Online Education to the School Students of Kerala during Covid-19 Epidemic Period

Harish Babu

Assistant Librarian, Medical Library, Malabar Cancer Centre, Thalassery, Kerala, India &
Research Scholar, Mahatma Gandhi University, Kottayam, Kerala, India
E-mail: harishpanchami@gmail.com

Abstract - **To address the school closure triggered by the Covid-19 outbreak, Kerala, one of the states in India, began online classes for the school students under the public education system. The study addressed the question whether the schools under the public education system in Kerala have the facilities to shift the conventional classroom teaching to the online class. And also examined how far the online classes in Kerala contented with the John Cable and Clara Cheung's eight principles of effective online teaching. Findings show that the online classes through the television channel fail to comply with the eight principles of effective online classes. Instead of asynchronous teaching through the television channel, the government needs to take initiative to impart interactive classes. The government should try to use the possibilities of a learning management system that will help to improve the teacher - student interactions.**
Keywords: **Online Learning, Distance Learning, Covid-19, School Education, Victers Channel, KITE, Eight Principles of Online Teaching**

I. INTRODUCTION

The terms distance education, distance learning, e-learning, and online learning are interchangeably used to denote the process of teaching learning activities where the learners and instructors are separated by time and/or distance. It is essentially a way of delivering education and instruction to learners who are not physically present in a conventional classroom. Institutions, teachers and learners communicate primarily via electronic media like telephone, interactive radio counseling, teleconferencing, video conferencing, chat sessions, email, and website (UGC, 2020). The outbreak of the Covid-19 pandemic had a huge effect on the conventional classroom oriented schooling. The school closures imposed on the students and teachers to stay at home thus, throughout the world, educators and authorities are trying to provide online education to school children.

Kerala, a state located in the southwest region of India had reported the first case of Covid-19 in India on January 30th, 2020. Since then the Covid-19 cases progressively increased in the country. And on March 16th the government of India announced the nationwide closure of educational institutions. It was the last term of the academic year and schools were in the process of the annual examination. Hence, apart from the uncertainty in the examinations of secondary and higher secondary pupils, there was not much

hesitation in the school closure at that time. The government of Kerala started online classes to the school going children since 2020 June. Due to the second wave of the pandemic the government has forced to continue the online model of schooling in 2021 academic year also.

This study aims to address the question whether the schools under the public education system in Kerala have the facilities to shift the conventional classroom teaching to the online class. And also an attempt is made to examine how far the online classes in Kerala contented with the John Cable and Clara Cheung's eight principles of effective online teaching. Primary data were collected from the official website of the General Education Department, Kerala. Besides, the investigator has first-hand knowledge about the schools in Kerala which he gathered at the time of his visits in the schools just before the Covid-19 outbreak as part of his Doctoral research.

II. REVIEW OF RELATED LITERATURE

A study conducted in Georgia reflects the capacities of the country and its people in the schools to shift its traditional education system to the online form of distance learning (Basilaia and Kvavadze, 2020). They conducted a case study in a school that has 950 students and used Google Meet for their online classes. The study observed that the quick transition to the online platform of the school was successful.

Naciri, Baba, Achbani & Kharbach, A. (2020) reviewed the recent literature related to remote teaching strategies during Covid-19 and presented their conclusion. The study pointed out that learning with the aid of mobile phones helps to study any constraints in time and place.

Based on the published documents, reports and news commentaries Dawadi, Giri and Simkhada (2020) studied the impact of Covid-19 on the Nepal educational system, laying special emphasis on school education. The findings suggested that the pandemic made serious impacts on student's learning and well-being, and that it expanded the gaps between pupils in their access to quality education. Besides, due to the improper implementation strategies and inability to ICT and Education policies, Foti (2020) tried to

explore perceptions, possibilities, and limitations regarding the implementation of distance learning in kindergarten schools in Athens. A quantitative study was carried out by survey method. Questionnaire was used as the research tool and random sampling method used for the selection of samples. In her study she described the main objectives and conditions for distance education followed by her research results. The teachers used the asynchronous form of distance learning which was apprised by them as very useful in the current situation.

Dwidienawati, *et al.,* (2020) examined the factors that affect satisfaction and success in e-learning for respondents who are compelled to enter e-learning due to the covid-19 pandemic. A descriptive quantitative study was conducted using a structured questionnaire as the instrument. The University Students at 4 campuses in Greater Jakarta, Indonesia were asked to fill the questionnaire. The study found that perceived ease of use (PEOU) and quality of service have significant positive impacts on e-learning satisfaction but not goal orientation and quality of information. Online learning will help the students come out of the school closure difficulties. Many schools, however, do not have adequate resources to offer students learning opportunities, and not all children have internet access at home. The schools that choose to do online learning will probably face these types of challenges. Schools will mitigate these challenges by following the guidelines of reputable organizations such as the International Society for Technology in Education (Morgan, 2020).

Mondol and Mohiuddin (2020) conducted a state of the art study of online classes in Green University of Bangladesh. The study adopted both quantitative and qualitative approaches. For the quantitative part, they have collected data through questionnaires and interviews whereas for the qualitative part, they have conducted Focus Group Discussion (FGD). The study illustrated the teacher's current state of mind as well as the students, potentials of the online classes and the need for some facilities and orientation to be assured.

Nambiar (2020) conducted a study among the students and teachers from the colleges and university in Bangalore city to know their perceptions and concerns about the online classes. Online survey method was used for data collection purposes. The study observed that the success of the online class depended on quality and timely interaction between the teachers and the students, technical support availability, structured online class modules, and modifications to accommodate conduction of practical classes.

III. EIGHT PRINCIPLES OF ONLINE TEACHING

Arthur W. Chickering and Zelda F. Gamson (1987) identified Seven Principles that can help improve undergraduate education. John Cable and Clara Cheung (2017) recited the seven principles and suggested Eight Principles of Effective Online Teaching.

A. Encourage Student-Faculty Contact

The most significant factor in student motivation and success relies on the relationships with the students and teachers. Through interacting with students, faculty can evaluate the students' challenges and then offer the required support to help them to resolve them.

B. Develops Reciprocity and Cooperation among Students

Learning is more effective when the interaction between teacher and student takes place. Within such an environment of collaborative learning, learners share knowledge among themselves as they work towards achieving shared learning outcomes.

C. Uses Active Learning Techniques

In an active learning environment, students must speak about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives instead of simply sitting in the classroom.

D. Gives Prompt Feedback

Learning is about knowing what you know and not know. Students need adequate feedback on their performance to evaluate existing knowledge, focus on what they have learned and what they still need to learn, and to improve their future work.

E. Emphasize time on task

Learning takes time. Efficient competencies in time management are important for students as well as faculty. Students need support with learning to handle time efficiently. Allocating reasonable amounts of time ensures productive student learning and effective staff teaching.

F. Communicate High Expectations

While it is important to have high expectations for students, it is also critical that these expectations are clearly communicated to students. Likewise, it is helpful to communicate clear expectations for participation and for interaction. According to McKeachie & Svinicki (2005), when students know what the teacher expects of them, they can be more productive.

G. Respects Diverse Talents and Ways of Learning

The student's learning needs and strengths may vary from one to the next. The teaching should be in a way that combines variations of teaching approaches in order to meet the learning needs and abilities of various students.

H. Technology Application

As technology has increasingly advanced to enhance student learning experiences, educators need to continually upgrade

the latest learning technologies and find ways to apply them to strengthen online teaching.

IV. OBJECTIVES OF THE STUDY

1. To study the modus operandi of the online classes in Kerala.
2. To analyse the problems faced by the students with the online classes.
3. To study the problems of the teachers in the schools regarding the online classes.
4. To suggest some solutions to the problems.

V. RESEARCH METHODOLOGY

Primary data were collected from the official website of the General Education Department, Kerala. Besides, the investigator has first-hand knowledge about the schools in Kerala which he gathered at the time of his visits in the schools just before the COVID 19 outbreak as part of his Doctoral research.

VI. SCHOOL EDUCATION IN KERALA

The public school education from pre primary to higher secondary level in Kerala is managed by the Directorate of General Education (DGE). There are 16028 schools under DGE, which consist of 7035 Lower Primary Schools, 3011 Upper Primary Schools, 3516 High Schools, 2077 Higher Secondary Schools and 389 Vocational Higher Secondary Schools.

The government of Kerala introduced a project called IT@school in 2000. The project launched with the aim to impart ICT enabled education to the school children. The first breakthrough of IT@School came in 2005 when Information Technology was made a compulsory subject in Std 10. After the launch of EDUSAT, a dedicated educational satellite, the government of Kerala started an educational channel, 'VICTERS' operated by IT@School which was the first Complete Educational Channel in the country. In 2017 August the project 'IT@school' was renamed as Kerala Infrastructure and Technology for Education (KITE), a company under Government of Kerala to add more scope and authority for implementing various ICT programmes. KITE is the first SPV (Special Purpose Vehicle) Company of the Education Department of the State (KITE, 2020). As part of the Hi Tech School programme the KITE provided high speed broadband connectivity to the schools and converted 45000 classrooms hi-tech in nature. Such a hi-tech classroom consists of laptops, multimedia projector, whiteboard/projection screen and USB speakers. Apart from the infrastructure development KITE provided ICT enabled training to the school teachers and the students. There is a resource portal called Samagra which contains digital textbooks and question banks from class 1 to 12.

Table I shows the status of hi-tech schools in Kerala. 92.08 percent of lower primary schools are hi-tech in nature. 90.79

upper primary schools are hi-tech in status. 78.26 percent of high schools are hi-tech schools. 81.70 percent of higher secondary schools are hi-tech in nature.

TABLE I CLASSIFICATION OF SCHOOLS HI-TECH SCHOOLS ON THE BASIS OF CLASS LEVELS

Class Level	Total Number of Schools	Number of Hi-Tech Schools	Percentage
Lowe primary	7008	6453	92.08
Upper Primary	3009	2732	90.79
High School	3400	2661	78.26
Higher Secondary	2077	1697	81.70

VII. METHODS USED FOR THE ONLINE EDUCATION IN KERALA

During this time of pandemic, the government of Kerala decides to impart online education to the school going students through the Victers channel. The channel offers classes to the students from class 1 to class 12 except class 11. As per the schedule each class allotted different time slots ranging half an hour to two hours. Per day it is a half an hour programme for class 1 to class 7, one hour for class 8 and class 9, one and half hours for class 10 and two hours for class 12 students. The online classes in Kerala are imparted through the Victers channel. The classes are handled by the selected teachers from various schools across Kerala. The teachers in each school are directed to keep in touch with pupils to encourage them to watch the classes and clarify their doubts on a routine basis. The teachers should contact their students by any means like phone calls, social media (Whatsapp, telegram etc.) or by direct visit. Besides the Victers channel, the classes are available live on the mobile app, the portal 'www.victers.kite.kerala.gov.in' and on the facebook page of the victers channel. After the live telecast of the class, the same would be uploaded to the YouTube channel of the Victers. Thus the students can access the classes through smart phones, laptops, tablets, notebooks and television.

TABLE II A SAMPLE TIME TABLE

Class	Telecast Time
12	8.30 -- 10.30 am
1	10.30 -- 11.00 am
10	11.00 am -- 12.30 pm
2	12.30 -- 1.00pm
3	1.00 – 1.30 pm
4	1.30 --2.00 pm
5	2.00 – 2.30 pm
6	2.30 – 3.00 pm
7	3.00 – 3.30 pm
8	3.30 – 4.30 pm
9	4.30 – 5.30 pm

This is a sample time table; the actual timings may change time to time.

Let us examine whether the online education of Kerala satisfied the above cited principles of online education.

A. Students Faculty Contact

The online education of school students in Kerala is mainly through Television channels, mobile apps and social media platforms like facebook and YouTube. The classes are designed like a one way communication model where the instructor delivers the pre scheduled classes and the students are in the role of spectators. It is impossible to develop a rapport between instructor and the students in such a condition. In addition, the instructors engaged with online education are not familiar to the students; the teachers who were associated with them in the conventional classroom have no role in the online environment.

B. Students Cooperation

The online education through the television channel does not support the student- student relationship. Even if the students attended the classes at the same time, the way of education itself abated the face to face communication of the students.

C. Active Learning Techniques

The new online classes in the schools of Kerala designed in a teacher centered manner rather than a learner centered approach. Thus the active learning techniques which is an offshoot of learner centered education, is not possible with the current online education system.

D. Feedback

The government of Kerala instructed the teachers to collect the feedback from the students about each class by everyday manner. However, there is no contact between the instructors who handled the classes and teachers who collect the feedback from the students.

E. Emphasize Time on Task

The time management of the online classes takes place by a predetermined schedule of classes. The time division for each class may vary from half an hour to two hours. But there is no means to assess the students utilizing the allotted time to its maximum.

F. Communicate High Expectations

The one-way communication through the television channel denied the teacher- student communication. So there is no means to inform the students what the teacher expected from them.

G. Respects Diverse Talents and Ways of Learning

Unlike interactive classrooms the current form of online classes cannot address a heterogeneous group of students.

H. Technology Application

In this era of information and communication technology, there are a plethora of tools available for online education. However, the government of Kerala opted for the television channel to impart online classes. And there are some social media platforms used as subsets of television classes. There are many interactive tools like Content Management and Learning Management systems.

VIII. PROBLEMS FACED BY THE STUDENTS AND TEACHERS AND THEIR SOLUTIONS

It is the fact that, even if the schools have the facilities to transform the classroom education to online classes the societal and economical factors of the students need to be addressed. The students from the underprivileged society could not grapple with the transformation of education. The poor network connectivity, interrupted power supply and lack of electronic gadgets deprived students of the online classes. The centralized teaching method fails to address the individual student needs. Every student is different from others in learning skills, interpersonal skills, organizational skills and many more. Individual attention is a necessary component in the teaching and learning process. The current system of online education lacks personal attention and care.

Usually, the students had a mental attachment to the teachers in their conventional schools. But in the online classes, the students were completely unfamiliar with the teachers, and vice versa. This may reduce student's interest in attending online classes. Moreover, the teachers who had engaged with the in-room teaching have no role in the new online education system. It is a sad state of affairs that well-equipped human capitals have been underused in the new online education system. Instead of centralized online education, the state must consider a school-based, interactive online class that helps the state to utilize most of the human resources available in schools more efficiently.

A. Solutions

1. *Include Question Time:* Encourage students to ask questions and doubts about the class. There should be some dedicated phone numbers for the purpose.
2. *Visit The Students:* The teachers should try to meet the students individually periodically. It will help to develop a rapport between the student and teacher.
3. *Use of Social Media:* "students- students" interaction and "teachers- students" interaction will take place through social media. Conduct group discussions, debate with the help of social media.
4. *Use of the Learning Management System:* Learning Management System is an inevitable tool for online education. The government aided schools in Kerala have the infrastructure to adapt the learning management system. There are a number of free or open source learning management systems in the market.

5. Use of teleconferencing for interactive teaching/learning: Conduct pre- class and post class assessments through teleconference.

IX. CONCLUSION

The government of Kerala has stated that the online education offered through the television channel is not a substitute for the formal classroom teaching. It is only a prelude to the regular classes which may help the students to engage with the curriculum during the school closures. But the circumstances alarmed us that the regular schooling will not be restored soon. So the government should think about online classes as an alternative for formal classroom education. Instead of asynchronous teaching through the television channel, the government should take the initiative to impart interactive classes. The government should try to use the possibilities of a learning management system that will help to improve the teacher - student interactions. The present study focused only on the general problem of the online education to the school students during the pandemic time. Further studies are needed to assess the efficacy and effectiveness of the online education to the school students.

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