

8. An empirical study on the perception and preference of Students towards virtual education in the era of Covid-19 pandemic in India

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Abstract

The pandemic has affected almost every industry in a negative way and hardly any sector has remained uninfluenced by the pandemic. The Covid-19 crisis has led to act people in a different way which created havoc among the living beings. Globally the education sector is among the most effected ones ever since the inception of the virus. Schools, Colleges and Universities were shut down in no point of time after the virus affected severally in our country and therefore the idea about social distancing has to be maintained since it is one of the measures to combat the virus from spreading. The concept of online education was then effectively applicable since studies should be continued and there should be no losses due to closure of educational institutions. There is always a problem to start something new and the idea about online education for the educational institutions was new which affected both the teachers and the students, where they have to handle a completely new medium of infrastructure, tools and techniques. Students are the future of our economy, and the sudden disruption will definitely affect them in the short or long term. Therefore, based on the social significance of the study, the study was conducted on the basis of primary survey through Google forms to understand the preference as well as perception of students on online education among different age groups in the current scenario. Kruskal Wallis Test has been used to study the perception and preference among different age groups of students and based on the results, logical conclusion along with recommendations have been given by the researcher.

Keywords: Corona Virus, Kruskal Wallis Test, Online Education, Preference.

JEL Classification: C12, C14C83, I21 Y10

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1. BACKGROUND

The pandemic caused on account of corona virus has been disruptive all over the world. It has not only taken life of human beings but also led individuals to think and act in a different way since it has affected every aspect of life. The pandemic created a major havoc globally and have affected every sector possible. Introduction of the pandemic led to the inception of less familiar terms quarantine, lockdown and new normal which suggested a different way of dealing and living life. Several lives were lost in the pandemic and the fear and anxiety among human kinds on surviving has become a herculean task all together. Different people had to deal differently in the pandemic but the children and students were among the worst affected ones since their life remained almost standstill from the external environment and offline classes. There was a time when a student had to make themselves ready to go to their institution and attend face to face classes but the pandemic forced the generation to attend everything virtually. Online education is not a new term which was inducted and started way before the corona crisis but the significance and effectiveness of online education can be enlightened in the toughest time period where it is the only option left to continue with your studies. Students along with the teachers had to adapt the new mode of learning in the new normal situation but a sudden acceptance of a different mode all together is not an easy task. Moreover, there are several problems associated with online learning from technological difficulties to issues in network, especially in a vast diversified country like India. Online education is also a major problem to the disadvantaged sections of people of our country. Evaluation of students in virtual mode of education is also one of the biggest challenges and is a matter of concern. Looking at the divergent aspects of online learning along with the societal value; perception and preference of the students is very important towards education in virtual mode during the pandemic such that we can build the futuristic education student centric for the overall development of the society.

2. LITERATURE REVIEW

Several existing literatures in the concerned area were reviewed by the existing researchers for the identification of research gap:

Dani et al. (2018) examined the factors that are affecting the preference of online education among students and for the study, factor analysis technique was used based on a structured questionnaire and the major findings of study reveals that the core reasons that affect

students' perception about virtual education are technology, interaction, convenience, participation, popularity and effective teaching.

Pasha and Gorya (2019) found out through their primary survey that many students are there who are unaware about the online mode of education but surprisingly those who knew about online education, they preferred such mode of education and thought it is an effective way of learning in future.

Biswas and Debnath (2020) found in their study that digital education divided the students into privileged and unprivileged sections where there are deprived ones and the main problem lies with them. The researchers also elaborated that there is inequality among students in online education since a section of students without adequate technology, devices and connection struggle hard to participate in such learning whereas the better half enjoy significant benefits.

Chandra (2020) observed through the research study that there is a perceptual difference about the fear of academic failure among different gender of students which is largely because of the home environment in online learning. The researcher also found that the students have also diverted their mind towards different creative activities and are also taking up various courses which will help them to enhance new different technical skills. The students have also tried to cope up with the negative effect of the pandemic by getting distanced from boredom by using emotional intelligence.

3. RESEARCH GAP

On the basis of the above extensive review of literature in the concerned area, the researcher has found out that there is no detailed and specific research study regarding understanding the perception of student's online education in the corona virus pandemic. The study is from the perspective of the students that is the need of the time which also got a major social significance and considering there is a major research gap, the researcher have tried to conduct the study by identifying several research objectives to fulfill the research gap.

4. RESEARCH OBJECTIVES

The following research objectives has been identified by the researcher based on the extensive review of the literature of the concerned research work as:

- To find the perception regarding online classes through its effectiveness and level of interest among different age groups of students amidst the Covid-19 pandemic.
- To find out the cost associated and the mental state of the students while learning virtually among different age groups of the students amidst the Covid-19 Pandemic.
- To find the level of interaction and concentration given by the students in online classes among different age groups of the students amidst the Covid-19 Pandemic.
- To find out the perception of the students about which mode of learning will be preferred and considered in future.

5. RESEARCH QUESTIONS

Based on the above well mentioned research objectives by the researcher, the following research questions have been raised:

- Does there is a variation in effectiveness for online classes among different age group of students amidst the Covid-19 pandemic?
- Does there is a variation of interest for online classes among different age groups of students amidst the Covid-19 pandemic?
- Does the cost associated with online classes vary among different age groups of students with online classes compared to traditional mode of classes?
- Does there is a variation in mental health among the students on account of online classes because of the Covid-19 pandemic?
- Does the interaction among the students and teachers vary in virtual classes among different age groups of students amidst the Covid-19 pandemic?
- Does the concentration level among different age groups of students vary in virtual classes in the era of Covid-19 pandemic?
- Does there is a variation in the preference of learning in future among different age group of students?

6. HYPOTHESIS OF THE STUDY

To fulfill the above mentioned research objectives and to answer the research questions, the following research hypothesis has been formulated:

- H₀₁: There is no significant difference in the effectiveness of online classes among different age groups of students amidst the Covid-19 pandemic.
- H₀₂: There is no significant difference in the level of interest in online classes among different age groups of students amidst the Covid-19 pandemic.
- H₀₃: There is no significant difference in cost associated with online classes among different age groups of students amidst the Covid-19 pandemic.
- H₀₄: There is no significant difference in student's mental health on account of online classes among different age groups of students amidst the Covid-19 pandemic.
- H₀₅: There is no significant difference in adequate teachers and students' interaction in online classes among different age groups of students amidst the Covid-19 pandemic.
- H₀₆: There is no significant difference in getting adequate concentration in online classes among different age groups of students amidst the Covid-19 pandemic.
- H₀₇: There is no significant difference in preferences of learning in future among different age groups of students amidst the Covid-19 pandemic.

7. RESEARCH METHODOLOGY

Based on primary survey the study was conducted by the researcher. Several questionnaires were prepared through the medium of Google form and on the basis of the questions, responses were collected from 260 students who are mainly from West Bengal and are engaged in online education in the current scenario. Questions were prepared to understand in general the perception and preference of different age group of students towards online learning in the corona crisis such that to fulfill its objectives. As per the research questions of the study, several hypotheses were formulated by the researcher which was tested using Kruskal Wallis Test since there were different age groups of respondents in the study. The non parametric test is considered to see whether there is a significant difference in the perception and preference of different age group of students towards virtual education in the era of the pandemic. SPSS software was used to test the formulated hypothesis and on the basis of the test, results were ascertained which were logically interpreted and analyzed by the researcher. As per the findings of the study, conclusion was given as well as several recommendations have also been provided in the current study so that students can be beneficial and the overall structure of the education sector can be evolved and developed.

8. DATA PRESENTATION AND ANALYSIS

Based on the data collected through primary survey from different age groups of students, data has been presented and analyzed below:

Table 1: Respondents Age Group

	Frequency	%	Valid %	Cumulative %
Below 18	11	4.2	4.2	4.2
18-24	124	47.7	47.7	51.9
18 and Above	125	48.1	48.1	100.0
Total	260	100.0	100.0	

Source: Computed through SPSS by Author

Based on the above Table 1, it can be clearly observed that 18 and above age group of students gave the maximum responses having 48.1% responses out of total 260 respondents. The least responses were from the student’s age group of below 18 with 4.2% of them responding.

H₀₁: There is no significant difference in the effectiveness of online classes among different age groups of students amidst the Covid-19 pandemic.

H₁₁: There is a significant difference in the effectiveness of online classes among different age groups of students amidst the Covid-19 pandemic.

Table 2: Do you find Online Classes Effective during the Covid-19 Pandemic?

	Frequency	%	Valid %	Cumulative %
Very High	43	16.5	16.5	16.5
High	28	10.8	10.8	27.3
Moderate	104	40.0	40.0	67.3
Low	60	23.1	23.1	90.4
Very High	25	9.6	9.6	100.0
Total	260	100.0	100.0	

Table 3: Kruskal Wallis Test

	Do you find Online Classes Effective during the Covid-19 Pandemic?
Chi-Square	8.337
Df	2
Asymp. Sig.	.015

Grouping Variable: Respondents Age Group

Source: Computed through SPSS by Author

Based on the above Table 3, the results are clearly observable that the null hypothesis is

rejected since the table’s P value is 0.015 (< 0.05) which is significant at 5% significant level. Therefore, as per the test result it can be said that there is a significant difference in the effectiveness of online classes among different age groups of students amidst the Covid-19 pandemic.

H02: There is no significant difference in the level of interest in online classes among different age groups of students amidst the Covid-19 pandemic.

H12: There is a significant difference in the level of interest in online classes among different age groups of students amidst the Covid-19 pandemic.

Table 4: Do you find Online Classes Interesting during the Covid-19 Pandemic?

	Frequency	%	Valid %	Cumulative %
Strongly Agree	65	25.0	25.0	25.0
Agree	47	18.1	18.1	43.1
Neutral	47	18.1	18.1	61.2
Disagree	50	19.2	19.2	80.4
Strongly Disagree	51	19.6	19.6	100.0
Total	260	100.0	100.0	

Table 5: Kruskal Wallis Test

	Do you find Online Classes Interesting during the Covid-19 Pandemic?
Chi-Square	12.782
Df	2
Asymp. Sig.	.002

Grouping Variable: Respondents Age Group

Source: Computed through SPSS by Author

Results from the above Table 5 signifies that the null hypothesis is rejected that can be observed from its P value at 0.002 (< 0.05) that is significant both at 5% and 1% level of significance and at 2 degrees of freedom. Hence, it can be concluded that there is a significant difference in the level of interest in online classes among different age groups of students amidst the Covid-19 pandemic.

H03: There is no significant difference in cost associated with online classes among different age groups of students amidst the Covid-19 pandemic.

H13: There is a significant difference in cost associated with online classes among different age groups of students amidst the Covid-19 pandemic.

Table 6: Do you find Online Classes less costly and more affordable during the Covid-

19 Pandemic?

	Frequency	%	Valid %	Cumulative %
Yes	117	45.0	45.0	45.0
No	86	33.1	33.1	78.1
Indifferent	20	7.7	7.7	85.8
Maybe	37	14.2	14.2	100.0
Total	260	100.0	100.0	

Table 7: Kruskal Wallis Test

	Do you find Online Classes less costly and more affordable during the Covid-19 Pandemic?
Chi-Square	4.059
Df	2
Asymp. Sig.	.131

Grouping Variable: Respondents Age Group

Source: Computed through SPSS by Author

As per Table 7, the results are clearly observable that the null hypothesis is accepted which is justified from the tables P value at 0.131 (> 0.05) that is significant at 5% level of significance. Therefore, there is no significant difference in cost associated with online classes among different age groups of students amidst the Covid-19 pandemic.

H₀₄: There is no significant difference in student’s mental health on account of online classes among different age groups of students amidst the Covid-19 pandemic.

H₁₄: There is a significant difference in student’s mental health on account of online classes among different age groups of students amidst the Covid-19 pandemic.

Table 8: Do you think Students Mental Health is affected in Online Classes during the Covid-19 Pandemic?

	Frequency	%	Valid %	Cumulative %
Highly Effected	75	28.8	28.8	28.8
Moderately Effected	90	34.6	34.6	63.5
Neutral	51	19.6	19.6	83.1
Less Effected	24	9.2	9.2	92.3
Not Effected	20	7.7	7.7	100.0
Total	260	100.0	100.0	

Table 9: Kruskal Wallis Test

	Do you think Students Mental Health is Affected in Online Classes during the Covid-19 Pandemic?
Chi-Square	1.070
Df	2
Asymp. Sig.	.586

Grouping Variable: Respondents Age Group

Source: Computed through SPSS by Author

The results are clearly visible from the above Table 9 that the null hypothesis is accepted which is justified and observable from its P value at 0.586 (> 0.05) that is significant at 5% level. Therefore, there is no significant difference in student’s mental health on account of online classes among different age groups of students amidst the Covid-19 pandemic.

H₀₅: There is no significant difference in adequate teachers and students’ interaction in online classes among different age groups of students amidst the Covid-19 pandemic.

H₁₅: There is a significant difference in adequate teachers and students’ interaction in online classes among different age groups of students amidst the Covid-19 pandemic.

Table 10: Does there is adequate Students and Teachers interaction in Online Classes during the Covid-19 Pandemic?

	Frequency	%	Valid %	Cumulative %
Yes	73	28.1	28.1	28.1
No	119	45.8	45.8	73.8
Indifferent	29	11.2	11.2	85.0
Maybe	39	15.0	15.0	100.0
Total	260	100.0	100.0	

Table 11: Kruskal Wallis Test

	Does there is adequate Student and Teacher interaction in Online Classes during the Covid-19 Pandemic?
Chi-Square	10.024
Df	2
Asymp. Sig.	.007

Grouping Variable: Respondents Age Group

Source: Computed through SPSS by Author

Results from the above Table 11 clearly signifies that the null hypothesis is rejected that can be justified from the tables P at 0.007 (< 0.05) that is significant both at 5% and 1% level of significance. Hence, there is a significant difference in adequate teachers and students interaction in online classes among different age groups of students amidst the Covid-19

pandemic.

H₀₆: There is no significant difference in getting adequate concentration in online classes among different age groups of students amidst the Covid-19 pandemic.

H₁₆: There is a significant difference in getting adequate concentration in online classes among different age groups of students amidst the Covid-19 pandemic.

Table 12: Do you concentrate properly in Online Classes during the Covid-19 Pandemic?

	Frequency	%	Valid %	Cumulative %
Poor	50	19.2	19.2	19.2
Moderate	101	38.8	38.8	58.1
Good	55	21.2	21.2	79.2
Very Good	21	8.1	8.1	87.3
Excellent	33	12.7	12.7	100.0
Total	260	100.0	100.0	

Table 13: Kruskal Wallis Test

	Do you Concentrate properly in Online Classes during the Covid-19 Pandemic?
Chi-Square	7.511
Df	2
Asymp. Sig.	.023

Grouping Variable: Respondents Age Group

Source: Computed through SPSS by Author

Based on Table 13, the results are clearly observable and it can be said that the null hypothesis is rejected which is justified from its P value 0.023 (< 0.05) that is rejected at 5% significant level. Therefore, there is a significant difference in getting adequate concentration in online classes among different age groups of students amidst the Covid-19 pandemic.

H₀₇: There is no significant difference in preferences of learning in future among different age groups of students amidst the Covid-19 pandemic.

H₁₇: There is a significant difference in preferences of learning in future among different age groups of students amidst the Covid-19 pandemic.

Table 14: You will prefer online, offline or blended mode of learning in future?

	Frequency	%	Valid %	Cumulative %
Online	53	20.4	20.4	20.4
Offline	110	42.3	42.3	62.7
Blended	97	37.3	37.3	100.0
Total	260	100.0	100.0	

Table 15: Kruskal Wallis Test

	You will prefer online, offline or blended mode of learning in future?
Chi-Square	7.511
Df	2
Asymp. Sig.	.023

Grouping Variable: Respondents Age Group

Source: Computed through SPSS by Author

On the basis of Table 15, the results are clearly observable and it can be said that the null hypothesis is rejected which is justified from its P value 0.023 (< 0.05) that is rejected at 5% significant level. Therefore, there is a significant difference in preferences of learning in future among different age groups of students amidst the Covid-19 pandemic.

9. FINDINGS AND CONCLUSION

As per the above detailed analysis above, it is observed that there are mixed responses from different age group of students towards the perception and preference of virtual education during the pandemic period. Therefore, it can be clearly said that different age group of students think differently and thus their perception and preference vary accordingly and same herewith the perception towards online education varied significantly. Brief overview of the overall results suggest that online classes are moderately effective especially in the current situation of crisis since there is no other means of possibility to continue education but the interaction within students and teachers is low during online classes. Overall the student’s perception is that they get moderate concentration in the online classes but it was found that online classes are more affordable and less costly than other means of education as responded by all groups of students. Considering the mental health of the students which is very much important, it was found that majority of the students responded that their mental health is moderately affected because of online education and therefore for

all the definite reasons, they wanted to shift towards offline education in the future.

The pandemic was such that the students and the learners have never thought of and it affected badly where life will come to such that they have to learn via online and which will be the only teaching and learning method that will be considered. Online education in the current tough situation is good but it cannot be a solution for future especially in a diversified and vast country like India where still majority of the students come from the rural areas. The rural area of our country has inequality in technology and digitally accessed medium to attend online classes, which is a major problem for some of the learners in the pandemic situation. Having accustomed with the digitally equipment for online education is also a challenge for many of them at the first instance. There are several problems associated with online education though it is the current solution at this very moment to combat the pandemic. The situation demands online education but there students are in favor of offline education in future. Thus, hopefully we will overcome this pandemic and create a sense of belongingness such that every student gets access to equal education for the overall development of the sector and the country as a whole.

10. RECOMMENDATIONS

On account of the current Covid-19 pandemic, the students are facing numerous problems and challenges that they have hardly faced earlier. Along with several other crises, the corona virus pandemic has also led to education crisis in our country. There is a psychological anxiety and streets among the learners on account of lockdown because of the pandemic. There is also a large divergent in online education where the unprivileged students are facing the problem whereas the privileged ones are taking the advantages of such education. There are numerous problems associated with online education in our economy which needed to be identified and thereby resolved for the benefit of both the education institutions and the learners. On the basis of the problems associated with online education, several recommendations are put forwarded by the researcher for the overall benefit of the learners in our country.

- The marginalized and the poor sections of the society should be taken care of with psychological support and such groups of students; especially the students should get special attention with learning needs and adequate resources from the educational institutions and policy makers.

- Online learning devices should be provided by the government and other institutions to the disadvantaged groups of students such that they can continue their learning in the corona virus pandemic.
- Adequate training to some of the inadequate students shall be provided to those who are not capable of accessing online tools and devices for the purpose of having online classes in the contemporary scenario.
- Along with teaching and learning, teachers along with the parents should ensure that much of the focus is given on student's immunity and both mental and physical health in the current scenario which is very much needed for the future generation students of our country.

11. FUTURE RESEARCH SCOPE AND LIMITATIONS OF THE STUDY

The current study is based on a small number of respondents collected through Google forms as a primary means of survey which is mainly based on a specific area. So, future researchers can conduct more elaborative research by collecting a greater number of responses from the respondents in different areas to better understand the preference of students on virtual education in the light of the pandemic. Only age group is considered and focused on the current study whereby several other variables could have been considered to diversify the study. The study is done using basic statistical tools and therefore more extensive research can be conducted by taking more sophisticated statistical tools in future. More number of parameters can also be considered along with extending the geographical area to conduct research study on a larger dimension.

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