

A Study on the Attitude towards E-Learning and its Implication on School Children during Covid-19 Pandemic

Huma Kayoom

Assistant Professor (Education), Centre for Teacher Education

Central Institute of Higher Tibetan Studies, Sarnath, Varanasi, Uttar Pradesh

Email: homa2527@gmail.com

Abstract

E-learning is a network-enabled, computer-mediated learning of skills and transfer of services. E-learning functionally rests on computer-based virtual learning and education where the content is delivered by audio-video tape, CD-ROM, satellite TV and Internet, which had revolutionized the field of education since the beginning of the 21st century, but its impact was not felt as strongly in the traditional system of education until the COVID-19 catastrophe. This study explores the effect of sudden changes in the form of online education and e-learning that happened to the education system during the covid-19 pandemic in India. Certainly, the pandemic made us move towards a new normal but does it apply equally to the education system as well? The primary concern of this study was to explore the implication of online learning on school children through exploring their own lived experiences, therefore, it entails the researcher to adopt a mix-method research technique in order to collect and analyse the data. This paper especially focuses on the personal experiences of school-going children who had been the most vulnerable during the pandemic and hence it also brings into focus the problems faced by them during online classes.

Keywords: E-learning, web content, technology, paradigm shift, Pragyata guidelines, Manodarpan, Government of India.

Introduction

Under Covid-19, educational institutions are transforming teaching-learning activities from direct, one-to-one interaction in a live classroom to e-learning and online teaching. E-learning is now becoming the new normal in the backdrop of Covid-19 after the state had imposed a nationwide lockdown for a relatively long period and imposed restrictions on the opening of educational institutions such as schools, colleges and universities. E-learning became imperative to educational institutions that had to adopt and adapt themselves according to the new normal. Students willingly or unwillingly adjusted to e-learning using web-based applications and

online education for their school-based learning activities.

E-learning and online teaching is not a new phenomenon. After the advent of video sharing platform YouTube where anyone can upload videos, certain educationists such as those facilitated by Unacademy, Byjus, Vedantu, Study IQ and alike, had been creating their own YouTube channels and had been uploading informative and educational videos. Scholars have been sharing their research papers in PDF format on Google Scholars and other search engines, many research journals and publications, news and print media are already on the internet providing web-based learning materials. However, when school learning is considered,

it is definitely the newest attempt and one of its kind. Though etymologically e-learning covers any electronically mediated learning, it can be defined from different perspectives as attempted by many researchers such as Grimes (2009, quoted in Mishra and Mishra, 2013) who define "e-education refers to the application of internet technology to the delivery of the learning." E-learning means electronic learning, so it refers to a wide range of processes and applications which are designed to deliver instruction through electronic means (Mishra and Mishra, 2013). So it appears that the definition of e-learning is broader than but includes online learning, web-based training or computer-based training but most importantly it signals the paradigm shift in education and training that is in progress (www.virtual-college.co.uk)

Review of Literature

A systematic review was taken to investigate the impact of e-learning on school children however, most of the research work focused on the worth and merit of e-learning and the changes e-learning brought in the wake of globalization. Research especially related to its implication on school children during the pandemic was too scarce, apart from some newspaper articles which voiced the concerns of the educationists and parents. There is a multitude of advantages and disadvantages of online learning as exhibited by Khan and Setiwan, 2019, their work also examines the ways to overcome these drawbacks, the researcher-duo suggests that students should not only "read the materials, listen to the lectures, but also participate in the observation and experience certain educational or teaching scenario and acquire skills in action". A study conducted by Allworth, 2014, also emphasized maintaining good communication between the

learner and the instructor, especially at the postgraduate level, one can see that even if learning is enabled with the help of machines it cannot eliminate the human element. Ensuring the importance of reflective thinking in the education process Al-Fahidi, 2008, explores whether, at a higher educational level, there is a link between the students' computer competency and their attitude towards e-learning. He found that 77.8 per cent of participants responded with the acceptance that the course helped them in improving their critical thinking. Ruiz J G et.al, 2006 also probed the role of e-learning in medical education by outlining the effectiveness and faculty development needs for the implementation, evaluation and strategies for e-learning in academic scholarship, whereas Trubina and Anna, 2016 highlight the nurturing activities involved in e-learning in the information society. They explore the claim of information technology of modifying the flow of the mental process of the cognitive activity of students, rebuilding the structure and function and thereby changing the whole structure of the training activities.

Need of the study

From students' perspectives learning on school premises had fundamentally included participation, inspiration and collaboration between teachers and peers but a sudden change in the pattern of school education during the pandemic and the lack of human communication in e-learning and online teaching had strongly influenced the academic performance of our young children so much that it might have brought a change in the attitude and belief system of the students. It is also evident that attitudes are not formed instantly rather they brood over time yet this unexpected alteration in the pattern of school education may have influenced the student's attitude

negatively, but we are not sure about it. Whether this online education had been advantageous or disadvantageous to school children had been a contentious issue and a matter of debate among academicians, educationists, government and alike. In the past two years, many newspaper articles had been published that had emphasized the effect of online education on the mental and physical health of school children. An article published by India Today in its online print dated September 18, 2021 and titled "effects of online education on mental and physical health" quotes that "attending online classes from home has led to a string of mental and physical health issues for both students and teachers".

It thus becomes very much pertinent and imperative to conduct research work in this current, ongoing scenario, to probe deeper into how this online education and e-learning are affecting our younger generation. Apart from the physical and mental problem that is posed by online education, are there some other problems or issues that the students are facing? Does online education help students progress in their studies or is it a deterrent and imposing restrictions and hindering their academic achievement, performance and growth? What implications and prospects does it hold for the students and other stakeholders? With these questions in mind the researcher was very much intrigued to look for answers to the following research question:

Research Question

1. What is the attitude of students toward e-learning?
2. Is E-Learning effective enough in imparting quality education?

Statement of the Problem: The present study is entitled, "A Study on the Attitude towards E-Learning and its Implication

on School Children during the Covid-19 Pandemic".

Operational definition

1. **E-Learning**-It refers to the education provided to the students in a virtual setting using technological devices and web-based applications.
2. **School children**- In this study, school children refer to students of class 9 enrolled in any government, private, aided or unaided school.
3. **Covid-19 Pandemic**- It refers to the pandemic stage in India, during which a nationwide lockdown was imposed on the country and the schools remain closed during the first wave and the second wave of the pandemic.

Objectives of the study: The objectives for the present study are bifurcated according to the phases: Quantitative and Qualitative.

Objectives for the Quantitative Phase:

1. To study the attitude of students toward e-learning.
 - 1.1 To study the attitudes of students towards e-learning with respect to their following personal variables-
 - (a) Type of school (Government and Private)
 - (b) Gender (Boys and Girls of government schools)
 - (c) Gender (Boys and Girls of private schools)

Objectives for the Qualitative Phase:

1. To study the advantages and disadvantages of e-learning as perceived by the students.

2. To study the problems and challenges, if any, faced by the students during e-learning.
3. To study the coping strategies if any adopted by the students to cope during e-learning.

Research Hypothesis:

Research hypothesis for objective number 1.1(a), 1.1(b) and 1.1 (c) with reference to the personal variables were formulated as-

HR1: There is a significant difference between the attitude of students of private schools and students of government schools towards e-learning.

HR2: There is a significant difference between the attitude of male and female students of government schools towards e-learning.

HR3: There is a significant difference between the attitude of male and female students of the private schools towards e-learning.

Null Hypothesis:

A Null Hypothesis is a statement of 'no effect' or 'no difference' present. The statement is being tested against research hypotheses. The null hypotheses of the study were:

HO₁: There is no significant difference between the attitude of students of private schools and students of government schools towards e-learning.

HO₂: There is no significant difference between the attitude of male and female students of government schools towards e-learning.

HO₃: There is no significant difference between the attitude of male and female students of private schools towards e-learning.

Methodology

Under Mixed Method Approach this study was conceived to carry out in two phases, Quantitative and Qualitative. In the present study quan→QUAL sequential design (Explanatory Field Study) had been used. Here in this study, the quantitative phase of the study was done before the qualitative phase of the study and the qualitative data collected was used to interpret and contextualise the quantitative finding.

Population

The population for the study was defined as all the students of class 9 of secondary schools studying in government and private schools of Varanasi district during the session 2020-2021.

Sampling technique

Maximum variation case under the Purposive sampling technique was employed for drawing the sample of the present study. Since the pandemic was in continuation, random sampling was not possible, because schools were functioning with only 50 per cent strength of the students; and that too based on odd-even roll numbers, also any unauthorized, newcomer or independent researcher was not received warmly inside the school premises. A total of 104 samples were drawn from the population, 50 students from government schools and 54 students from private schools which comprised the sample for the first phase of the study. For the second phase of the study a subset (i.e. outlier case) from the first sample was drawn to constitute the sample.

Tools of the study

1. For the first phase (quantitative) of the study, an E-learning Attitude Scale (ELAS) developed by Bhalla and Rani, 2016, was used to

measure the attitude of students towards e-learning.

2. For the second phase (qualitative) of the study a semi-structured interview schedule constructed by the researcher was used.

Research Procedure: As per the availability of the students in the schools according to the odd-even roll number, the E-Learning Attitude Scale (ELAS) was given to the students, after the first phase of data collection, the scoring and analysis were done and z-scores of all the students were interpreted. For the second phase of the study, a sub-set of

10 students who either scored too high or too low on ELAS (i.e. outlier case) were selected as a sample from the first sample set. These students were interviewed, discourse analysis was employed followed by coding, themes were identified and thematic analysis in terms of research questions was done.

Findings of the study

Objective No.1: To study the attitude of students towards e-learning.

The following table shows the analysis done on the part of achieving objective no. 1:

Table-1: Table showing the Mean, Standard Deviation and its Interpretation of ELAS for students of class 9

Students	No.	Mean	Standard Deviation	z-score	Interpretation
All students	104	104.64	10.99	-0.15	Average favourable
Government school	50	100.56	12.87	-0.38	Average favourable
Private school	54	108.42	7.04	0.09	Average favourable

Discussion:

The analysis of the data shows the combined mean as well as separate mean for both the government school students and the private school students. The total means for all the students was 104.64, whereas the mean scores of government school students and private school students were 100.56 and 108.42, respectively. These scores when transformed into z-score, the norms for the interpretation of z-score resulted into Average Favorable Attitude towards E-Learning. It can also be interpreted as although the students

are slightly inclined towards e-learning but still there are some obstacles that hinder the extremely favorable or even moderately favourable attitude of students towards e-learning.

Objective No. 1.1 (a): To study the attitude of students towards e-learning for the type of school (Government and Private). For the achievement of this objective, the null hypothesis was stated and verified statistically as:

HO₁: There is no significant difference between the attitude of students of private schools and students of government schools towards e-learning.

Table-2: Table showing t-test value for an attitude of students of private schools and government schools towards e-learning

Type of school	No. of students	Mean	Standard Deviation	t-value
Private	54	108.42	7.04	3.834*
Government	50	100.56	12.87	

*Significant

Interpretation: The t-value in the above table is greater than 1.96 which reveals that the students of private schools differ significantly (at 0.05 level of significance) than the students of government schools in their attitude towards e-learning. Hence, the related null hypothesis, in this case, is not accepted. Students from Private schools have a more positive attitude towards e-learning and online education. This may be attributed to the fact that they have much easier access to electronic devices and gadgets compared to government school students, as during the interview one student from a government school mentioned that he does not have a smartphone for

his personal use but rather a common device is shared between his siblings to join the online class, whereas all the students from the private school claimed to possess a personal smartphone.

Objective No. 1.1 (b): To study the attitude of students towards e-learning with respect to gender (Boys and Girls of government schools). For the achievement of this objective, the null hypothesis was stated and verified statistically as-

HO₂: There is no significant difference between the attitude of male and female students of government schools towards e-learning.

Table-3: Table showing t-test value for attitude of male and female students of government school towards e-learning

Gender	No. of students	Mean	Standard Deviation	t-value
Male	29	100.44	12.91	-0.074*
Female	21	100.71	12.80	

*Not Significant

Interpretation: The statistical analysis shows that at (df=48) at 0.05 level of significance, the calculated t-value (t=-0.074) was found to be not significant for difference in mean score of male and female students of government school on their attitude towards E-learning. Hence, the related null hypothesis in this case was accepted. Thus it is inferred that the male students of government school do not differ significantly in their attitude towards e-learning and online education than the female students of

government school.

Objective No. 1.1 (c): To study the attitude of students towards e-learning with respect to gender (Boys and Girls of private schools). For the achievement of this objective, the null hypothesis was stated and verified statistically as-

HO₃: There is no significant difference between the attitude of male and female students of private school towards e-learning.

Table-4: Table showing t-test value for attitude of male and female students of private school towards e-learning

Gender	No. of students	Mean	Standard Deviation	t-value
Male	25	110.56	7.15	2.235*
Female	29	106.58	6.39	

*Significant

Interpretation: The statistical analysis shows that at (df =52) at 0.05 level of significance, the calculated t-value (t= 2.235) was found to be significant for the difference in the mean score of male and female students of a private school on their attitude towards E-learning. Hence, the related null hypothesis, in this case, is not accepted.

Thus, it is inferred that statistically, both male and female students of private schools do differ significantly in their attitude towards e-learning. The male students of private schools have an above-average favourable attitude towards e-learning and online education.

Objective No.2: To study the advantages and disadvantages of e-learning as perceived by the students.

Advantages of E-Learning and Online Education

1. Ubiquitous, Omniscient and Universal- One of the most common advantages of online education that emerged under this study was that since online education does not require the face to face interaction between the learner and the instructor, and can be imparted from any place, at the ease of our home, where-ever we find good connectivity and as long as our technical devices are working it gives ease to both the students and teachers to log-in to their account

and connect in a virtual setting, who may be distant physically but connected virtually.

- 2. Collaboration between teacher and students-** Many respondents were of the view that there was present vitality and synergy, whenever they will see their teachers and other fellow students online, since they were distant apart due to lockdown and other restrictions they still felt connected with them not in terms of virtual connectivity but emotional connectivity.
- 3. Student-centered-** Some students were of the opinion that online classes kept them very attentive as they did not want to miss important teaching points and that the teacher's focus was also on the students. The whole learning process revolved around the needs of the students.
- 4. Access to resources-** Since the online classes were carried on via web-based applications such as Zoom or Google meet, it was very much feasible for the teachers to even share their screen and whiteboard, sharing videos and alike made the lecture intriguing and engaging. Moreover, many other resources were also available online such as sidebooks, animated videos, research papers and materials that aided and facilitated online education and e-learning.

Disadvantages of E-Learning and Online Education

1. Equity and accessibility to technology- Since the respondents of this study were from all sorts of schools, one clear thing that was visible from their responses was the great digital divide this online education had created. And this division only worsened on the pretext of non-accessibility, non-availability of technological devices, internet connections and reach to internet resources. One of the respondents who were in a government school and belonged to a lower-income group said that *"I really want to study, but my parents can afford only one smartphone with a data pack and that too is shared between my other siblings, I get only a small time-duration to attend the classes"*.

2. Computer literacy- Computer literacy is not something that is widely spread in our country. The parents, students and teachers as well fidgeted with the peripherals and other devices. Some students had not known before how to connect to live classes or make an email account or use zoom and google meet. This condition was more widespread among those students who belonged to government schools and had lesser interactions with the latest technologies.

3. Limitations of technology- Even those students who were apt to techniques and tools and had access to the internet also faced serious limitations posed by the technology. Most of the students complained about the lesser speed of the internet, lower bandwidth and network issues and alike. Sometimes due to network failure, they sometimes failed to write their

online exams.

Objective No. 3: To study the problems and challenges, if any, faced by the students during e-learning.

1. Effect on Physical health of students- almost all respondents were of the opinion that increased screen time is causing several health issues such as headache, burning sensation in eyes, weak eye-sight issues, increase in the number of vision if using spectacles, rashness and dryness of eyes. Apart from these, lack of movement, low physical exercise/work, constant sitting in front of mobile and tablets and deformed posture cause serious pain in the neck and backbone. Increased weight and habit of munching during online classes were also highlighted by some respondents.

2. Effect on Mental health of students- the students mostly were of the opinion that online teaching has created a gruesome burden on them because in addition to attending regular online classes they need to prepare for class assignments, tests, and other activities and that too recorded. Lack of interest in studies, monotonous timing of class, switching off camera and lack of co-curricular activities put a lot of mental stress and anxiety on students. The respondents complained that concentration plunged, which makes it difficult for most of the students to keep up with the teaching-learning activities.

As the period of lockdown during the first wave was extended for educational institutes even after June, the Union Ministry of Human Resource and Development (now Ministry of Education) released the PRAGYATA guideline on July, 14 2020. The MHRD released the PRAGYATA guidelines

on Digital Education, with an aim to improve online education and ensure the safety and academic welfare of the students by Plan, Review, Arrange, Guide, Yak (talk), Assign, Track, and Appreciate (PRAGYATA).

“The COVID-19 pandemic sternly impacted schools and children across the globe, in India alone, over 240 million children have had to face a negative impact of the pandemic in terms of education. To overcome the loss faced by schools or the children, the Government of India initiated the Digital campaign for a conducive environment for moving towards digital education” (MHRD, 2020).

Some important guidelines extended through this were-

- Keeping an overall and holistic development of the learners with an aim “to cut down undue screen time”.
- Guidelines also tend to cater to a diverse set of stakeholders including school heads, teachers, parents, teacher educators and students.
- The guidelines stressed the use of an alternative academic calendar of NCERT, for both, learners having access to digital devices and learners having limited or no access.

The duration of classes as per the PRAGYATA guidelines are as follows:

Division	Screen Time for students
Pre-primary students	Not more than 30 minutes a day
Elementary classes	Not more than 2 online sessions per day, 30 to 45 minutes each as decided by states and UTs
Secondary classes	Maximum four sessions per day, 30 to 45 minutes each as decided by the concerned state/UT government

Whether the schools are following these guidelines or not is a matter of grave concern as well as an area to be researched.

Objective No.4: To study the coping strategies if any adopted by the students to cope during e-learning.

All of the students (10 in number) denied using any coping strategies, it was obvious that online education had definitely put them under a lot of pressure and apart from muting their audio or switching off the camera, students didn't come up with any other strategy to deal with the stress, anxiety and fatigue faced by the students. Even most of the respondents fumbled on this aspect because reaching the timeline and completing the course and maintaining another academic record

was a pain-taking task that they needed to do or otherwise fear of losing their rank among their peers exhausted them mentally.

Showing great concern for the young generations of our country, the HRD ministry in July launched MANODARPAN: An initiative to provide psychosocial support to students for their mental health and well-being during the COVID-19 outbreak and beyond. The following components and features are encompassed in this novel initiative: -

- **Guidelines for all-** advisory guidelines for students, teachers and faculty of school systems and universities along with the families of the learners had been incorporated under this section.

- **Self-directed web page-** the web page on the MHRD website carries advisory, practical tips, posters, videos, do's and don'ts for psychosocial support, FAQs and an online query system that can be retrieved by the user.
- **Tele-counselling-** a national level database had been accordingly placed along with a directory of counsellors at the school and university level whose services are offered voluntarily to learners for tele-counselling service on the national helpline.
- **National toll-free helpline-** the launch of a toll-free helpline number by the MHRD for a country-wide outreach to students from school, universities and colleges is operated by a pool of experienced counsellors, psychologists and other mental health professional and is sought to well continue beyond the COVID-19 pandemic.
- **Handbook on Psychosocial support-** a learner-friendly handbook on psychosocial support enriching life skills and well-being of students is also published online. The booklet includes FAQs, facts and myths and covers ways and means to manage emotional and behavioural concerns.
- **Interactive online chat platform-** for direct contact, counselling and guidance by psychologists and other mental health professionals available for students, teachers and families during COVID-19 an interactive online chat platform had also been provided on this web page.
- And apart from the components of webinars, audio-visual resources including videos, posters, flyers, comics and short films had also

been scheduled to be uploaded as additional resource materials on the webpage. A section on peer support from others is also a special feature of this web page.

Yet again, how many students, teachers, parents and school administrators are actually aware of such a support system is a matter of investigation. It is very well evident that at least those sampled in this study did not know about any such initiative taken by the government

Conclusion

Overall, we can say that online education has some serious repercussions on the part of students and their learning. This research work provides us with an insight that although the impact of online education is far-reaching, the effect of learning via a computer at home may vary for different backgrounds of students. It is important to remember the extraordinary challenges many students face during e-learning and online education. Young children had to scramble to figure out how to do school in quarantine. Remote learning has taken a huge toll on many kids. Students are left unattended at home during their online learning if both parents are working. Even many students who had parents who could be home with them struggled with the demands and expectations of online school. If our country is to advance technologically, we first need to lessen the digital divide and the government and educational institutions should formulate sound policies based on sociological and psychological frameworks if we are to proceed in the direction of online education and e-learning.

References

- Al-Fadhli, S. 2008. *Students' Perceptions of E-Learning in Arab Society: Kuwait University as a Case Study E-Learning* 5, pp.418-28
- Allworth, M B. 2014. *Postgraduate distance education in sheep health veterinary education Small Rumin. Res.* 118, pp. 97-9
- Bhalla, S and Rani, F. 2016. *E-Learning Attitude Scale*. Psychomatrix, Neelkanth House, Delhi.
- India Today. *Effects of online education on mental and physical health*. Retrieved From <https://www.indiatoday.in/education-today/featurephilia/story/effects-of-online-education-on-mental-and-physical-health-1854320-2021-09-18>).
- Khan, M.L.H. and Setiawan, A. 2019. *The Impact of E-learning on Higher Education, Perception, Skills, critical thinking and Satisfaction. Journal of Physics. Conference Series*.
- Manodarpan: *Psychosocial support for mental health and well-being of student during the COVID outbreak and beyond*. GOI, MHRD, 2020. Retrieved from <https://manodarpan.education.gov.in/index.html>
- Mishra, S and Mishra, S. 2013. *Impact of e-education on school going children. International Journal of Humanities and Social Science Invention*, vol. 2, issue 71, July 2013, pp 58-61.
- Pragyata: *Guidelines for Digital education*. GOI, MHRD, 2020. Retrieved from https://www.education.gov.in/sites/upload_files/mhrd/files/pragyata-guidelines_0.pdf
- Ruiz, J G. Mintzer, M J. and Leipzig, R M. 2006. *The Impact of E-learning in Medical Education. Academic Medicine*, vol. 81, no. 3, pp. 207-212.
- Trubina, I. and Braines, A. (2016). *The Impact of e-learning in the education in the information society. SHS Web of Conference*, 29-01072. Retrieved From https://www.researchgate.net/publication/305888166_The_impact_of_e-learning_in_the_education_in_the_information_society/fulltext/57a4a1de08aee07544b4528d/The-impact-of-e-learning-in-the-education-in-the-information-society.pdf