Problems of Online Education System in South Bengal During the Covid-19 Pandemic: An Appraisal

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Abstract:
Background: At present, the world is under the cruel clutch of Novel Corona virus and was given the designation of a pandemic by the World Health Organization (WHO) on the 11th March 2020. This situation is thus called COVID-19 pandemic. Spread of this virus among people can be controlled by adopting physical distancing for which many nations across the world have undertaken Lockdown strategies by closing down most of the public offices including schools and colleges and shifted towards the strategies of Work from Home and online education. India is also not an exception and it has also started adopting strategies for online education system. However, this new strategy has given rise to a number of problems among teachers and students. An attempt has been made in this paper to analyze the problems of online education among the students and teachers of South Bengal.
Materials and Methods: In order to accomplish the task, primary data has been generated by these researchers through an online questionnaire survey and secondary data was collected from the websites of Health Department, Government of West Bengal and Ministry of Health and Family Welfare, Government of India. All charts and diagrams were prepared using MS Excel and ArcGIS 10.3 software. Major problems of the study area were analysed by adopting weighted score method proposed by Aristisdis K Nicolopaulous.
Results: The study revealed that poor internet connection along with the lack of access to it and link failure has turned out to be the most serious problems and the intensity of the problem affected the students more than the teachers.
Conclusion: In this pandemic situation, the online platform is the only option to pursue the educational system. Although online education is protecting the spread of coronavirus, it has not yet turned out to be highly beneficial as the traditional system of education.
Key words: COVID-19 pandemic, Lockdown, Online Education System, Poor Internet Connection, Link Failure.

I. INTRODUCTION

It is universally accepted that classroom teaching plays the most vital role in the academic pursuits of students as well as the teachers. Face to face interaction between the students and the teachers produces fruitful understanding and learning of the subject. Indian society has been following this strategy since time immemorial. However, the scenario has come to a certain change following the outbreak of COVID-19 pandemic. The schools and colleges now remain closed under the directive of the government in order to prevent the spread of the virus within the community and online education system has been adopted where students and teachers can attend classes by means of different platforms of social media. Considering the present situation of the pandemic which, till now shows no sign of subsidence and due to non-availability of vaccine, there is no question of reopening the educational institutions. Under this situation online education system has become an unavoidable alternative[1]. The technologies and online platforms used for accomplishing the task is new to many teachers and students and is creating many problems as they are not accustomed in their daily use. An attempt has been made here to analyze the problems of online education in South Bengal and suggest recommendations for their solution.

II. MATERIALS AND METHODS

Study Design: This prospective comparative study was carried out on the people of South Bengal through online survey. Telephonic interviews and video conferencing were also conducted from 10th May 2020 to 10th September 2020. The survey was based upon a sample size of 180 persons selected randomly.

Study Location: The entire South Bengal area extending from 21°40'N to 24°48'31"N and 85°49'50"E to 88°59'29"E. has been selected for study. The area is bounded by Malda in the north, Bay of Bengal in the south, Bangladesh in the east and Jharkhand in the west. Duration of study was 10th May 2020 to 10th September 2020.

**Study Duration:** From March 2020 to September 2020.

Sample Size: 180 persons.

Sample size calculation: The total population from which we selected our sample size was considered 50,000,000 considering all the 13 districts of West Bengal. All classes of people with ages above 21 were interviewed through telephonic conversation.

Subjects & selection method: The study population was drawn from all possible classes of people who have to come out almost every day for their work and interact with all types of people in the society..

Procedure methodology: Primary data were generated through an online questionnaire was prepared in Google format. Secondary Data was collected from the websites of Health Department, Government of West Bengal and Ministry of Health and Family Welfare, Government of India. Degree of importance of problems of online education has been judged by using Weighted Score technique suggested by Aristisdis K Nicolopaulous. All charts and maps were prepared using MS Excel and ArcGIS 10.3 software. Finally, the charts and maps have been prepared and interpreted to obtain a logically established result.

Staistical Analysis: Statistical analysis upon Weighted Score Method has been used in this instance, which is a prioritization framework designed to help decide how to prioritize features and other initiatives on the product. With this framework, initiatives are scored according to a set of common criteria on a cost-versus-benefits basis and then ranked by their final scores.
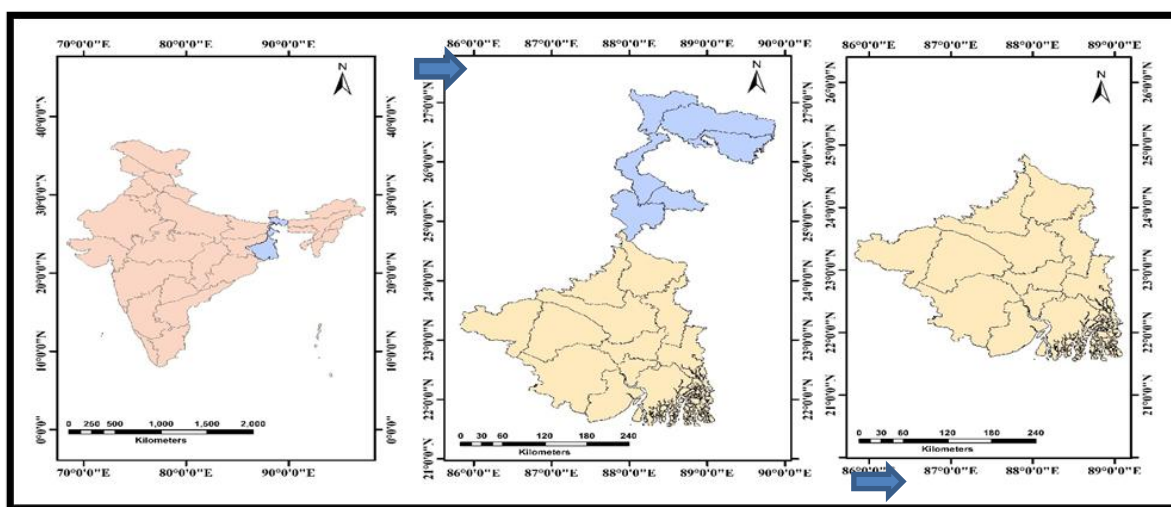
Figure 1: Location of the Study Area

III. RESULT
Scenario of COVID-19 pandemic in South Bengal (Up to 10th September, 2020)

The first COVID-19 case in West Bengal was recorded on the 17th March, 2020[2]. Since then there has been a sharp rise in COVID-19 cases across the state. West Bengal occupies the 7th position in India in terms of total cases. The most affected districts include Kolkata followed by North 24 Parganas. As per the data, available on the 10th September, 2020, the total number of cases reported in West Bengal was 1,93,175[3]. Total number of active cases, recoveries and deaths on the same date was 23,377, 1,66,027 and 3,771 respectively. Total number of samples tested till the 10th September 2020 was 23,30,283. Discharge rate was as high as 85.95% and fatality ratio was 2%.

In the case of South Bengal, the total number of cases till the 10th September was 1,62,638 accounting for about 84.2% of the cases of the entire state[3]. The highest number of total cases was reported from Kolkata (44,957) followed by North 24 Parganas (39,979) and the lowest number of cases was reported from Purulia (1,905) (Fig 2.1). The total number of active cases in South Bengal till the 10th September was 19,855 accounting for 85% of total active case of the entire state. The highest number of active cases was reported from North 24 Parganas (4,671) followed by Kolkata (4,098) and the lowest number of active cases was reported from Birbhum (354) (Fig 2.2). The total number of recoveries in South Bengal till 10th September was 1,39,283 accounting for about 84% of the recoveries of the entire state. The highest number of recoveries was reported from Kolkata (39,426) followed by North 24 Parganas (34,456) and the lowest number of recoveries was

reported from Purulia (1,493) (Fig 2.3) The highest recovery percent of 91% was recorded in Howrah while the lowest 78.37% was recorded in Purulia. The total number of fatalities in South Bengal till the 10th September was 3,500 accounting for about 93% of the fatalities of the entire state. The highest number of deaths was reported from Kolkata (1,433) followed by North 24 Parganas (852) and the lowest number of recoveries were reported from Purulia (6) (Fig 2.4).

Table 1: Scenario of COVID 19 pandemic in South Bengal till the 10th September, 2020

SL NO	DISTRICT	TOTAL CASES	TOTAL DISCHARGED	TOTAL DEATHS	TOTAL ACTIVE CASES
1	Murshidabad	4104	3527	50	527
2	Nadia	5051	4066	55	930
3	Birbhum	2582	2209	19	354
4	Purulia	1905	1493	6	406
5	Bankura	3574	2836	26	712
6	Paschim Medinipur	6659	5261	72	1326
7	Purba Medinipur	8084	6486	83	1515
8	Bardhaman	8452	6710	66	1676
9	Howrah	14726	13408	438	880
10	Hoogly	9447	7916	160	1371
11	North 24 parganas	39979	34456	852	4671
12	South 24 parganas	13118	11489	240	1389
13	Kolkata	44957	39426	1433	4098

(Source: Corona Bulletin, 2020, Health Department, Government of West Bengal)
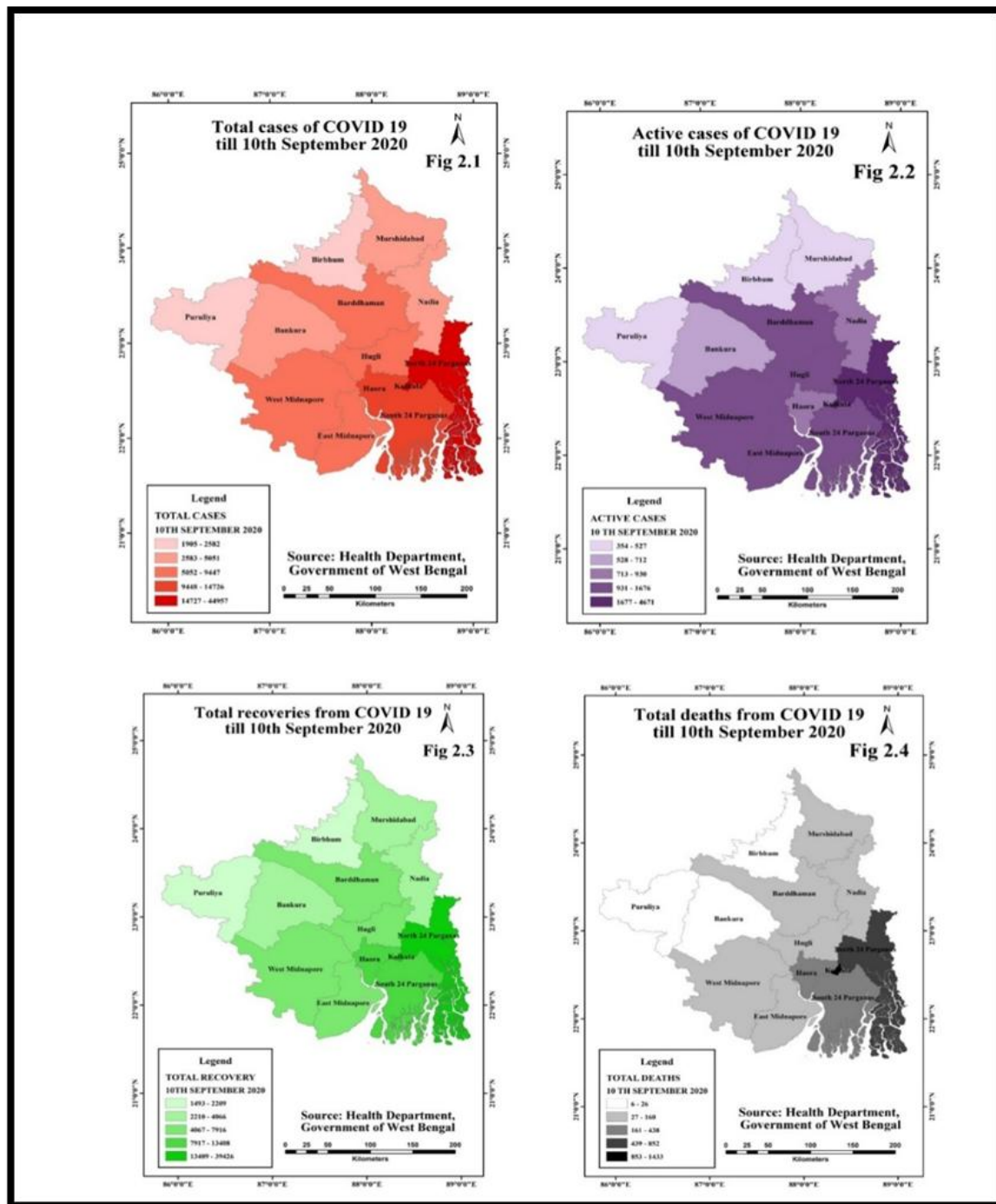
(Source: Corona Bulletin, 2020, Health Department, Government of West Bengal)
Figure 2: Scenario of COVID 19 pandemic in South Bengal till the 10th September, 2020

It is revealed that the pandemic scenario of South Bengal as well as that of the entire state is getting worse day by day. Under this critical situation, the question of opening educational institutions does not arise. So, online mode of education is the only alternative to provide guidance to the students[4].
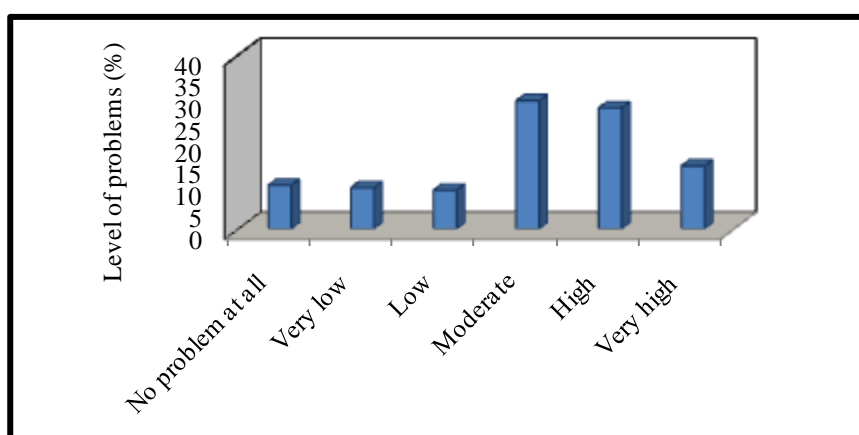
Level of problems faced due to internet connectivity and speed during COVID-19 pandemic: The survey revealed that 14% of respondents have been suffering through very high level of problems regarding internet connectivity and speed, 28% of respondents have been facing high level of internet problems, 29% of respondents are having moderate problems regarding internet connectivity and speed. 8% and 9% have low and very low problems regarding internet connectivity. Remaining 10% of respondents have been stating that they didn't face any problems regarding internet connectivity and speed (Fig. 3). Problems regarding internet

connectivity were triggered during the time of the outbreak of the Amphan Super Cyclone that created havoc in different parts of the state especially South 24 Parganas, North 24 Parganas, East and West Midnapore, Kolkata, Howrah, Hugli, Nadia and parts of Burdwan. The communication system of these districts especially the southern part of West Bengal was devastated due to this cyclonic storm and as a result the telecommunication system of all those districts were damaged which created a disturbance in the internet connectivity and thus affected the online education system. Besides, technical fallacies also turned out to be an important reason for slow internet connectivity and network problem[5].

Table 2: Problems due to internet connectivity and speed

No problem at all	Very low	Low	Moderate	High	Very high
18	17	16	53	50	26
No problem at all (%)	Very low (%)	Low (%)	Moderate (%)	High (%)	Very high (%)
10	9.444444444	8.888888889	29.44444444	27.77777778	14.44444444

(Source: Primary Survey)

(Source: Primary Survey)

Figure 3: Problems due to internet connectivity and speed

Level of satisfaction regarding the completion of the syllabus through online modes of teaching:

For every student and teacher, completion of syllabus is considered very important. Most of the students and teachers emphasize in completion of the syllabus. However, the outbreak of the COVID-19 pandemic and lockdown created an obstacle in fulfilling this goal both from the part of the teacher and the student.

Through the survey, it has been revealed that 6% of people remain unsatisfied, 5% are belonging to the satisfaction level of very low, 19% have satisfaction level of low, 37% belong to moderate level of satisfaction, 24% have high satisfaction level and 9% of people are fully satisfied about the completion of their syllabus which has been covered through these online modes of teaching (Fig 4). Many of the teaching faculties are not used to these online modes of education system and are not highly accustomed in using the different online teaching tools like Google Meet, Cisco Webex, Skype, Zoom etc[6].

Students and teachers who belong to the domain of practical based subjects faced serious problems in taking practical classes as in such subjects there has to be a face to face interaction between the teacher and the student for clear understanding of the principles and approaches. For practical subjects like Geography, Physics, Chemistry, Botany, Zoology, Engineering and Medical, laboratory work, field study and use of different instruments are involved and these need hand to hand training and these activities could not be done owing to the closure of schools and colleges due to the outbreak of the Pandemic[7,8].

Table 3: Level of satisfaction regarding the syllabus completion through the online mode of teaching

Unsatisfied	Satisfaction level very low	Satisfaction level low	Satisfaction level moderate	Satisfaction level high	Satisfaction level very high
11	10	34	66	43	16
Unsatisfied (%)	Satisfaction level very low (%)	Satisfaction level low (%)	Satisfaction level moderate (%)	Satisfaction level high (%)	Satisfaction level very high (%)
6.111111111	5.555555556	18.88888889	36.66666667	23.88888889	8.888888889

(Source: Primary Survey)

(Source: Primary Survey)

Figure 4: Level of satisfaction regarding the syllabus completion through the online mode of teaching
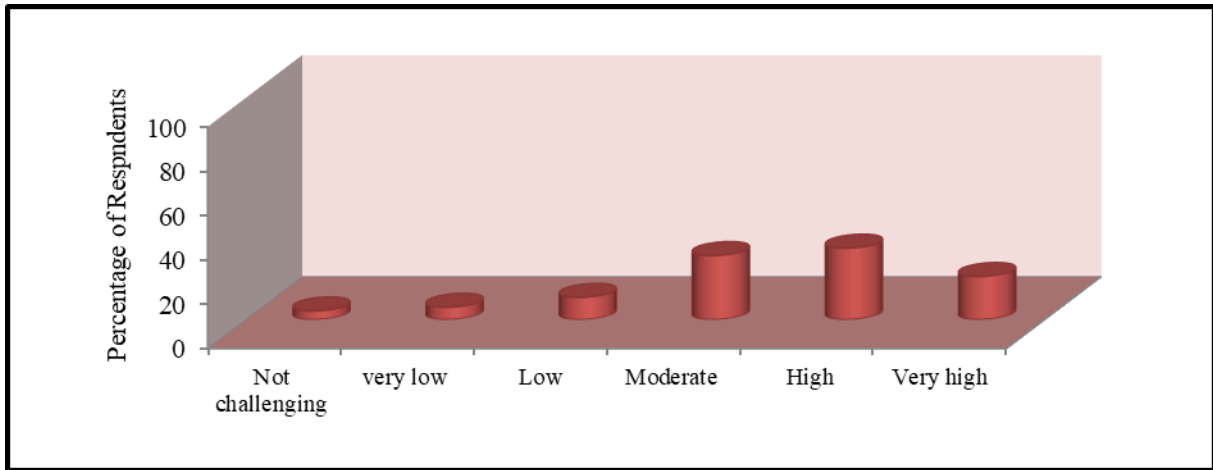
Challenges for the respondents to learn or teach a new topic without face to face contact:

Successful understanding and teaching become fruitful through a strong and informative interactive session between the teacher and the student. About 4% of people surveyed said that it is not yet a challenging matter for them to teach or learn a new topic without face to face contact. 6% said that it is a low level of challenging matter for them to teach or learn a new topic without face to face contact. 10% stated that it is a low level of challenging matter. 29% stated that this is a moderate challenging issue. 32% said that learn or teach a new topic on this online platform is such a high challenging matter. 19% stated that this is really very high challenging matter (Fig 5). This could vary from one people to other people. Every human being is individual and everybody has been thinking according to their own perspective of life which is regulated by the situations they belong to. Besides, students also have different levels of intelligence and different levels of understanding. Teachers who were surveyed opined that their students are irregular in these pandemic days. Many teachers also opined that they are not used to with this online mode of education, and so they faced difficulties in taking online classes. Some school teachers also stated that their respective institutions do not have infrastructure for taking online classes. On the other hand, from a student's point of view, due to less interaction with teachers and classmates, they found it difficult to understand a particular topic properly. It was also revealed through the survey that some students (especially male) had to get involved in some activities to supplement their family income. Learning a practical based subject turned out to be very much difficult in this online mode of education. The communication gap between the teachers and the students in this pandemic situation became the most important reason.

Table 4: Challenges faced by the respondents in teaching or learning a new topic without face to face interaction

Not challenging	very low	Low	Moderate	High	Very high
7	10	18	52	58	35
Not challenging (%)	very low (%)	Low (%)	Moderate (%)	High 9%)	Very high (%)
3.888888889	5.555555556	10	28.88888889	32.22222222	19.44444444

(Source: Primary Survey)

(Source: Primary Survey)

Figure 5: Challenges faced by the respondents in teaching or learning a new topic without face to face interaction
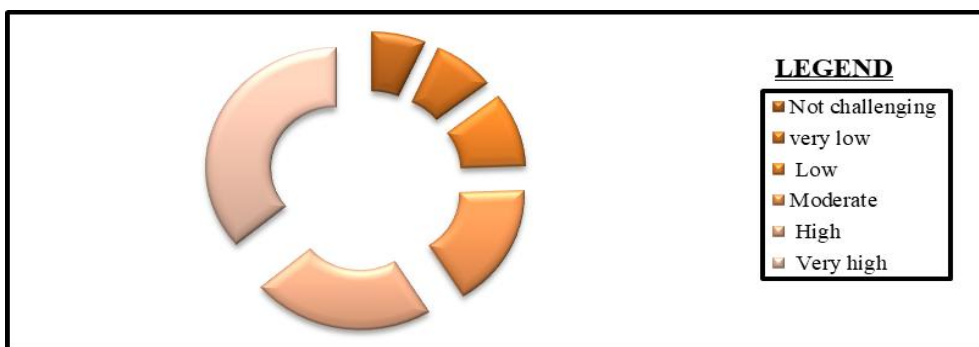
Challenges for the respondents to learn or teach practical based subject in this online mode   education:

Practical-based subjects always involve the use of different instruments, field surveys, laboratory works etc. For proper understanding of a practical assignment, it is very necessary for a student to understand the steps and principles properly. Without proper understanding, the practical assignments will bear no result. This task can be accomplished through hand to hand training and face to face interaction between the teacher and the student and it is these two situations that faced a significant setback during this pandemic situation. Through the survey, it has been revealed that 6.67% of respondents said that it was not yet a challenging matter to teach or learn practical based subject in this online mode of education. 7.78% said that it was very low challenging factor, 10% stated that it was not a big issue, low level challenging matter this is. 16.67% were of the opinion that it was moderately a challenging matter, 58.89% said that it was high to very high level of challenging matter (Fig 6). The dominance of respondents in the category of high to very high challenge clearly states that field survey, laboratory experiments, surveying cannot be done through this online mode of education and it needs hand to hand training and face to face interaction between the teacher and the student[5].

Table 5: Challenges for the respondents to learn or teach practical based subject in this online mode of education

Not challenging	very low	Low	Moderate	High	Very high
12	14	18	30	41	65
Not challenging (%)	very low (%)	Low (%)	Moderate (%)	High (%)	Very high (%)
6.666666667	7.777777778	10	16.66666667	22.77777778	36.11111111

(Source: Primary Survey)

(Source: Primary Survey)

Figure 6: Challenges for the respondents to learn or teach practical based subject in this online mode of education
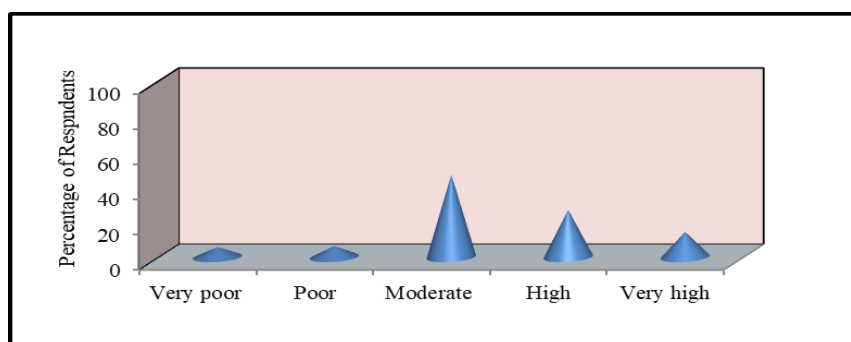
Level of attendance of respondents during online classes in this pandemic situation:

According to the graphical representation (Fig 7), it has been shown that the attendance of 12% students is low to very low, 47% is moderate, 27% is high and 14% is very high. Very low attendance of the students could be due to poor network connectivity, insufficient mobile data availability, problems of internet recharge, issues related to Smartphone and computer, family work load, power cut at their home etc. Because of this pandemic situation, the people who belong to the containment zones had to go through many difficulties during lockdown days. In the containment zones, the local mobile recharge centers and most of the shops were also closed due to the fears of Coronavirus. The outbreak of the Amphan cyclone also raised the intensity of the problem. People who live in the areas that were severely affected by the super cyclone *Amphan* faced telecommunication problems. There was power cut in the cyclone affected areas for a long time period. The internet connectivity also suffered a severe setback as telephone towers were totally destroyed by the cyclone. A considerable number of students through the survey opined that they could not attend online classes as they did not have charge in their mobile phones due to power cut for long time due to the cyclone and problem of network connectivity. Students and teachers having problems like migraines, high power in eyes, spondylitis often face problem sitting in front of their computers and mobile phones for a long time. They suffer from headaches and visual problems in doing so and often face problem in attending classes. Another importance of low attendance is that many students who belong to the lower- and middle-income group had to go out to do some work to supplement their family incomes. Through the survey, it has also been found that some students had to go out to sell vegetables to support their families as their fathers have lost their jobs owing to the lockdown. This problem was acute in case of students belonging to the rural areas of the study area. All those matters have highly affected the attendance of students in classes through online education system.

Table 6: Level of attendance of respondents during online classes in this pandemic situation

Very poor	Poor	Moderate	High	Very high
9	10	75	43	23
Very poor (%)	Poor (%)	Moderate (%)	High (%)	Very high (%)
5.625	6.25	46.875	26.875	14.375

(Source: Primary Survey)

(Source: Primary Survey)

Figure 7: Level of attendance of respondents during online classes in this pandemic situation

Problems regarding provision of good quality of Study Material for the students:

The success of online education system also lies in the accessibility of good quality of study material which is of great help not only for the students but also for the teachers[4]. The survey revealed that about 57% of the respondents, including both teachers and students, were partly satisfied regarding the availability of the study material, 25% fully satisfied with the availability of the online study material while 18% were not at all satisfied regarding the availability of the study material (Fig 8). Slow internet connectivity and problems of mobile internet services were considered to be highly responsible for such lack of availability of study materials. This problem was faced both by the students and teachers which created a communication gap and also attributed to the problem of availability of the study material[5]. Many teachers and students are of the opinion that they often came across many books and study materials in the internet which were too large in size to be downloaded and also took lot of time to get downloaded due to slow internet speed. Besides, many teachers have stated that they also faced problem in providing their students with good quality of study material due close down of college libraries and departmental libraries under the situation of COVID-19 pandemic. Students have also stated that they are facing problems in preparation of notes for their exams due to lack of accessibility of books present in their respective schools and colleges and departmental libraries. Students have

also complained that they also faced lack of supply of their preferred books as the book stalls were closed and supply of books through online modes like Amazon, Snap deal etc. were also not available during the lockdown. The problem turned out to be more severe for students and teachers residing in the semi-urban and rural areas of the study area.

Table 7: Problems regarding provision of good quality of Study Material for the students

Yes	No	Partly
45	33	102
Yes (%)	No (%)	Partly (%)
25	18.33333333	56.66666667

(Source: Primary Survey)
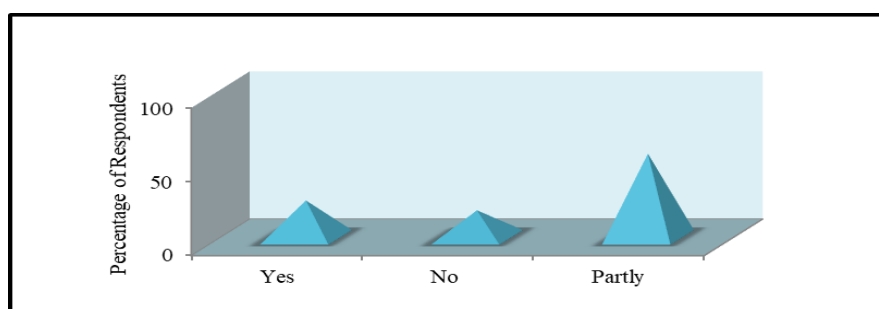
(Source: Primary Survey)

Figure 8: Problems regarding provision of good quality of Study Material for the students
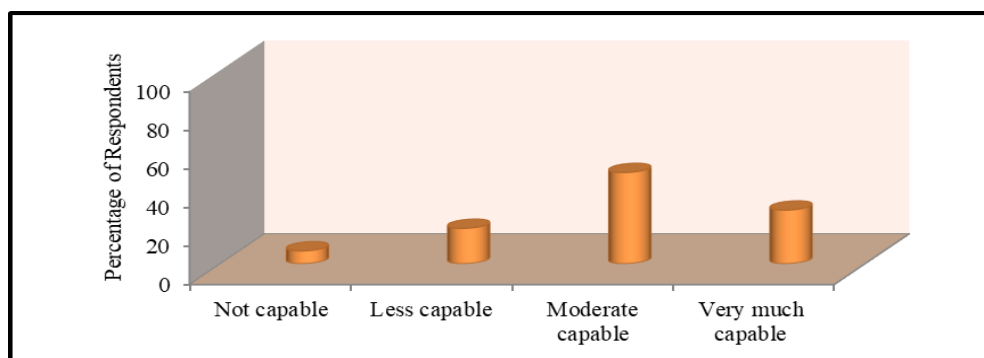
Capability of the respondents to support the facilities of online education:

One of the important aspects that need to be highlighted in this regard is capability to avail facilities of online education system. Online education system needs the presence of equipment like laptop or desktop computers or android mobile phones equipped with provision of high internet facilities. But the lockdown during the COVID-19 pandemic have severely affected the economic condition of the people. Many people who work in private sectors have lost their jobs. People who are running businesses have to incur severe losses due to long period of shut down of their businesses and thus they faced problems in providing their children with facility for online education. Many college students who belong to the low-income families stated that their fathers have become unemployed and are sitting idle at home as they are engaged in different private sector jobs. The study revealed that about 47% of the respondents are moderately capable of providing facilities of online education and 28% of the respondents are highly capable of availing online education system (Fig 9). These include respondents who are either engaged with Government services or high posts of private organizations. About 18% and 7% of respondents are less capable and not at all capable of availing facilities of online education system (Fig 9). This section of respondents includes people who are engaged with private sectors and have lost their jobs or are running their personal business and have incurred losses owing to the lockdown during COVID-19 pandemic.

Table 8: Capability of the respondents to support the facilities of online education

Not capable	Less capable	Moderate capable	Very much capable
12	33	85	50
Not capable (%)	Less capable (%)	Moderate capable (%)	Very much capable (%)
6.666666667	18.33333333	47.22222222	27.77777778

(Source: Primary Survey)

(Source: Primary Survey)

Figure 9: Capability of the respondents to support the facilities of online education
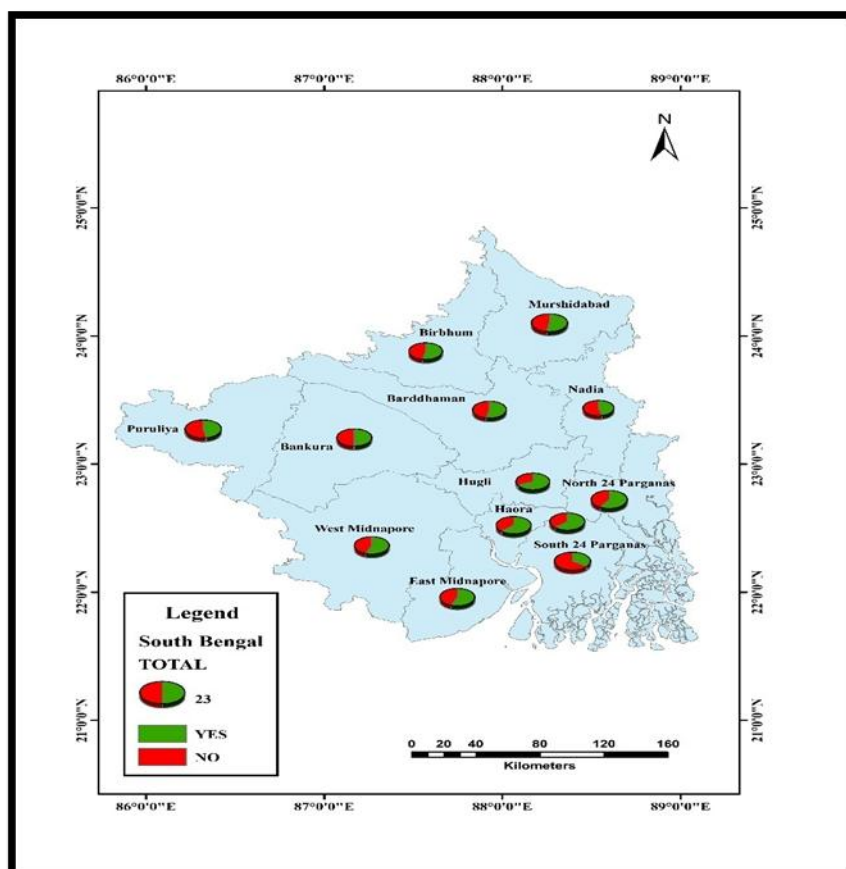
Support for online education across the Study Area:

An attempt has been made to understand the attitude of the people whether they support this online mode of education in this pandemic scenario or not. The study revealed that the persons supporting the online education are quite high compared to the number of people who are not supporting this system. Out of 180 respondents, 98 (54%) supported this system of education while rest 82 (46%) did not. The two districts which are highly affected by the pandemic are Kolkata and North 24 Parganas, and in these districts number of respondents supporting online education is more than that of respondents, who are against it (Fig 10). Districts of South 24 Parganas, Nadia and Purulia have registered more respondents who are against this system. Other districts have revealed almost a balanced condition. It is expected that once the schools and colleges start taking classes online on a regular basis, the support base for online education will undergo a change.

Table .9: Support for online education in the pandemic scenario

DISTRICT	YES	NO
North 24 Parganas	9	6
Howrah	9	5
Hooghly	9	4
Kolkata	9	5
South 24 Parganas	5	10
Murshidabad	8	7
Nadia	5	6
Bardhaman	7	6
East Medinipur	8	6
West Medinipur	8	6
Bankura	7	7
Birbhum	7	6
Purulia	7	8
TOTAL	98	82

(Source: Primary Survey)

Figure 10: Support for online education in the pandemic scenario
Discussion

Analysis of problems of online education system in the Pandemic scenario through Weighted Score Technique:
From the survey conducted and through telephonic interactions and perception, some major problems of online education in this pandemic scenario have been identified and weighted score was assigned to them on the basis of the number of respondents for a specific problem.

1)   Problem of internet connectivity and mobile link failures: This is the most important problem that most of the respondents as the students and teachers have been facing during this pandemic situation. A large number of students do not have access to the high-speed internet facilities like Wi-Fi at home. Even if they have mobile net packages, it is not sufficient for fulfilling their needs for attending or conducting classes from home. Some students have stated that they often had to leave classes due to expiry of their net packages. Teachers also stated that they had to face problem in giving classes due to frequent disturbances and slow net connectivity. Downloading of study materials of large size from the internet also became a serious drawback for both the students and the teachers. This problem has become particularly aggravated following the occurrence of Amphan cyclonic storm which hit South Bengal severely in April 2020. The areas affected by Amphan remain disconnected of internet connection for more than 1 week. Teachers and students are of the opinion that even having internet connection the service has become very slow and online classes with such slow connection becomes almost impossible. This problem is even more acute in extreme and remote rural areas of the state. Considering all these aspects, this problem has been given the highest weighted score of 154.28 (Fig 11).

2)   Problem regarding completion of studies according to the syllabus: Teachers and students have faced this problem in this pandemic situation. Owing to the communication gap due to lockdown for COVID-19 pandemic, there was no scope of having face to face interaction of the students and the teachers of schools and colleges. As a result, teachers often found it difficult to complete the syllabus. Although teachers and students have conducted classes in online mode through different platforms like Cisco WebEx, Google Meet, Zoom, Skype etc. there was the absence of that classroom ambience which the teachers and students enjoy the comprehensive method. In spite of many obstacles, teachers have tried their level best to provide students with study materials or uploading lectures in the YouTube or institution or departmental e-mail ids or WhatsApp or

Telegram groups. Students can easily download this study material and can study at home. Even study materials in the form of Word documents, PowerPoint presentations and PDF were also uploaded by the teachers for their students. Students themselves have also downloaded study material from the net and have shared among themselves. Besides, schools, colleges and Universities have also conducted numerous webinars which also helped both the teachers and students for completion of syllabus. After the enforcement of Unlock 1, students and teachers have started purchasing books through e-commerce services and have shared study materials from those books. Considering all these aspects, this problem has been given a weighted score of 90.55 (Fig 11).

3)   Problem of learning a new topic: From the perspective of the student, this problem has become a serious issue during this lockdown owing to pandemic. Although teachers and students have conducted classes in online mode through different platforms like Cisco WebEx, Google Meet, Zoom, Skype etc. there was the absence of that classroom ambience which the teachers and students enjoy at their respective institutions. Clarification of doubts from the teachers by the students became a serious problem. Students and teachers often faced problem in understanding their voices in the online teaching platforms due to poor voice quality and internet connection problems (Fatma, 2013). This problem became acute in learning practical-based subjects which involves laboratory work, use of different instruments and surveying. These tasks can be learnt properly only through proper hand to hand training and field work experience under the supervision of the teacher (Britt, 2006). This activity was not possible under this pandemic scenario. This problem has been assigned a weighted score of 98.15 (Fig 11).

4)   Time Management Problems: Time management problem is one of the major issues faced by the students and teachers. In this lockdown period, many students are engaged in domestic works. Class timings often coincide with the time when students are engaged in some other activities especially female students who have to take a lot of responsibilities at home. Schools are also taking classes online for the students of primary section. A number of parent respondents who are at the same time informed that they have to spend a lot of time behind their small child as the child has to attend online classes and as parents they have to sit all along with their children and look after the technical issues such as connecting the net in phone or computer, signing in the mail, joining the meeting etc. (Basilaia and Kvavadze, 2020). As a result, they are facing problems in their respective work fields as the laptop or phone is often running out of charge. In simple words, when the teacher is conducting classes, all students are not available. Thus, there is a time lag between the timing of the teacher and the student. Taking this problem into account all the colleges and schools are assigning class timings according to the routine that the students and teachers used to follow in the Pre-COVID scenario. Some institutions have also started their own YouTube channels and the teachers are uploading tutorial videos along with links for downloading the study material in the channel. As a result, students can have easy and all-time access to all these resources. They can watch the video tutorial and download the associated study material at their convenient times. Considering all these aspects, the problem has been assigned a weighted score of 72.73 (Fig 11).

5)   Incapability to avail equipment for online education: For proper conduction of online classes, easy availability of accessories that are used in online education is necessary. It includes android phones, laptops, tabs, desktop computers Wi-Fi, Dongle etc. However, accessibility to all these instruments is not easy for people belonging to middle and lower sections of the economy. People who run their personal business or are engaged in some private sectors have faced severe economic crisis due to total shut down of their respective companies. Some families have undergone economic crisis to such an extent that fulfillment of basic needs became their primary concern. Some students belonging to the lower section of the economy and residing in the rural and semi urban areas have also started selling vegetables, delivering newspapers and milk etc. for supplementing their family income. However, the problem was not so severe in case of Government employees or people who occupy top positions in Private companies. To those people who had to struggle for existence owing to economic crisis in the pandemic situation, spending money for availing equipment for online education is a means of luxury. The problem was acute in case of students especially those who reside in the rural areas of the state and took a serious turn after the occurrence of Amphan in the middle of the Pandemic. Considering all these aspects, this problem has been given a weighted score of 119.28 (Fig 11).

6)   Lack of availability of good quality of study material: Owing to the sudden closure of the educational institutions due to the imposition of lockdown to control the COVID-19 pandemic, many teachers and students have faced the problem of lack of availability of good quality of study material. As the colleges were closed, the libraries both central as well as departmental were also closed. Many college students informed that they rely on books and articles that are available in their college libraries as the source of study material. They are currently not having those library access facilities. Similarly, teachers also stated that in absence of books which they can get from college libraries, they have also faced problems in providing their students with quality study material. However, both the teachers and students have stated that this problem did not affect them much as they have accessed the internet for the respective study material. But they had to face problem when the internet speed was slow. Some students have stated that this was not at all a problem for them as they have a good collection

of books of their respective subjects at home. Besides, many students have got notes and study material from their private tutors and coaching centers by means of email. Many senior and experienced college and school teachers have prepared notes and study materials and have shared them in social media so that a large number of students all over the state can have access to it. This problem was very short lived and just like the other problems it was quite severe in case of students who belong to the lower income group. Considering all these factors, this problem has been given a weighted score of 63.61 (Fig 11).
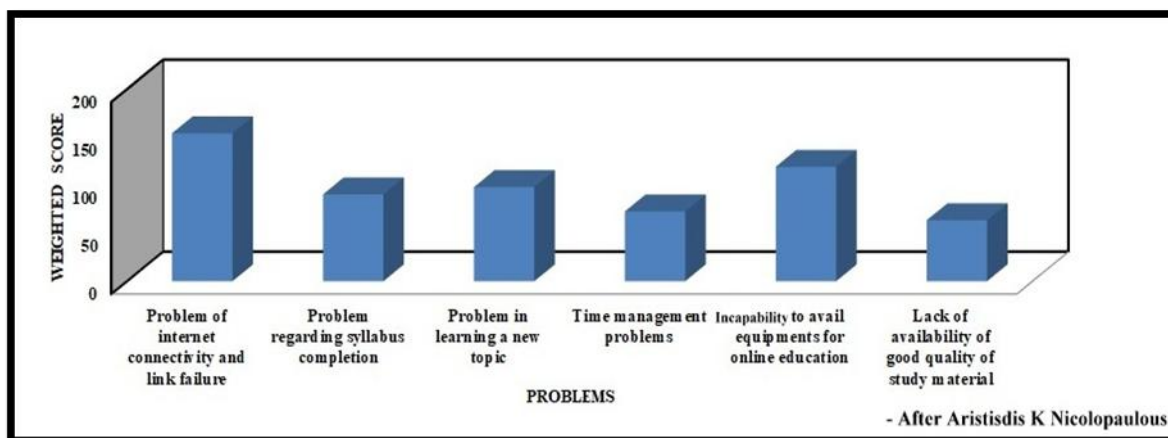
(Source: Primary Survey)

Figure 11: Weighted Score analysis of problems of online education in South Bengal

IV. SUGGESTIONS AND RECOMMENDATIONS:

As we are under the grip of a pandemic situation and yet have no answer after how long the schools and colleges are going to reopen, some strategies have to be taken in order to solve the above-mentioned problems. If problems related online education system is not looked into properly, the education system of the study area may face a serious setback.

1.   There is an urgent need to solve the problems of slow internet connectivity through up gradation of the telecommunication system (Swan, 2017). Internet as well as mobile companies can start some more suitable packages with high speed internet facilities.

2.   Telecommunication system in the remote areas of the villages of the study area has to be upgraded with special emphasis on the areas affected by Amphan.

3.   Schools and colleges under the assistance of the Government should take steps for starting Online Digital Library where books and study material of all the subjects will be available and can be easily downloaded by the teachers and students (Swan, 2017).

4.   Government can start for special online educational packages for poor students. In collaboration with the mobile companies, the Government can start special educational internet packages for the poor students.

5.   Educational help lines for both college and school students can be started where students can ask questions to the teachers and can clarify their doubts. This has to be done on a regular basis and media should also come forward to bring about success of the program.

6.   Educational institutions have to prepare new syllabus and routine so that there is no time management problem for the teachers and the students.

V. CONCLUSION

Since the situation the nation is currently undergoing is entirely unusual, time is needed to get adjusted to the new system of education. In spite of many challenges, the Central as well as the state Governments are trying their level best to solve the problems related to online education system. Although online education is protecting the spread of COVID-19, it has not yet turned out to be highly beneficial as the traditional system of education. When the world will come out of this situation and educational institutions will reopen, they have to take into account the health issues while designing their new curriculum. It is expected that Government will pay emphasis in the up gradation of technological infrastructure in the field of education and then only the problems will be taken care of and will ensure a reasonably bright future for the students who are considered as the pillars of future India.

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