



A Study on Student Perception Towards Online Education During Covid-19 Crisis

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Abstract

At the end of December 2019, the pandemic COVID-19 disease emerged in Wuhan city of China. It spread rapidly and affects other parts of China. To control the risk of further spread of disease the authorities in Wuhan locked down the city on 23 January 2020. The COVID-19 cases were detected in several other countries within a few weeks, and it became a global threat. On 6th June 2020, 115,942 active COVID-19 cases exist in India. To break the chain of transmission of infectious disease, the educational institutions are closed. Due to the COVID-19 pandemic, all schools/colleges/universities have postponed or cancelled all campus events such as examinations, workshops, conferences, admissions and other activities. The main objective of this study is to know the impact of COVID-19 on education, to study the perception of students towards online education during COVID-19 crisis and to study the student perception towards COVID-19 disease. The data are collected by structured questionnaire from 100 students in Tirupati city. The study includes both primary and secondary data. The convenient sampling method is used to collect data. Results are summarized using SPSS software and conclusion drawn that most of the respondents are satisfied towards online education and most of the students want to continue the online education in future also. The main problem facing by the students is network connectivity. In Tirupati, 45% of the colleges are using Canvas Instructure for online classes. To build young minds in the present crisis, an effective and well-rounded educational practice is needed. It will help students to improve their skills that will drive their productivity, employability, health and well-being in the decades to come and ensure the overall progress of India.

Keywords COVID-19 · Online education · Zoom · Canvas

Introduction

At the end of December 2019, the pandemic COVID-19 disease emerged in Wuhan city of China. It spread rapidly and affects other parts of China. To control the risk of further spread of disease the authorities in Wuhan locked down the city on 23 January 2020. The COVID-19 cases were detected in several other countries within a few weeks, and it became a global threat. In Kerala, the first

COVID-19 case was detected when a student came from Wuhan. Prime Minister Narendra Modi announced five-phase lockdowns to control the spread of coronavirus disease. The first phase of lockdown is from 25 March to 14 April. During the first phase of lockdown, almost all services and industries are closed. Only essential goods are available to the people. The second phase of lockdown is from 15 April to 3 May with some relaxation. In this phase, the areas are divided into three zones, i.e. red zone, orange zone, and green zone, and allowed agricultural businesses, cargo vehicles, Banks and government centres, etc. The third phase of lockdown is from 4 to 17 May. In this phase, buses are allowed with a capacity of 50 per cent in green zones, but in orange zones, only private and rented vehicles are allowed. The lockdown has remained the same in the red zone. The fourth phase of lockdown is implemented from 18 to 31 May, and the present fifth phase of lockdown is from 1 June to 30 June. In the fifth phase shopping malls,

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religious places, hotel, and restaurants are reopened from 8th June, and it is called “Unlock 1”.

On 6th June 2020, 115,942 active COVID-19 cases exist in India. To break the chain of transmission of infectious disease, the educational institutions are closed. Due to the COVID-19 pandemic, all schools/colleges/universities have postponed or cancelled all campus events such as examinations, workshops, conferences, admissions, and other activities. Many colleges and universities are conducting online classes for students. The online education is new for both students and teachers. The COVID-19 pandemic has shifted the old chalk teaching method to one driven by technology. One of the vital tools to continue the education of students the teachers is using online collaboration tools and LMS (Learning Management Software) for conducting online classes. At present COVID-19 crisis, digital education emerges as a suitable solution for a period of four to five months which reduces the chances of any infection to students up to classes reopen [1–4].

Objectives

1. To study the impact of COVID-19 on education.
2. To ascertain the tools for sustainable development in educational sector.
3. To study the perception of students towards online education during the COVID-19 crisis.
4. To study the student perception towards COVID-19 disease.

Research Methodology

The primary and secondary data are collected for the study. The respondents are randomly selected from the Chittoor district by using a Convenience sampling technique. The sample size is 100. The structured questionnaire is used to collect data by using google forms. For the purpose of data analysis, SPSS software is used. The primary data are collected from respondents through questionnaire, and secondary data are collected from the internet, e-books, websites, etc.

Impact of Covid-19 on Education

From March second week onwards, the schools, colleges, and universities are temporarily closed down by the government to stop the spread of COVID-19. There is no certainty when the colleges will reopen. This is a very crucial period for schools, colleges, and universities

because nursery admissions, board exams, admissions, and entrance exams are taken place during this period. There is no prompt solution to stop the COVID-19 pandemic, colleges, and universities shutdown will affect more than 285 million young learners in India due to short-term impact on the continuity of education.

One of the major problems is private schools can easily maintain online teaching methods, but private schools or colleges with low income and government schools are not able to access online learning solutions and they completely closed down. Digital learning has many benefits like cost-effective and students can learn in their comfort zone. However, digital learning also has its own challenges and limitations, and the perfect form of communication is face-to-face interaction as compared to remote learning.

Online education has been some success across the world, but in India, to see digital learning as a mainstream of education, it will take a long time because the students in rural areas are not financially strong to buy smartphones and laptops for online education and they do not have adequate internet facilities in remote areas. On the other hand, the students who are living in urban areas can easily adopt online education because they have proper infrastructure. It is very troublesome for the government to build infrastructure for digital education due to lack of budget.

Due to COVID-19 pandemic, the work from home is thriving in India. The best way to stop the spread of the COVID-19 outbreak the social distancing is the only way. So, schools, colleges, and universities are using online collaboration tools like Zoom, Canvas Instructure, Hyper-say, etc. All academic meetings, conferences, and seminars have moved to online. After all these, there is one certainty that we can envision and that is going to transform how higher education will operate globally and in India.

Tools for Sustainable Development in Educational Sector During COVID-19 Crises

Due to the COVID-19 crisis, a large number of sectors shifted to online including the education system, where various schools, colleges, and universities have shifted to online teaching across the world. In India, to improve the quality of education, it is necessary to use technology in education. Online collaboration tools and virtual classrooms help to continue the education and build up the relationship between the teacher and students as same as the experience in classroom type. There are various online collaboration platforms for the sustainable development of online education. Some of them are here:

Google Classroom

Google Classroom was launched by Google on 12th August 2014, and it is developed for schools. Google Classroom is the trendiest edtech tools nearly ten million teachers and students are using it. To maintain teacher and student communication the Google Classroom consolidates sheets, slides, docs, Gmail, and calendar into a coherence platform. The students can join in Google Classroom either by using invite to join a class by using private code or by using the school domain. The main features of Google Classroom are discussed below:

- Google's suite of productivity applications is used to store and grade assignments. It helps teachers to track the student's progress.
- Google Classroom affords to go through the paperless classroom.
- In Google Classroom, the teachers can create a different unique class for every class.
- Another main feature in Google Classroom is it allows teachers to create announcements. Students respond to the announcements and also teacher responds back to them. Teachers have the option of adding a file, a link, or a YouTube video to an announcement.
- Google Classroom allows to archive courses at the end of the year. So that the teachers can organize their current classes.

Zoom Classroom

Zoom is established in 2011 and launched its software in 2013. Zoom is an American communications technology, and it is a cloud-based peer-to-peer software platform. Zoom app is used for telecommuting, teleconferencing, social relations, and distance education. The usage of the Zoom app is increased during the COVID-19 Crisis. The main features in Zoom app are given below:

- In the Zoom app, we can join from anywhere and from any device.
- It provides team chat for groups.
- Zoom provides extra features like access to webinars, phone, and chat.
- Zoom offers role-based user permission to meet securely.
- It offers HD video and audio calls.

Canvas Instructure

Another best online education tool is Canvas Instructure. Canvas Instructure provides an android app for both

teachers and students. In canvas LMS (Learning Management System), teachers can create videos, stores, share, and communicates. One of the best options in Canvas is students can watch videos at any time. The significant features in Canvas Instructure are as below:

- In Canvas Instructure, teachers can create separate classes for each class.
- It offers a discussion forum to communicate between teachers and students.
- An Instructor can create Assignments for students. Assignments include Quizzes, Discussions, and Assignment.
- Canvas Instructure offers Modules option. It is a tool that can unify all course content into structural components.
- In Canvas teachers can separate students into small collaboration teams.

Easy Class

Easy Class is a Free Learning Management System (LMS). It is a good platform for educators and students. Digital classes are created and control by teachers or professors. Students can join in a class by using an access code. The content created with the digital classes can be seen by only the class members who enrolled. The Easy Class team gets back to you if you have any queries within 24 h. The basic features offered by Easy Class are as follows:

- In Easy Class teachers or professors can create digital classes, can store course materials online, can give the assignment, quiz, and online exams to students.
- It also offers an option to track student's grade results and also can provide feedback to all students in one place.
- Teachers have an option to delete class members and posts.
- The Chance for cyber-bullying is not possible in Easy Class because there is no private conversation between students.
- Easy Class does not entertain any advertisements.

Moodle

Moodle is an online Learning Management System (LMS), and it is free. In Moodle, teachers can create dynamic courses and own private websites at any time and at anywhere. Moodle is a user-friendly LMS and simple drag-and-drop functionality. Moodle is used for distance education, blended learning, and other e-learning projects in schools/colleges/universities and other sectors. The main features in Moodle are below:

- Moodle can easily customizable per user learning need and locality because it is available in 100 languages.
- We can use Moodle either for online courses broadly or for blended pedagogy.
- In Moodle, teachers can create a bulk courses and easy backup options.
- Moodle offers security and privacy.
- Moodle resources are easily obtainable to both ordinary users and advanced users for informative purpose and software development.

Blackboard Learn

Blackboard mobile app is another popular LMS developed by Blackboard Inc. It is a virtual learning environment developed by CourseInfo LLC and Blackboard Inc jointly. One of the drawbacks in Blackboard Learn is the claim of faulty patent rights and it facing several legal issues. The students, teachers, and educational institutions have disclosed concerns about the loyalty of Blackboard. The following are the features in Blackboard learn app:

- The teachers can post articles, videos, assignments, etc.
- By using the learning modules option the professor can post different chapters for students to access.
- The teachers can assign quizzes and exams by using the assessment tab. The students access them via the Internet.
- Another feature of Blackboard learn is the assignment. The teacher can post assignments and students will submit it by using the internet.
- By using the Grade Book option, the teachers or professors can post grades for students to view on Blackboard.

Digital Class

It is a rapid developing online education platform in India. This app is a single platform for both teachers and students. Any tutor likes teachers, faculty, educational institutes, and

Table 1 AGE cross-tabulation

Age	Perception towards online classes		Total
	Like	Dislike	
18–20	14	3	17
20–25	69	9	78
Above 25	4	1	5
Total	87	13	100

Perception towards online classes? * AGE Cross-tabulation

Table 2 ANOVA^a

Model	Sum of squares	Df	Mean square	F	Sig
1 Regression	.009	1	.009	.082	.776 ^b
Residual	11.301	98	.115		
Total	11.310	99			

a Dependent Variable: Perception towards online classes

b Predictors: (Constant), Gender, Age, Qualification Inference

online education providers. One of the highlights in this app is after simple verification the tutor can place their own course with their brand name. The feature of the digital class is here:

- Digital class provides all types of online education so students no need to go anywhere.
- It offers different types of courses like spoken English, Accounts and Finance, Business Management, Dance and Music, and so on.

Hypersay

It is founded on 5th February 2015. Hypersay is a platform for live interactive presentations. Hypersay allows maximum of 20 participants per session, and it is free. The popular features in Hypersay are given below:

- Hypersay supports live audio/video streaming for presenters with three options, i.e. Audio only, Video Streaming, and can embed third-party streams like Restream, YouTube, Vimeo, etc.
- In Hypersay, one can create interactive slides by adding live quizzes, opinion scales, open questions, and interactive images.
- In Hypersay, audience can connect to live presentations by using QR codes.
- Hypersay has features such as Documentation, In-person, Live online, Online tutorials, and webinars.

Edmode

Edmode is launched on 1st September 2008 by Nick Borg, Jeff O’Hara, and Crystal Hutter. Edmode offers communication, coaching, and collaboration to K-12 schools and teachers. Edmode is available in Arabic, English, Croatian, Spanish, Portuguese, German, Greek, French, Italian, Turkish, Dutch, Chinese, Swedish, and Indonesian. The features of Edmode are given below:

- Teachers can share content, assignments, and quizzes.

Table 3 GENDER cross-tabulation

Gender	Drawback of online classes					Total
	No co-curricular activities	Not meeting friends	Lack of two-way communication	Network connectivity issue	Language	
Female	5	0	8	45	5	63
Male	2	5	8	22	0	37
Total	7	5	16	67	5	100

Drawbacks of Online classes * GENDER Cross-tabulation
Count

Table 4 ANOVA^a

Model		Sum of squares	Df	Mean square	F	Sig
1	Regression	3.070	1	3.070	3.613	.060 ^b
	Residual	83.290	98	.850		
	Total	86.360	99			

a Dependent Variable: Drawback of online classes
b Predictors: (Constant), Gender, Age

- Teachers can communicate with students, parents, and colleagues.
- Edmode is a teacher-centric, and the students and parents can only join if invited by the teacher.
- Edmode is free to use, and also, it provides premium services.

BrainPop

BrainPop was founded on 31st December 1999, and these sites retained by FWD Media Inc. in New York City. The quality and robust support for teachers makes Brainpop popular. Due to COVID-19 pandemic, it offered free access to teachers and schools. The main features in BrainPop offer are given below:

- For grades K-12 students, BrainPop offers short animated movies with material and quizzes.

Table 5 Student qualification cross-tabulation

Student qualification	Choice of the source of online classes				Total
	PPT	PPT with audio	Video	Webinar and video conferences	
UG	0	9	5	3	17
PG	3	36	11	28	78
Ph.D	1	0	2	2	5
Total	4	45	18	33	100

Choice of source of online classes? * Student Qualification Cross-tabulation Count

- It covers the subjects of English, Maths, Science, Social studies, Arts, Music, Engineering, and Technology.
- Teachers can track students’ progress in BrainPop.
- BrainPop is available only by Subscription.

Data Analysis and Interpretation

Above Table 1 shows that the respondents lying in age group of 20–25 are liking online classes.

Above Table 2 shows that there is no significant difference between dependent variable (Perception towards digital wallet) and independent variables (Gender, Age, Qualification).

Inference

Table 3 shows that there is no significant difference between dependent (Drawback of online classes) and

Table 6 ANOVA^a

Model		Sum of squares	Df	Mean square	F	Sig
1	Regression	1.869	1	1.869	2.078	.153 ^b
	Residual	88.131	98	.899		
	Total	90.000	99			

a Dependent Variable: Choice of the source of online classes
b Predictors: (Constant), Gender, Age, Qualification

Table 7 AGE cross-tabulation

Age	Reasons for liking online classes					Total
	Face-to-face interaction is limited	Study time becomes flexible	Study location becomes flexible	No need to visit the campus	Other reasons	
18–20	5	3	3	1	5	17
20–25	17	22	7	8	24	78
Above 25	1	2	1	0	1	5
Total	23	27	11	9	30	100

Reasons for liking online classes? * Age Cross-tabulation
Count

Table 8 ANOVA^a

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	.011	1	.011	.004	.947 ^b
	Residual	247.829	98	2.529		
	Total	247.840	99			

a Dependent Variable: Reasons for liking online classes?

b Predictors: (Constant), Student Qualification, Gender, Age

Table 9 AGE cross-tabulation

Age	Do you like to continue online classes		Total
	Yes	No	
18–20	14	3	17
20–25	49	29	78
Above 25	3	2	5
Total	66	34	100

Do you like to continue online classes? * Age Cross-tabulation Count

Table 10 ANOVA^a

Model		Sum of squares	df	Mean square	F	Sig
Regression		.461	1	.461	2.057	.155 ^b
Residual		21.979	98	.224		
Total		22.440	99			

a Dependent Variable: Do you like to continue online classes?

b Predictors: (Constant) Student Qualification, Gender, Age

independent variables (Gender, Age, Qualification) (Table 4).

Table 5 shows that most of the students choose webinar and video conferences and PPT with video for online classes.

Inference

Table 6 shows that there is no significant difference between dependent (Choice of the source of online classes) and independent variables (Gender, Age, Qualification).

In Table 7, it is clearly shown that the majority of the students like online classes due to flexible study time and limited face-to-face interaction.

Inference

Table 8 shows that there is no significant difference between dependent variable (reasons for liking online classes) and independent variables (Student Qualification, Gender, Age).

In Table 9, it shows that 49% of the students like to continue online classes in future also.

Inference

Table 10 shows that there is no significant difference between dependent variable (reasons for liking online classes) and independent variables (Student Qualification, Gender, Age). Table 11 it shows that 32% of the students age group of 20–25 is less connected with friends and 30% students connected as usual with friends.

Inference

Table 12 shows that there is no significant difference between dependent variable (How connected would you say to feel your friends right now) and independent variables (Student Qualification, Gender, Age).

Table 11 AGE cross-tabulation

Age	How Connected would you say you feel to your friends right now			Total
	More connected than usual	About as connected as usual	Less connected than usual	
18–20	2	9	6	17
20–25	16	30	32	78
Above 25	0	2	3	5
Total	18	41	41	100

How Connected would you say you feel to your friends right now? * Age Cross-tabulation Count

Table 12 ANOVA^a

Model	Sum of squares	df	Mean square	F	Sig
1 Regression	.622	2	.311	.568	.569 ^b
Residual	53.088	97	.547		
Total	53.710	99			

Findings

1. The students are satisfied with online classes and 66% of the students want to continue online classes in the future also.
2. 67% of the students are facing a network connectivity problem during online classes.
3. The majority of the students are using social media to touch with friends and family.
4. 41% of the students are worried that they exposed to coronavirus disease.
5. Majority of the students preferring the Canvas app for online classes.

Suggestions and Conclusion

The main drawback of online classes is network connectivity. The government should take steps and increase broadband in rural areas. The students are much worried about COVID-19 disease. The colleges or universities should give counselling to students and should create awareness and confidence for students about COVID-19. Learning is a continuous and ever-evolving process. In India, the educational institutions from schools to universities, should use this present crisis as a blessing and make digital education as a major part of the learning process in the future for all learners. To build young minds in the

present crisis, an effective and well-rounded educational practice is needed. It will help students to improve their skills that will drive their productivity, employability, health, and well-being in the decades to come and ensure the overall progress of India.

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Declarations

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