iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 12 **Issue:** VII **Month of publication:** July 2024

DOI: https://doi.org/10.22214/ijraset.2024.63545

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 12 Issue VII July 2024- Available at www.ijraset.com

A Survey on the Effects of Online Teaching-Learning Process for Government Sponsored Institutions during Pandemic

Kuntal Biswas[1], Jyotibrata Chakraborty[2]
[1]*Departmentof Physics, Dum Dum Motijheel College, West Bengal State University*
National Bureau of Soil Survey and Land Use Planning, Government of India

Abstract: ***From the last week of March 2020 our country went under lockdown for an indefinite period to resist the spread of COVID-19 novel corona virus. During that time the educational institutions were not open for learners in physical mode. Many institutions were trying to keep the teaching-learning process active through online mode so that students did not detach from the learning environment. Online teaching was never thought of as the teaching-learning process before the pandemic in the context of our educational system. But right now, after the pandemic situation, this process has become an alternative not only for our country but for the whole world. This change in the teaching-learning process affected the students both socially and economically. There is a huge possibility of it affecting the students psychologically too. Through this study some major effects of online teaching process was determined which resulted due to the sudden change in the teaching-learning environment. Thus, this study has immense significance in finding out different problems and constraints faced by the learners for this online teaching-learning.***

Keywords: lockdown, COVID-19, teaching-learning, online teaching, virtual classroom

I. INTRODUCTION

The year 2020 was the year of pandemic for the whole world. Our state as well as the Barrackpore Sub-Division, North 24-Parganas was also not the exception. All types of mobility stopped suddenly all over country for an indefinite period of time. The life stylechanged in a sudden to co-up the adverse situation to survive. Like all other sectors, the educational sector was also badly affected. Government declared closing of schools, colleges, universities and other educational institutions to avoid physical contact, closeness within the class rooms and hence to control the spread of this viral infection. Thus a dead lock situation took place in all educational campus. In this context, to rescue the educational environment and to maintain the learning habit of the learners online teaching played a significant role against this pandemic situation. Many educational institutes introduced the online teaching learning classes for the learners as per the class routine to combat the undesired adverse situation according their capacity and resources. In this research work the effect of online teaching on learners was studied in the back ground of adverse socio-economic condition by incorporating various parameters like monthly family income, data usage etc. Through this study many other significant observations came out which must be considered seriously during implementing the online teaching as alternative.

A. Objective

Many government sponsored educational institutes on the basis of their own capacity continued the virtual classes for their students in regular basis. This effort should address some goals and objectives in favor of the learners and to the educational system.

1) Due to sudden lockdown the learners got totally disconnected from their daily classes in their educational institutes as well as deprived from the guidance of the teachers. By introducing the online teaching-learning process by the respective institute helped their learners to get back their healthy learning environment through virtual classroom.
2) For this long-term lockdown the people lost their jobs and their normal earning process was highly disturbed. In this condition each member of a family engaged of fighting to survive. It caused a significant number of dropouts. But the introduction of online classes that was maintaining the continuous teaching-learning streamline process creating virtual classrooms in this lockdown situation resisted the dropout successfully and efficiently.
3) The total livelihood was changed to an usual form. To maintain physical distancing everyone kept themselves isolated from the outer world. Though the introduction of this online teaching, the situation of monotonous captivity for the learners was overcome effectively.
4) As there was no option of attending educational institution for the learners, they got detached from their learning habit. With the introduction of this online classes they got back their class rooms, teachers, learning environment and could able to continue with their learning habit.

©IJRASET: All Rights are Reserved

5) Through this initiative the continuous transfer of knowledge towards the learners was maintained. As a result learners were not deprived to increase their educational potential and also not losing their academic year as well.
6) Many private organizations, multinational companies were selling education for their own interest and profit. They usually took the opportunity of such adverse situation. But they could not avail this opportunity of huge business as due to time wise proper initiatives by the government sponsored educational institutions looking at the benefits of the learners only.
7) Through this new type of learning process, learners got habituated with different techniques, technologies, got chance to interact with different software, apps etc. which made them efficient.

B. Study Area

For carrying out this research work the study areas were chosen at the different government sponsored educational institutions within the jurisdiction of Barrackpore Sub Division, North 24- Parganas, West Bengal, India. Educational institutes were chosen at different geographical locations, different economic zones for best results and to get clear picture in this regard.

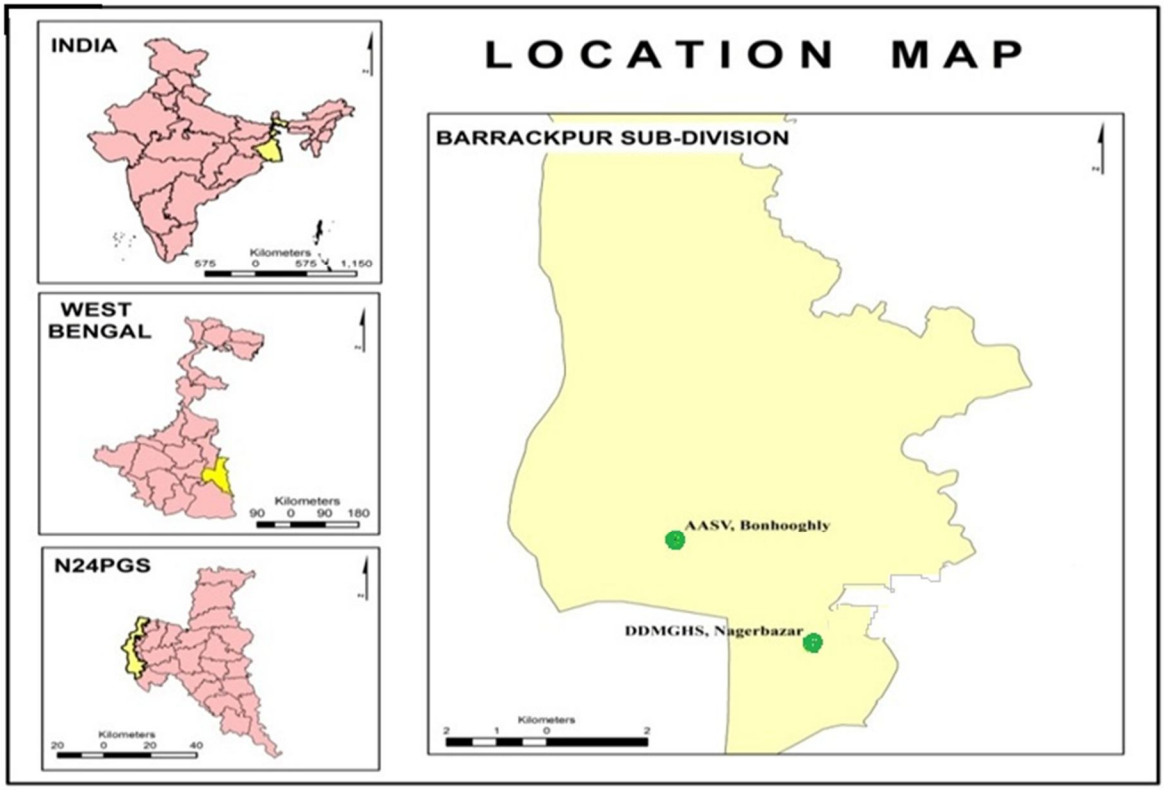


Fig.1 Location map for study area

Fig.1 shows the location of two different educational institutions under study area under the jurisdiction of Barrackpore Sub-Division, North 24- Parganas, West Bengal, India. In this map the geographical location of these two educational institutions are shown.

C. Hypothesis of Study

1) All the students of same study area are in same socio-economic conditions.
2) Students from same sections will have same maturity.
3) The data given by the students are spontaneous and impartial.
4) There is no correlation between emotional stability and academic achievement of students of same sections.
5) Students of these educational institutions are from urban or semi urban areas within the jurisdiction of Barrackpore Sub-Division, North 24- Parganas, West Bengal, India.

©IJRASET: All Rights are Reserved

D. Definition of Variables

1) *Secondary Section:* According to the Indian educational system a student studied in class IX and X are belonging to secondary section. It is a two year academic program after completing the upper primary education (VI-VIII). In this survey analysis students of these two classes are considered as secondary section and are taken as sample.
2) *Higher Secondary Section:* According to the Indian educational system a student studied in class XI and XII are belonging to higher secondary section. It is a two year academic program after completing the secondary education. After completing this program they will enter in the college education. In this survey analysis students of these two classes are considered as higher secondary section and are taken as sample for this research work.

II. METHODOLOGY

In such terrible situation online classes were the only option left for any educational institutes to reconnect the learners with their campus virtually.

The research was carried out with online learning established in different government sponsored educational institutes during this pandemic periods and how much the learners were benefited with such initiatives. The work was also included the problems faced by the learners and to find out the possible solutions.

The SWOC analysis was conducted to understand various strengths, weaknesses, opportunities, and challenges associated with online mode of learning during this critical situation. The research tool used for analyzing the data which amassed from different sources for this study was a content analysis and the research method was descriptive research. We had taken into consideration the qualitative aspects of the research study.

This study was based on the primary data obtained through electronic questionnaires surveying from the learners as well as the data available from the concerned educational institution. Data obtained from different journals, publications, reports, articles, research works, search engines can be treated as secondary data. Also, a systematic review is done in detail for the collected literatures and also through systematic review was done in detail.

A. Variables

Age group, family income, class hours were the independent variables. On the other hand, mobile data usage, monthly data cost, mobile attachment, online hazards, health hazard s were considered as dependent variables to carry out this research work.

B. Population

The population of the study was all the students of secondary, higher secondary sections of two different government sponsored educational institutions under the jurisdiction of Barrackpore Sub-Division, North 24- Parganas, West Bengal, India.

C. Sample

A sample is a statistically significant portion of a given population, not an entire population. Due to time constraint the study was carried out for 120 students from more than 1000 number of students from two government sponsored educational institutions (two higher secondary schools) under the jurisdiction of Barrackpore Sub-Division, North 24- Parganas, West Bengal, India. From each section 20 students were chosen randomly for the sake of symmetry. The sample was collected from the following two government sponsored educational institutions under the same jurisdiction are given below:

1) Dum Dum Ananda Ashrama Sarada Vidyapeeth (DDAASV)
2) Dum Dum Motijheel Girls' High School (H.S.) (DDMGS)

D. Tools of Data Collection

Something which is utilized for collecting data or information for a study is known as the research tool or research instrument. Questionnaires, observation forms, arranging interview schedules are examples of classified research tools. First step in carrying out the research work is to choose a suitable research tool according to the need of the research problem. It is important for a researcher to decide the way he/ she will collect the data to construct a research instrument for this.

In this study, the data was collected from the students by questionnaires using Google form. As the total data collection process was carried out through online mode using Google form only due to this pandemic situation, therefore students gave all information without any physical contact.

E. Research Design

This present study was conducted by survey method whose very nature was to describe the status. After constructing the Google form, it was shared with the respective authority of the said educational institutions. After getting their permission the form was sent to the respective class teacher. Each institute already created a WhatsApp group for continuing their teaching-learning process during this pandemic situation. Therefore, it became easier to share the Google Form among the students through respective class teacher. After completing the questionnaires, the student pressed the submit button and instantly the information was recorded in an excel sheet in proper order for further analysis. The research design in this study had the attribute of both quantitative and qualitative design. The objectives of this were met by statistical analysis, comparative graphs. It was preferred to consider equal amount of sample from each section such that no biasness may come in the concluding part of this research study.

F. Procedure

This form consisted of thirty questions related with their academic, economic and social perspectives. Most of the questions were MCQ type and few questions were narrative in nature. As students did not write their name, roll number etc so that he/ she could not be identified, thus the information filled up by them without fear and hesitation resulting the data was pure and unbiased. Students filled up a Google Form and a set of data were recorded automatically in an excel sheet for all students of all sections from all the mentioned government sponsored educational institutions. Then through systematic choosing process, sample of equal size was considered for each section from the population of huge numbers. Thus the biasness of data could be avoided. Then a detail analysis and appropriate interpretation with these data was carried out and ultimately conclusions were made.

III. RESULT

The data analysis and interpretation was the next part after getting the Google forms from the learners. This data analysis and its interpretation was very important because on the basis of these the conclusions would be made. There were various ways to analysis or interpret a data depending on its nature. Different graphical presentations were used for different kind of data to find out its effect in online teaching-learning process. In this pandemic situation the socio-economic conditions were changed in different ways. So the data analyzed in such a manner that thisother indicators in addition with learning might be reflected in a clear way. For this reason different types of diagrams, graphs, charts (Star diagrams, Double axes graphs, Pie charts) were used.

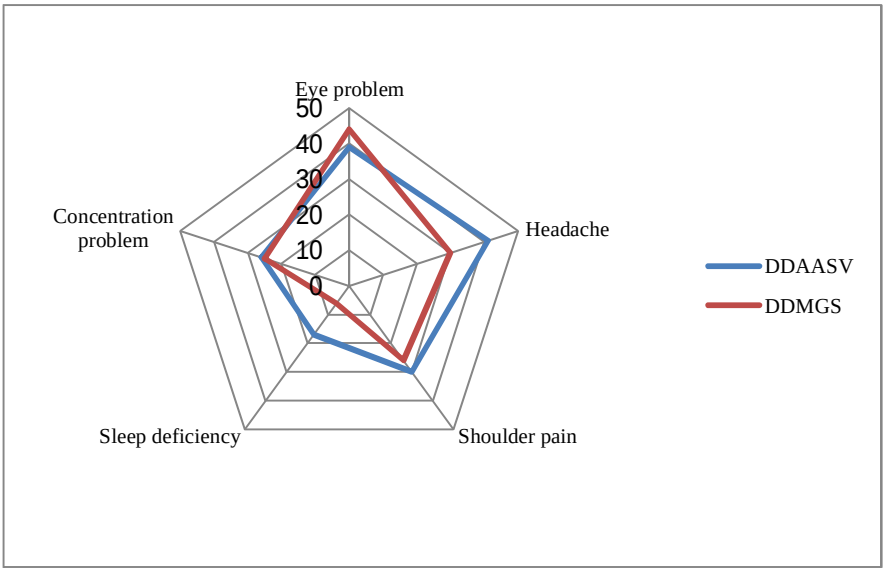


Fig.2 Comparison of different health hazards between two schools

Fig.2 shows the comparison of different health problems result due to online classes for the students of both schools. It is observed from the star diagram that excessive use of electronic gadgets for attending online classes, most of the students are suffering from eye problems and headache which is very much alarming.

It is seen from the Fig. 3 that the students from both the schools are faced mainly the connectivity problem during the online classes. Again, exhausting of data is another very significant problem for the students of both the schools which interrupt their online classes.

Fig.4 shows the bi-variant analysis of data expenditure for continuing online classes for school students with their monthly family income. It is observed from this analysis that correlation coefficient comes out with positive value in this case. It signifies that data expenditure increases as their monthly family income increases. This observation is very important in socio-economic perspectives in this pandemic situation.

Fig.5 shows that mobile attachment time beyond the class hours increases as one moves from upper primary section to higher secondary section for the students of DDAASV school. The same trend is observed for the students of DDMGS school as per the graphical representation in Fig.6.

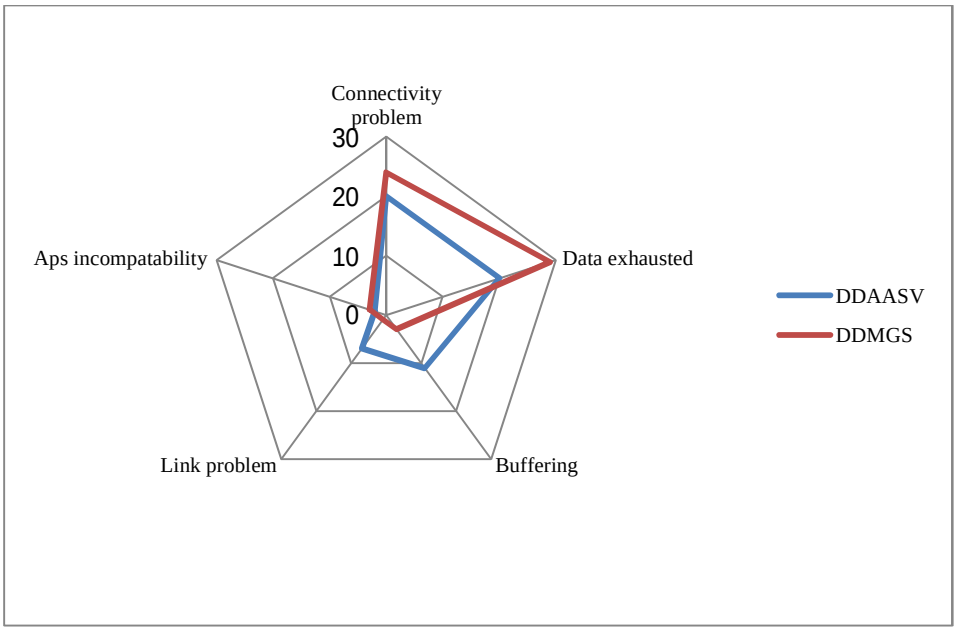


Fig. 3 Comparison of various connection problems between two schools

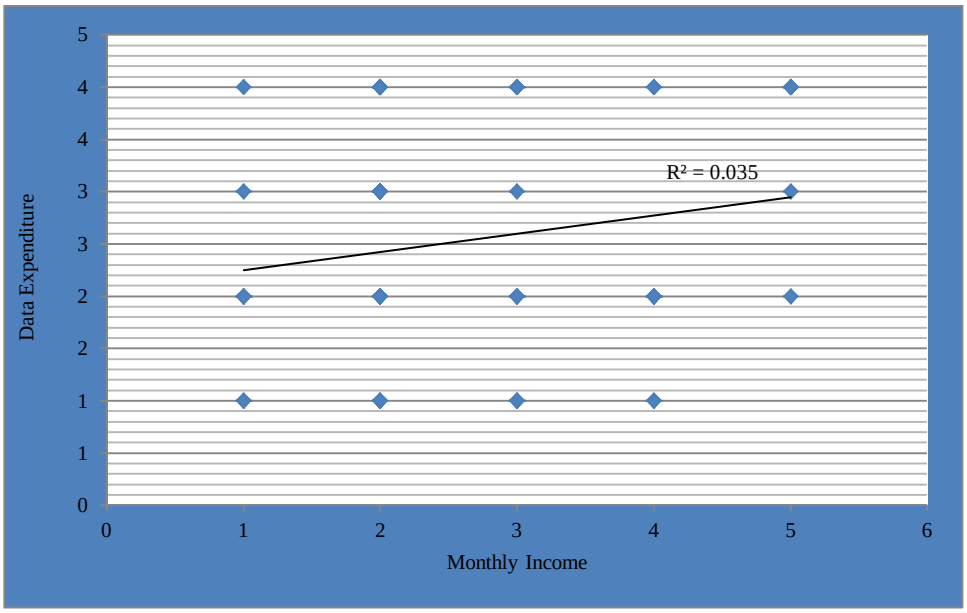


Fig. 4 Variation of data expenditure with monthly income for school students

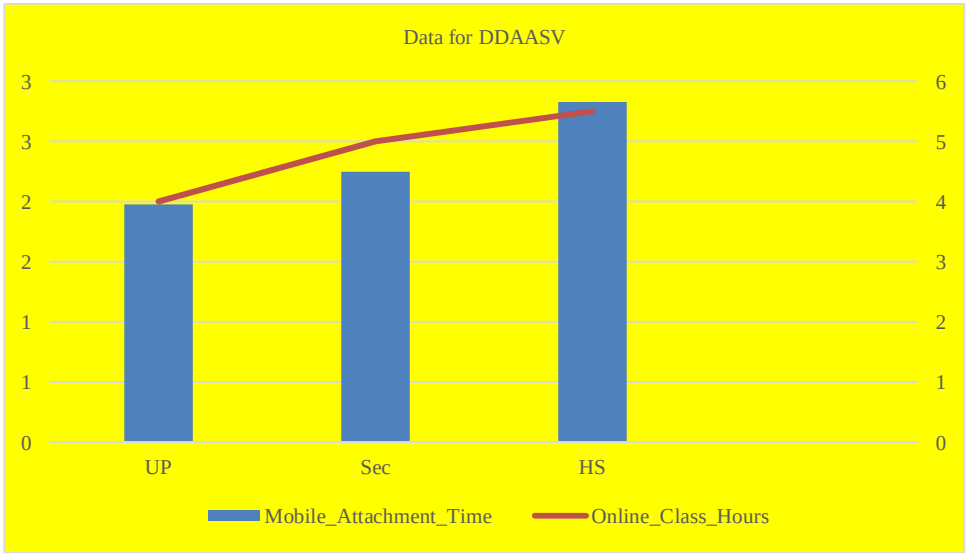


Fig.5. Graph for mobile attachment time and online class hours for DDAASV school

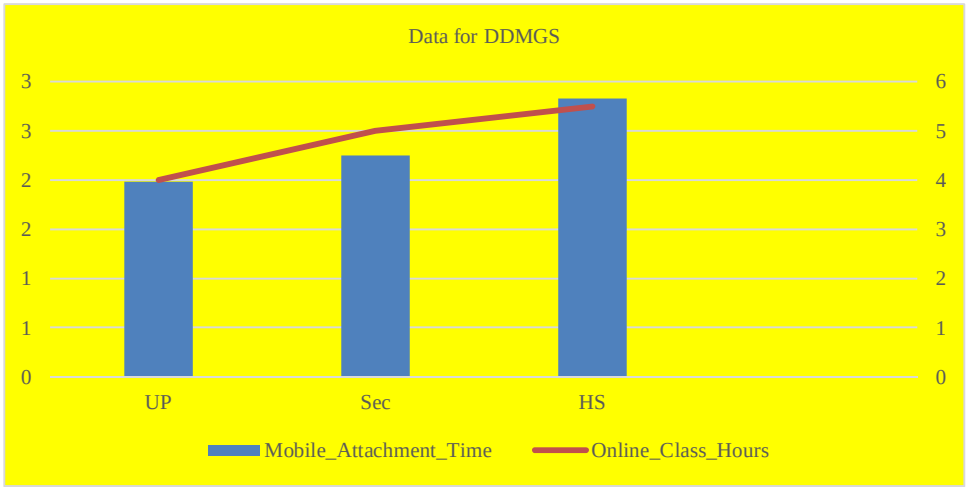


Fig.6. Graph for mobile attachment time and online class hours for DDMGS school

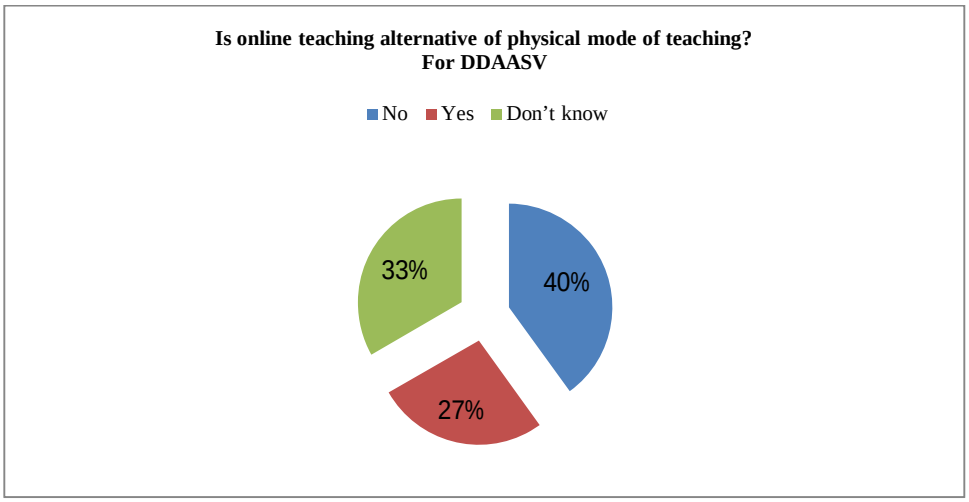


Fig. 7

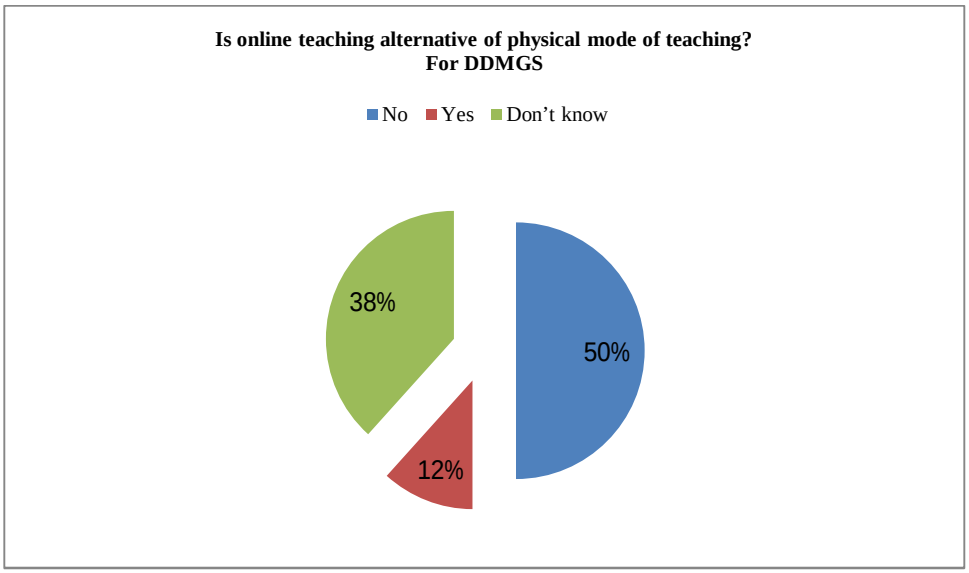


Fig. 8

The above two pie charts (shown in Fig.7. and Fig.8) give the view of the students about the effectiveness of the online teaching in comparison to physical mode teaching. From these above charts it is very much clear that most of the students of these schools think that online teaching is not an alternative of physical mode class room teaching.

IV. CONCLUSION

In this pandemic situation online teaching-learning process was the only option to make connected the learners with the learning environment. Though this process had to be chosen so suddenly in such an unstable socio-economic condition which directly affects the educational system. Not only that the gadgets necessary for this online teaching causes different types of health hazards for the learners of any age which should be brought under our knowledge. Other parameters like data usage, monthly data expenditure, mobile attachment beyond the class hours, connectivity related problems, expenses raised to buy a suitable gadget (eg. Smart phone) related to socio-economic condition should be come under the notice of policy makers. Thus this study was very important at that situation too. Through the outcome of this study the educational policy makers may thought about the solutions or alternative ways to overcome the crisis due to online teaching. It should be remember that education is needed for everyone but not at the cost of learner's health. Again education should not be so expensive as online teaching needs smart gadgets, good quality connectivity so that learners are dropped out from the learning environment. As most of the learners come from poor families for our country, this study had huge importance to build up the clear picture about the effectiveness of this online teaching.

Through this study it was definitely established that during this lockdown period online teaching keeps alive the educational motivation among the students by creating virtual class rooms and developing teacher-student interactions. Again this study gave the idea of alternative education transaction irrespective of geographical locations and time. Again it encourages the idea of hybrid model for knowledge transaction.

Teachers during lockdown period needed to understand their student motivations when teaching online classes. However, it could be difficult to assess student motivations for online learning due to the lack of personal contact between the students and teachers. One way to avoid this is to have the students complete an online assessment form on motivation and also fill up the feedback form for future improvement of online teaching-learning process as well as teacher-student interaction. From the information obtained, a teacher could identify a number of strategies to engage the students and keep them motivated. Most importantly, it should be noted that more technology does not necessarily lead to better learning outcomes. Teachers who taught the students of the study should be interviewed to get feedback in order to evaluate e-learning from a teacher's perspective. The interview questions should focus on evaluating e-learning and the implications for enhancing the quality of learning and teaching through e-learning. As this online learning system can accommodate versatile learners of different age groups, from different locations enhances the informal education system and can make the mission " Equity of education" successful.

The outcomes from this study shows that online teaching-learning is the only alternative to connect the learners with their educational campus virtually.

Otherwise in this pandemic situation when the socio-economic condition became worst, the learners might be dropped out from their educational institutions and were forced to engage them in job to earn. But the health hazards caused due to this online learning and due to excessive expose to the radiation should be discussed in appropriate level with priority basis.

Other burning problem is connectivity very much related to the online teaching-learning. Poor quality signal creates disconnections, interruptions during the online classes. Sometimes for better Apps compatibility high quality costly gadgets are needed. But the learners from poor family back ground are unable to get such device. In this regard it should be mentioned that the Government of West Bengal decided to provide Tab/ Smart phone to all board students for the online learning in this pandemic situation. This unique initiative must enhance the enthusiasm of the students mainly coming from poor and backward back ground. Now Central government should take some positive initiatives so that all learners should get free internet of good quality.

Learners are getting addicted with the gadgets in this online teaching-learning process. Every learners have to be provided this gadget as this is the only device for continuing their learning. After completion of their schedule online classes, they continue with this gadgets for playing games, videos, films, songs etc. which a result destruct their mind. This problem should be addressed in a proper way so that technology causes loss than benefit.

With the increase of family monthly income, the data usage capacity increases. It actually shows that how economy controls the online teaching-learning system. In such economic condition, when peoples were loosing their jobs every moment, when learners were left out from the educational environment and forced to engage in job to run the family, online teaching-learning was going beyond their reach unless government or any competent authority took some effective initiatives.

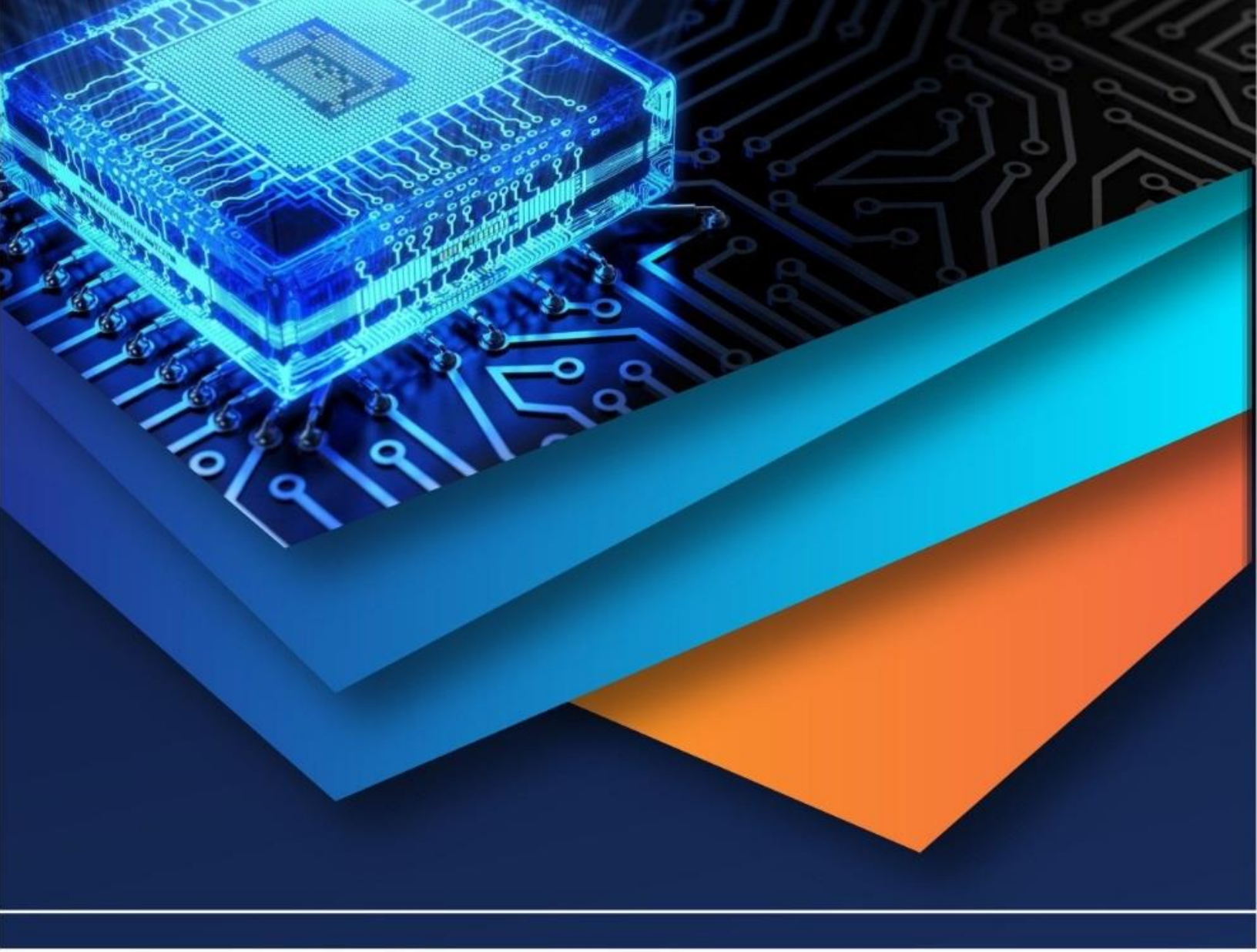
From this study it was observed that the learners from all sections were not accepting the online teaching as the replacement of physical mode class room teaching. Though in present day for running online teaching, roles and attitudes of all the boards, monitoring authorities, educational institutions, teachers and finally the government policies should be sympathetic and cooperative for the learners. Central government through their new education policy tried to introduce blended mode of teaching-learning. The poor economic condition should not be the barrier of getting education for a single learner. This study also gave such cases where students were facing insufficient data which directly related to their poor economic condition. So before implementing the online teaching in future as a part of blending teaching-learning process, the outcome of this study should be keep in mind. Thus for any educational policy maker the findings of this study is of great importance.

V. ACKNOWLEDGMENT

I shall remain grateful tothe Head of the Institute (HOI) of both the schools for giving permission for this survey. AgainI like to thank all the class teachers for their positive initiatives to make it successful.

REFERENCES

[1] Stephanie J. Blackmon and Claire Major, “Student experiences in online courses: A Qualitative Research Synthesis,”The Quarterly Review of Distance Education, ISSN 1528-3518, vol. 13(2), pp. 77–85, 2012
[2] Brittany Gilbert, “Online Learning Revealing the Benefits and Challenges,”Fisher Digital Publication,, vol. 4, pp.1-32,2015.
[3] Tuan Nguyen, “The Effectiveness of Online Learning: Beyond No Significant Difference and Future Horizons,”MERLOT Journal of Online Learning and Teachin, vol. 11, No. 2, pp.309-319, 2015.
[4] M.Kebritchi, A.Lipschuetz., L. Santiague, “ Issues and challenges for teaching successful online courses in higher education,”Journal of Educational Technology Systems, vol. 46(1), pp. 4–29, 2017
[5] Nawar Al-Saadi, “ E-learning and its impact on future generations,” Journal of Information Technology Education: Research, vol.17, pp.187-160, 2017.
[6] V.Singh, A. Thurman, “ How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018),” American Journal of Distance Education, vol. 33(4), 289–306, 2019.
[7] L. Mishra, T. Gupta, A. Shree (2020), “Online teaching-learning in higher education during lockdown period of COVID-19 pandemic,”International Journal of Educational Research Open, Vol. 1,2020.
[8] Soujanya Kaup, Rashmi Jain, SiddharudhaShivalli,Suresh Pandey, Soumya Kaup, “Sustaining academics during COVID-19 pandemic: The role of online teaching-learning,” vol. 68(6): pp. 1220–1221, 2020. doi: 10.4103/ijo.IJO_1241_20
[9] Shivangi Dhawan, “Online Learning: A Panacea in the Time of COVID-19 Crisis,”Research Article, vol. 49, pp.5-22, 2020.
[10] S.Affouneh, S. N. Salha., Z. Khlaif, “Designing quality e-learning environments for emergency remote teaching in corona virus crisis,”Interdisciplinary Journal of Virtual Learning in Medical Sciences, vol. 11(2), pp.1–3, 2020.
[11] G.Basilaia, M. Dgebuadze, M. Kantaria, and G. Chokhonelidze, “Replacing the classic learning form at universities as an immediate response to the COVID-19 virus infection in Georgia,”. International Journal for Research in Applied Science & Engineering Technology, vol. 8(III), 2020
[12] T.Favale, F. Soro, M. Trevisan, I. Drago, M. Mellia, “Campus traffic and e-Learning during COVID-19 pandemic,”Computer Networks, vol. 176, 2020.
[13] E. W. Liguori, C. Winkler, “From offline to online: Challenges and opportunities for entrepreneurship education following the COVID-19 pandemic,” Entrepreneurship Education and Pedagogy. 2020. https://doi.org/10.1177/2515127420916738
[14] A.Martin, “How to optimize online learning in the age of coronavirus (COVID-19): A 5-point guide for educators,”Online article posted at UNSW Newsroom, pp.1-3, 2020.



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)