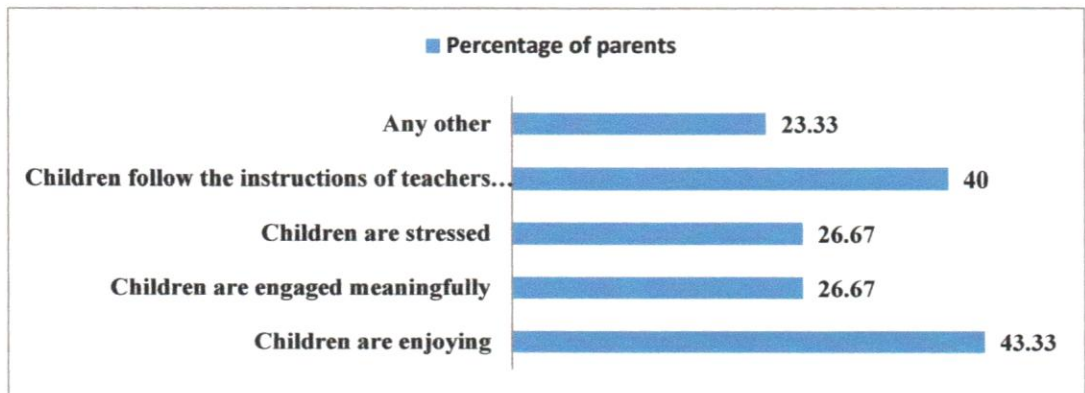

Figure 4. 20: Responses of parents on children's response to online learning

4.4 Perception of Students about Online Education

In this section, the results pertaining to the perception of 37 students of rural schools of Cuttack district about implementation of online education have been presented. Several dimensions of online learning such as ways of studying, modalities used for online education, duration of classes in a day, regularity of classes, advantage of online classes, preferred mode of education, difficulties faced in online learning has been taken into consideration. The results depicted below has been analyzed with reference to these dimensions.

4.4.1 Ways of studying

Table 4. 21: Perception of students on ways of studying during pandemic

			N=37
SL NO.	Types of ways	Frequency	Percentage of students
1	Self-study	28	75.67
2	Online learning	26	70.27
3	Tuitions	29	78.37
4	Did not study at all	4	10.81

The result pertaining to the perception of students on their ways of learning after the schools been closed as per the table 4.21 revealed that more than two third of students (78.37%) took tuitions followed by students did self-study (75.67%), students studies through online learning (70.27%). Only 10.81% students accepted they did not study at all.
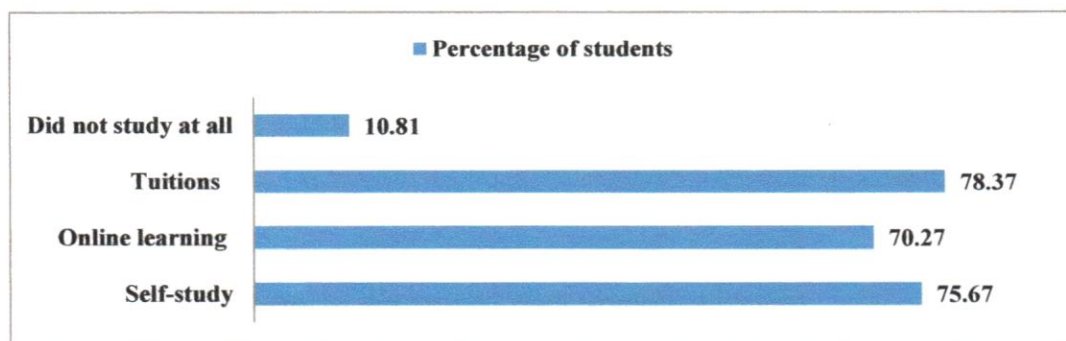

Figure 4. 21: Responses of students on ways of studying during pandemic

4.4.2 Devices used for online education

Table 4.22 represents the perception of students on types of devices they used for online learning.

Table 4. 22: Perception of students on Devices used for online education

			N=37
SL NO.	Type of devices	Frequency	Percentage of students
1	Radio/Television	18	48.64
2	Desktop/Laptops	1	2.70
3	Smartphones	28	75.67

The result from Table 4.22 reveals that more than two third (75.67%) students either use mobile phones their own or borrowed/shared from others. While 48.64% students watch TV/ radio for programmes like 'Radio Pathashala','Gyan Bharti' etc.
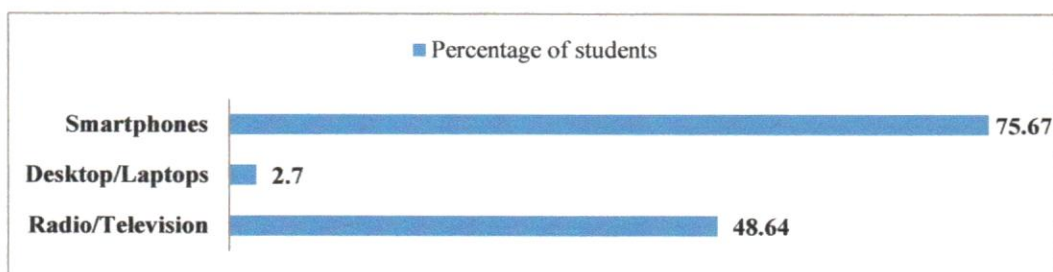
Figure 4. 22: Responses of students on devices used for online education

4.4.3 Duration of learning in a day

Table 4.23 represents the percentage of students on duration of their classes/study hours in a day.

Table 4. 23: Percentage of students on class duration in a day.

			N=37
SL NO.	Total Duration of classes	Frequency	Percentage of students
1	Less than 1hrs	11	29.72
2	1-2hrs	13	35.13
3	2-3hrs	9	24.32
4	3-4hrs	4	10.81
5	4-5hrs	0	0

The result pertaining to table4.23 suggests that around one third of students (35.13%) attend online classes for 1-2hrs. follows by students who attended the less than 1hr. (29.72%), 2-3hrs. (24.32%), 3-4hrs. (10.81%).
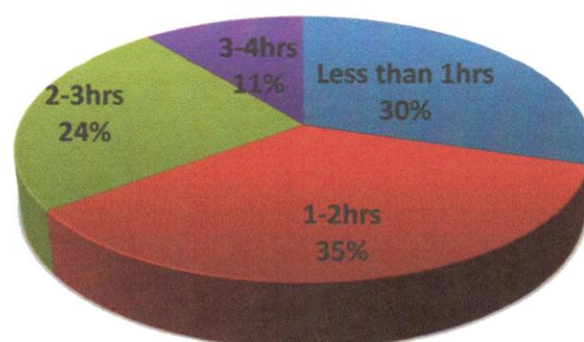

Figure 4. 23: Responses of students on class duration in a day

4.4.4 Regularity of online classes

Table 4.24 represents the perception of students on weather their classes conducted are regular or not.

Table 4. 24: Perception of students on regularity of classes

			N=37
SL NO.	Regularity of classes	Frequency	Percentage of students
1	Yes	8	21.62
2	No	11	29.72
3	Half hazard	18	48.64

The perception of the students about regularity of the classes as per the results in table 4.24, less than half of students (48.64%) agrees on the half hazard arrangement of classes. While 21.62% parents reported, classes are regular and 29.72% parents on classes are irregular.
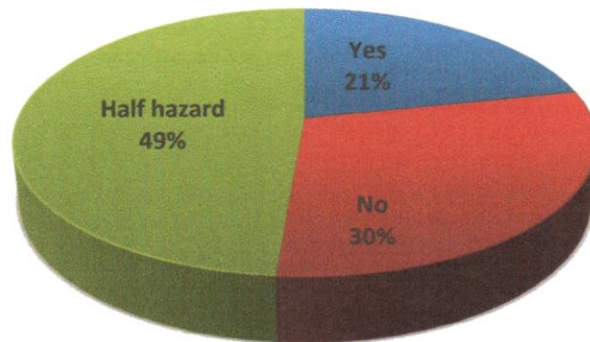

Figure 4. 24: Responses of students on regularity of classes

4.4.5 How useful are the online classes

Table 4.25 represents response of students on satisfaction over the utility of online classes.

Table 4. 25: Perception of students on utility of classes

			N=37
SL NO.	Utility of classes	Frequency	Percentage of students
1	very useful	8	21.62
2	not at all	7	18.91
3	something is better than nothing	19	51.35

The results as the table 4.25 on the perception of how useful the classes for them half of the students (51.35%) respond on something is better than nothing in this situation of pandemic, while 21.62% students found the online learning very useful and 18.91% disagrees on online classes are at all helpful.

Figure 4. 25: Responses of students on utility of classes

4.4.6 Future of online learning

The table 4.26 represents the responses on of students on their preferred mode of learning in future.

Table 4. 26: Perception of students on preferred mode of education

			N=37
SL NO.	Mode of education	Frequency	Percentage of students
1	Face-to-face	15	40.54
2	On-line	3	8.1
3	Blended	17	45.94

Table 4. 25: Perception of students on utility of classes

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vii. Integrate multiple media presentation and different activities to make learning more participative for students.

viii. Teacher need to ask open-ended questions to ensure active engagement of students.

ix. Promotion of collaborative learning through discussion forums where each individual student gets to participate.

x. Teachers need to give immediate feedback on students' success.

xi. To make students involved and motivated to learn online.

xii. Development of e-contents, e.g. educational videos and audios for online teaching-learning and evaluation purposes.

xiii. Bringing out innovations in teaching through online.

xiv. Creation of awareness amongst parents and students about digital technologies.

4.6 Conclusions

The conclusions of the study are derived from the empirical data collected from the teachers, students, parents regarding their perception on different aspects of online education such as orientation of teachers on online education, complications faced, time and duration of classes, attendance rate of students, use of technology tools, Pedagogical practices, teaching and learning materials used, learner assessment; and presented under the following sub-heads:

A. Conclusions pertaining to perception of teachers about online education

B. Conclusions pertaining to perception of parents about online education

C. Conclusions pertaining to perception of students about online education

D. Conclusions pertaining to suggestions of teachers, parents and students about online education

4.6.1 Conclusions Pertaining to Perception of Teachers about Online Education

i. More than two-third of the teachers (83.33%) have been oriented on online education by School/ state/ organization. The corresponding percentages of teachers oriented themselves by their personal efforts or through online courses/

attending webinars and by friends/ relatives/ acquaintances etc. are 40 and 23.33 respectively.

ii.   More than half of the teachers (53.33%) are unfamiliar about online/digital education. The internet connectivity issue affected almost all the teachers (96.67%).The percentage of teachers who face other difficulties during online/digital education, e.g. lack of devices/ gadgets, lack of confidence, more workload, and poor attendance vary between 16.67 and 76.67.

iii.   More than half of the teachers (63.33%) prefers to conduct their classes in the morning schedule between 9am to 12 pm. While 30% agreed on not having fixed schedule for taking classes.

iv.   More than half of the teachers (56.67%) are of opinion that the duration of the periods for online classes should be of 45 minutes. Thirty percent teachers are of opinion that the duration of the periods for online classes should be of 30 minutes.

v.   More than less than one third of teachers (33.33%) have the attendance rates of students in online classes 20-40%. 23% of teachers opined on having very low attendance i.e. below 20% in their classes.

vi.   Half of the teachers take classes between 1-2hrs in a day(53.33%) where as 26.67% teachers take 2-3hrs and 20% of teachers stated no fixed time limit in taking their classes

vii.   Most of the teachers (93.33%) of teachers possess smartphone over laptop as the device to be used in the process of online education.

viii. Majority of teachers (83.33%) were using WhatsApp for online teaching **followed by** YouTube (60%), Google Classroom (40%), and Zoom (16.67%). WhatsApp might be considered as one of the easiest tools to use for asynchronous learning experiences that is flexible and easily accessible and handled by the teachers.

ix.   Most of the teachers (93.33%) provided students with teacher-made text materials followed by textbook chapters (86.67%), Videos/audios on topics (70%), Details of TV/ radio programmes (46.67%). Teacher-made texts and videos are generally tailored in correspondence to the needs and specific features of students.

x. More than one third of teachers (76.67%) are of opinion in giving homework to students **followed by** asking oral questions (70%), conducting discussion sessions after class (63.33%). Around one third of teachers prefers conducting separate live exams for students.

xi. Less than half of the teachers (46.67%) opines on online teaching are effective, while 30% believed it is ineffective. Around 23.33% teachers remained indifferent in their opinion on effectiveness on current circumstances.

4.6.2 Conclusions pertaining to perception of parents about online education

i. Less than half of parents (43.33%) reported their children took tuitions in the pandemic period where as 16.67% did self-study, 33.33% watched online resources provided by teachers and YouTube and other sources.

ii. Less than half of the parents (43.33%) opine on the use of smartphones followed by teachers/volunteers visiting and taking classes (33.33%), radio (26.6%), television (16.67%).

iii. More than two third of parent (76.67%) avail the devices at the time of classes/exam. Whereas, 33.33% parents borrowed gadgets from others, 23.33% supported by volunteer and 13.33% prefers to share devices within their children during classes.

iv. More than one third of parents (36.67%) felt engagement of their children between 1-2hrs. in a day. The opinion parent over period of engagement varies from less than 1hr to 3-4hrs. in a range of 10-26.67%.

v. out of 30 parents, 8 of the parents (26.67%) thinks it saves time going to the school. 30% parents liked its feature of providing accessibility to content materials as most of the parents belong to school education, nearly 43.33% parents insisted on their children do not study at home as in school. 26.67% parents revealed the stress level arise in children in accommodating online classes and the homework.

vi. More than two third parents (90%) faced connectivity and network related issues while learning of their child online. 18% parents reveals they cannot afford to provide phone to my child. On the use of mobile phones, more than two third of parents presents their concern over on their unfamiliarity about digital technology

(76.67%), children overuse the mobile phone (80%) and get distracted in games and social media (83.33%) instead of learning.

vii. Only 6.67% of the parents are of opinion that more online and less face-to-face classes should continue beyond the pandemic situation. As high, as 73.33% of parents opined that only face-to-face class and 26.67% on more face-to-face and less online classes should continue beyond the pandemic situation

viii. Less than half of (43.33%) parents believe their children enjoys the new learning environment. Parents also reveals they engaged meaningfully in studies (26.67%) and follows their teacher's instruction carefully (40%).23.33% parents gave their opinion on children about learning new technologies, aware about what happens around the world.

4.6.3 Conclusions pertaining to perception of students about online education

i. More than two third of students (78.37%) took tuitions followed by students did self-study (75.67%), students studies through online learning (70.27%). Only 10.81% students accepted they did not study at all.

ii. More than two third (75.67%) students either use mobile phones their own or borrowed/shared from others. While 48.64% students watch TV/ radio for programmes like 'Radio Pathshala','Gyan Bharti' etc.

iii. Around one third of students (35.13%) attend online classes for 1-2hrs. follows by students who attended the less than 1hr. (29.72%), 2-3hrs. (24.32%), 3-4hrs. (10.81%).

iv. Less than half of students (48.64%) agrees on the half hazard arrangement of classes. While 21.62% parents reported, classes are regular and 29.72% parents on classes are irregular.

v. Half of the students (51.35%) responded on something is better than nothing in this situation of pandemic, while 21.62% students found the online learning very useful and 18.91% disagrees on online classes are at all helpful.

vi. Half of students (45.94%) preferred future learning will be somehow a blended form of learning while 40.54% students thinks face to face as their ideal way of learning.

vii.   More than two third of students (81.08%) face the harsh reality of lack of digital resources. Other than that, 43.24% students responds on the home environment always not suitable for learning. While 45.94% students worried over lack of interaction with teachers and peers, 62.16% students addressed their addiction to games and social media. Although the teachers are responsible, enough to take their classes or share the resources through WhatsApp, many students (89.18%) reveals their lack of interest and motivation in studying through online.

4.6.4 Conclusions pertaining to suggestions of teachers, parents and students about online education

The suggestions made by the participants of a study are of great significance because they formulate those suggestions after thoroughly analyzing their situation. The analyses of this study showed that students enjoyed learning through online mode, if proper facilities were accessible to them. It is suggested that necessary technical changes along with pedagogical interventions must be made in online learning to facilitate teacher –student interaction, peer interaction, and socialization in the online learning environment because interaction is the key variable that influences the quality of online learning. Integrate multiple media presentation and different activities, giving immediate feedback, motivation learners are the maximum remarks to enhance effectiveness of online learning. Along with that, proper orientation of teachers on using technologies, creation of contents, counselling of parents on a continuous basis are the need of hours. It is Needless to say that, teaching and learning needs to be customized according to the perspective of students and their preferred modes and manners for creating better online learning environment.