Effectiveness of Online Learning During Covid – 19 Pandemic : Students Perspective

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ABSTRACT

COVID-19 pandemic has compelled all the academic experts around the globe to move over and above conventional method of learning as it doesn't seem a viable option and consider virtual learning as a substitute of conventional learning. This research paper tries to understand different pedagogy like connectivity issues, consumption of data, flexibility etc that are related to the online teaching from the perspective of students and to conclude whether e-learning can be substitute for face to face learning.

Keywords : COVID – 19, Education, Online Teaching, Technology, Edu Tech Company, chi – square test, Data Tabulation, Pivot Table

I. INTRODUCTION

The World Health Organization declared COVID -19 as a global public health emergency of international concern on 30th January 2020 as well as pandemic on 11th March 2020.COVID – 19 has affected many sectors of the economy including academic industry. Like many other aspects of life COVID – 19 has had a serious impact on students, instructors and educational organizations around the globe.

The pandemic caused schools, colleges and universities across the globe to shut down there campuses so that students could follow social distancing measures which ultimately gave birth to the virtual learning instead of conventional learning. Many academic institutions that were earlier reluctant to change their traditional pedagogical approach had no option but to shift entirely to online teaching learning. Virtual learning is also lined to

various obstacles and challenges. This pandemic compelled the academic experts all-round the globe to move over and above the conventional method of learning as it doesn't seemed a viable option and thought on distance learning as a substitute for filling up the classroom activities for a period of three to four months.

Various research studies have explored the challenges and opportunities associated with E-learning during this pandemic, but it is important to keep students voice at the center and so this study has been conducted from the viewpoint of students / stakeholders' perspective.

II. LITERATURE REVIEW

(Anwar, 2020) conducted a research study considering students voice as an important factor and part of online learning. The main objectives of his

study were to find out the effectiveness of online learning and challenges as well as obstacles that are faced by higher education students in Pakistan. The total sample size was of 126 higher education students divided into 64 undergraduate and 62 post graduate students. He concluded that online learning helps in providing education keeping up the health conditions in mind however it cannot be consider as a substitute of conventional learning. Though majority of the students were having proper infrastructure for attending online lectures still respondent found conventional learning much better and effective.

(Shivangi, 2020) conducted a research study in order to know strength , weaknesses , opportunities and challenges of online learning during COVID – 19 pandemic and found that time flexibility was the main advantage of online learning while technical difficulties was the main drawback of online learning and concluded that robust IT infrastructure is one of the pre-requisite for online learning.

(T.Muthuprasad & Jha:, 2020) conducted a research study on agricultural students' perception and preference towards the online learning with sample size of 307 students and it was found that majority of the students showed the need for online education as a part of completing the syllabus and most of them also signified smartphones as the tool for attending lectures online.

(Baig, 2011) conducted a research study in order to find out the students' achievement studying in tenth grade. It was found that with the help of online learning students were able to score more as compared to conventional learning because in online learning sharing of the resources beyond the four walls of the classroom is possible and features such as user center ,user control and learning process becomes centric while in conventional training sharing of the resources is limited to the four walls of the classroom.

(Jena, 2020) undertook a research in order to highlight the initiatives that are being undertaken by Government of India in the teaching sector during COVID-19 pandemic and positive and negative sides of virtual learning. Various initiatives like e-Pathshala , Swayam , National Repository of Open Educational Resources etc were undertaken and at the end he conclude that Government has explored Open and Distance Learning (ODL) to a great extent but in order to make it fruitful it will have to strengthen knowledge and information technology infrastructure.

III. OBJECTIVES OF THE STUDY

1) To know the relationship between gender and age from the perspective of online learning.
2) To analyze the relationship between laziness and gender as far as online learning is concerned.
3) To draw conclusions between expenditure on online teaching and gender.
4) To find out the relationship between discipline and online teaching.
5) To know the association between discipline and quality of teaching.
6) To find out the relationship between indiscipline and gender.
7) To draw conclusions between age and cost effectiveness.
8) To know the relationship between discipline and doubt clearance mechanism.
9) To analyze the relationship between gender and risk of privacy.
10) To find out the relationship between time spent on social media and lecture affordability.
11) To know the relationship between gender and suitability of home environment from the perspective of online learning.
12) To know the relationship between lethargy and attending lectures online.
13) To find out the impact between online teaching and connectivity issues.

IV. RESEARCH METHODOLOGY

a.   Sample Size

The sample of the study included 170 higher education students segregated into 62 female students and 108 male students. The targeted sample size included undergraduate (N = 121, 71.18%) students and postgraduate (N = 49, 28.82%) students. The sample size included the students who have started attending lectures online since last two months.

b.   Data Collection Method

For the purpose of this research data was collected through the mode of questionnaire via Google Forms. Appropriate revisions were made based on their comments and suggestions, Necessary modifications were made based on their ideas and feedback.

c.   Data Analysis

Out of the data collected, around 2.35 % fall in age group of 15- 18 years, 87.65 % fall in age group of 18-22 years and remaining (10%) fall in the age group of above 22 years.

Graph 1: Graph depicting the relationship between faculty in which student is studying and quality of teaching.
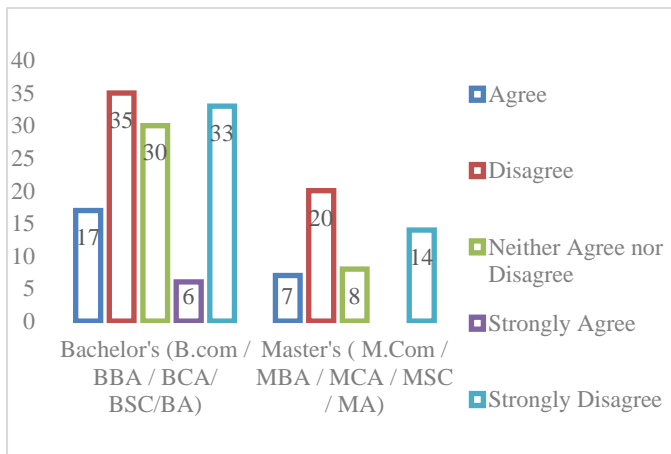

From the above graph we can say that out the students who study in undergraduate courses ,28.93% of the total students and 40.82% of the total students studying in post graduate course didn't agree that quality of teaching is being affected. While 14.05% and 14.29% of undergraduate and post graduate students agree that quality of teaching is being affected while attending lectures online.

Graph 2: Graph showing the responses of whether online teaching can be a substitute of offline teaching.
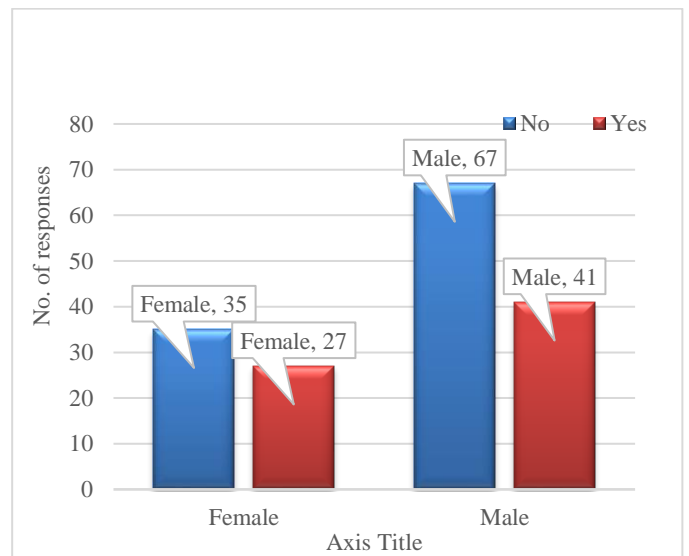
From the above graph, we can say that total 56.45% of the total female and 62.04% of the total male considered that online teaching is not much effective and thus cannot be considered as a substitute of offline or face to face teaching. While 43.55 % of the total female and 37.96% of the total male considered that online teaching can be considered as a substitute of offline teaching.

Graph 3: Graph showing the responses of frequency of attending online lectures
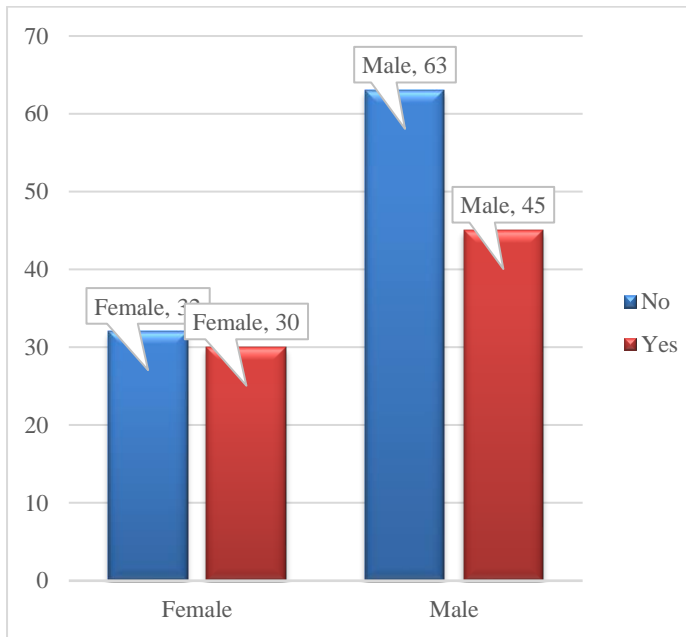
From the above graph, it can be said that 51.61 % of the total females and 58.33 % of the males do not attend lectures regularly while 48.39% of the total female and 41.67 % of total male attend lectures regularly. The causes of not attending the lectures may be the cost of data pack, consumption of online data, lack of face to face communication etc.

Selection of the Factors related to online Pedagogy:

1) Connectivity Issues: If any educational institute wants to develop e-content for the purpose of online learning it must make sure that it is compatible with the smartphones or laptops. Still many of the people are residing in rural and semi urban areas hence connectivity issue is one of the important determinants for online teaching.

2) Consumption of data: For attending lectures regularly through mode of virtual learning requires availability of high data pack as the platforms on which lectures are hosted like Webex, Zoom, Google meet, Microsoft Teams etc. requires consumption of more amount of data. From the perspective of students, availability of data pack is one of the main determinant for attending lectures online.

3) Faculty: As far as the sample size is concerned, students of the higher education are targeted i.e. undergraduate and post graduate students. Requirement of online teaching for both class of students may be different as their curriculum demands from the perspective of online teaching.

4) Quality of teaching: In conventional mode of learning, existence of face to face communication is possible and hence quality of teaching can also be maintained. But in case of virtual learning, maintaining of quality of teaching is also important as students require conceptual clarity and proper doubt solving mechanism.

5) Indiscipline : As there is absence of face to face communication in virtual learning , it may become possible that due to lack of fear , discipline among the students is also not maintained and entire decorum of online teaching gets affected and hence it doesn't prove to be effective at times.

6) Risk of Privacy: While attending lectures online, students needs to pass on certain personal information in order to get eligible for attending lectures online. In certain cases, students may also have the fear of losing the personal details which ultimately leads to hacking of all confidential information.

7) Doubt clearance mechanism: From the perspective of students, there should always be a doubt clearance mechanism for solving the doubts of the students post lectures or the institute may provide facility of recorded lectures 24/7 in lieu of the same. This would also be one the determinant for increasing the effectiveness of online learning.

Table1 : Depicting the Relationship Between Different Factors Related To Online Pedagogy From Students' Perspective.

Sr. No.	Statement of Hypothesis	P-value	Accepted / Rejected	Conclusion
1)	H_{01}: There is no significant relationship between gender and age from the perspective of online learning.	0.0482	Rejected	There is no significant relationship exists between gender and age from the perspective of online teaching.
2)	H_{02}: There is no significant relationship between laziness and gender on platform of online learning	0.5042	Accepted	There is no significant relationship laziness and gender from the perspective of online learning.
3)	H_{03}: There is no significant relationship between expenditure on online teaching and gender.	0.9494	Accepted	There is no significant relationship between online teaching and gender and thus gender is not an important determinant for online teaching.
4)	H_{04}: There is no significant relationship between faculty and online teaching.	0.3720	Accepted	There is no significant relationship between discipline and online teaching.
5)	H_{05}: There is no significant relationship between faculty and quality of teaching.	0.4985	Accepted	We can say that quality of teaching is independent of faculty in which you are studying.
6)	H_{06}: There is no significant relationship between indiscipline and gender.	0.3578	Accepted	There is no significant relationship between indiscipline and gender.
7)	H_{07}: There is no significant relationship between age and cost effectiveness.	0.6879	Accepted	Age and cost effectiveness are independent of each other when is comes to attending lectures online.
8)	H_{08}: There is no significant relationship between faculty and doubt clearance mechanism.	0.2721	Accepted	There is no significant relationship exists between faculty in which student is studying and doubt clearance mechanism.
9)	H_{09}: There is	0.272	Accepte	There is no

	no significant relationship between gender and risk of privacy.	6	d	significant relationship exists between gender and risk of privacy.
10)	H_{010}: There is no significant relationship between time spent on social media and lecture affordability.	0.0756	Accepted	There is no relationship between time spent on social media and lecture affordability.
11)	H_{011}: There is no significant relationship between gender and suitability of home environment for attending online lectures.	0.9098	Accepted	There is no relationship between gender and suitability of home environment.
12)	H_{012}: There is no significant relationship between lethargy and attending lectures online.	0.0007	Rejected	There is significant relationship between lethargy and attending lectures online from the perspective of online teaching.
13	H_{013}: There is no significant relationship between online teaching and connectivity issues.	0.2703	Accepted	There is no significant relationship exists between the online teaching and connectivity issues.

V. CONCLUSION

Government of India has explored many possibilities of Open and Distance Learning but there are many factors which need to be considered for online pedagogy while students are attending lectures online like consumption of data , lethargy , lack of face to face communication , faculty in which the student is studying , indiscipline , time spent on social media , flexibility etc.. Out of the total respondent majority of them (97.65%) were aware of the online learning platforms as some learning platforms are explored by the government under various initiative. While analyzing the reasons for not attending lectures regularly it was found that there was no relationship with consumption of data, cost, indiscipline etc. Only lethargy was the main determinant for not attending online lectures students. It was found that majority of the students agreed that online teaching cannot be considered as a substitute of offline teaching.

VI. LIMITATIONS OF THE STUDY

[1]. This study is limited only to the students of Gujarat University.
[2]. This study is limited only to the higher education level students i.e. undergraduate and post graduate students.

VII. FURTHER SCOPE OF RESEARCH

This research can further be extended considering different other parameters like mode of connectivity, digital literacy, place of residence, mode of communication etc. Moreover, this study has been undertaken only from the perspective of students, inclusion of faculty opinions in future studies will be useful in knowing exact effectiveness of online education.

VIII. REFERENCES

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