Online/ICT based Education and COVID-19 Pandemic: Challenges for School Education in India

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Abstract- In the last two years, not only India but the entire world has witnessed the danger and consequences of the Covid-19 pandemic, surely it has come as the biggest pandemic of the century that shook the entire human race from within. This pandemic has affected all of us, due to which we have to make changes in our lifestyle. All educational institutions in India were closed from March 2020 to prevent the spread of the pandemic and all of a sudden we had to shift our education system completely to online mode because at that time to prevent the spread of the pandemic and help the students. There was no better option than this to continue studies. India is a developing country and here the necessary infrastructure for online/ICT based education, trained teachers and policy for online education was in a development order. Therefore, due to the pandemic, due to the shift of the entire education system towards online and ICT based education, it has emerged with many challenges for the students, teachers, school leaders, parents and policy makers. In this review based article, the researcher has tried to analyze the challenges faced by stakeholders especially in school education during Covid-19.

*Keywords***:** COVID-19, Online Education, ICT based teaching and learning Key words: COVID-19, Online Education, ICT based teaching and learning

Introduction

"The challenges are there, but they are only temporary challenges. Online education will flourish…"

- Philip Regier

India is one of the biggest developing country in the world and its diversity makes it distinct from other developing countries of the world. Most of the people in India still rely on agriculture for their livelihood. They use mobile phones for communication but are still away from smart phones and are not much exposed to internet access (Muthu et al., 2021). Hence for effective incorporation of online and ICT based education it is very essential to develop pre requisite infrastructure and internet facilities across the country. But for this biggest hurdle on the way is that in India more than 65% population still live in rural or remote areas so it is a difficult task for the government to develop essential infrastructure which is required for online and ICT based

education in less time. It will surely take more time to develop basic infrastructure and resources to rural and remote areas of India. Along with the good quality of internet accessibility of smart phones and laptops is also a big question mark for the government (Atika et al., 2020). Because those families who belong to the Economically Weaker Section and Marginalized groups cannot afford smart phones, laptops and good internet connection to their children's. But in the difficult time of pandemic no other better way of teaching and learning is available so we all rely on online and ICT based education. In India from March 2020 all schools and colleges remain closed. During COVID-19 pandemic our School Education system across the country suddenly shifts towards online and ICT based teaching and learning. In this sudden transition of teaching, a lot of issues and challenges come in front of the school education system in India.

Because in face to face teaching classroom pedagogies worked as an important intervening variable but in online/ICT based teaching learning or in implementing e-learning pedagogy a lot of factors have affected the teachers and students. And interaction between students and teachers is limited from one screen to another screen therefore use of non-verbal communication and classroom pedagogies are limited to a certain level (Rasheed et al., 2020). Sometimes in offline classrooms teachers use different kinds of pedagogies for the needs of different types of students so that they can reach each and every student. And every child learns from school but in the current scenario of online/ICT based education it is difficult for teachers to use a variety of pedagogy in one class as per need of inclusive classroom.

Review of related literature
Mishra, (2009) had worked on e-learning, in their work he has presented an overview of e-learning in India and explained the union grants commission and the ministry of human resource development are collaborating on a nationwide programme to promote online and ICT-based teaching and learning across the country. Based on research experience, researchers feel that the establishment of statutory bodies for online Education in India is very important for upcoming time. Verma et al., (2020) conducted a research on Online Teaching during COVID-19: Perception of Medical Undergraduate Students in their work they explains that medical education was also affected due to pandemic, further they explains after teaching more than one month through online mode they found 47% students want online teaching must be as a part of the curriculum. In the research they addresses some issues related to lack of training of using ICT devices. Perryman (2013) explicitly explained in his work in India that there is huge requirement of skilled teachers. Existing teachers are not trained for online mode; they need immediate pre-service training programmes so that they can improve the standard of Indian school system further. He explained the use of open educational resources in India (OER) in India and also explained how OER is helpful for teachers and students in online and ICT based teaching and learning. Muthu et al., (2021) had worked on Students' perception and preference for online education in India during COVID -19 pandemic they did a survey on agriculture students regarding adaptation of online education. In this research work researchers explained suitability and usability of e-learning in India is still a question mark. During the study they

concluded more than 70% of students ready to adopt online teaching and mostly preferred smartphones for this. Atika et al., (2020) during the COVID-19 pandemic, they worked on converting traditional to online education. Do developed and developing countries cope similarly? In their research, they conducted a cross-sectional study of 320 students to determine the level of satisfaction with online education during the COVID-19 pandemic. Students in urban regions are more satisfied (about 50%) with online-based learning than students in rural areas, according to the findings of this study (around 37%). Dhawan, (2020) did work on online learning during COWID-19 in her descriptive analysis she explained Strength, Weaknesses, Opportunity and Challenges (SWOC) analysis of online education during COVID-19 pandemic. Palvia et al., (2018) conducted a study on Online Education: Worldwide Status, Challenges, Trends, and Implications in their study they explained by 2025 online/ICT based education come in mainstream method of provide education but quality and quantity of online/ICT based education will be important factor which we have to take into consideration. Rasheed et al., (2020) had worked on online learning and challenges in this research work in blended mode with face to face teaching and online learning which kinds of problems arises in front of teachers and school management? Basically for teachers use of technology related to online/ICT based teaching is a real concern but providing training for them for such type of blended learning is also a big challenge for school management and other authorities. Hockridge (2013) conducted a study on Challenges for educators using distance and online education to prepare students for relational professions, Distance Education in his research work he explained issues and challenges for teacher educators in implementing online and distance education. For this study researcher selected theology educators from Australian theological institute and findings of this research study provide a platform to educators for development of formational learning.

Objectives of the Study

- To explore the preparedness, designing and effectiveness of online/ICT based education in the context of school education during corona virus pandemic.
- To conduct a study of the concerns and obstacles that the corona virus has posed for school instruction during the pandemic.
- To make suggestions for how to make online/ICT-based teaching and learning successful in a crisis situation.

Research Methodology

This study is descriptive, attempting to comprehend concerns and challenges for school education in India in adapting online/ICT-based education during times of crisis and pandemic, such as the COVID-19. The analysis was carried out to better understand the different concerns and obstacles linked with online/ICT-based education for schools. A content analysis was utilized to analyze the data acquired from various sources for the study, and researchers employed a descriptive method for this analysis. Researchers also considered the qualitative

component of the research study. This research study was fully based on secondary data and systematic review was done for data collecting.

Challenges for School Education System

UNICEF Datasheet (2020) put few critical points about adaptation of online/ICT based education worldwide in the period of Covid-19 pandemic.

31% of school children worlwide (463 million) can not be reached by the broadcast and internet based learning during COVID-19 pandemic

Only 60 % countries across world adopted digital learning for pre-primary education.

only 16% of school children could be reached by radio based learning worldwde

Globally, 3 out of 4 students who cannot be reached by the remote learning policies come from rural areas and/or belong to the poorest households.
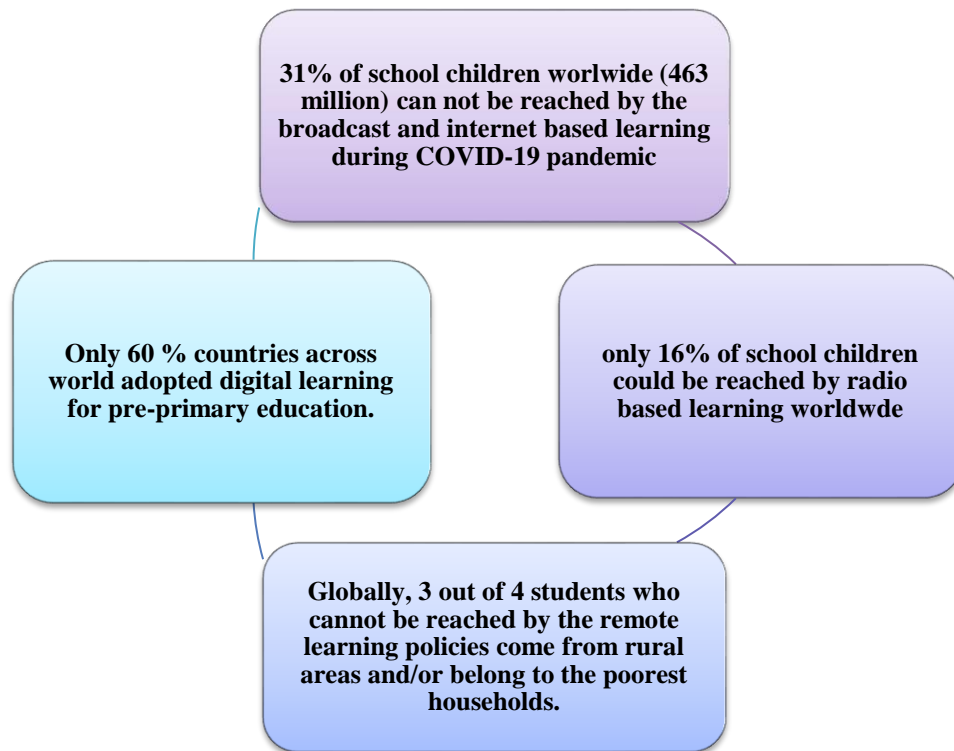
Figure: 1 School Education (Worldwide) during COVID-19 Pandemic

Changes in the school education system were anticipated a few years ago but a sudden complete shift towards online education or ICT based teaching and learning was not anticipated. That makes teaching and learning more challenging for teachers as well students because we are not ready for this spontaneity in Education (Verma et al., 2020). This is a big challenge in front of school management to completely shift from offline face to face mode to online mode. Because our curriculum followed in school education in India was not designed for completely online mode. And curricular and co-curricular activities were remains integral part of our school education curriculum. During this pandemic our teachers and educators start thinking about alternative of those co-curricular activities through virtual mode, but there is no rigorous research work available that the virtual activities will be helpful for inclusive online classroom where learners of different needs present there (Dhawan 2020) So there are few questions which strike the researcher mind too? It is good if we discuss all these issues and challenges from the point of views of students, teachers, parents, school management and policy makers.

Issues and Challenges for Students and Parents

- Before pandemic students are habitual to limited use of ICT in the process of teaching and learning but a sudden complete shift of education towards online/ICT may bring few challenges in front of students as well as parents:

- Those students who are good in live interactive face to face mode of teaching and learning feel monotonous in online and ICT based teaching and learning because maximum communication is limited from one screen to another screen.

- Students and parents are not confident about the assessment process because there are no pre existing guidelines, documents or policies available for online assessment.

- Since all students are not tech savvy some time they feel difficulty in adjustment with online or ICT based teaching and learning.

- Those students who are very much tech savvy such types of teaching do not pose in front of them new challenges to learning so they do not use their full capacity in this.

- Nationwide connectivity and speed of internet, not even so students from rural and remote areas suffer problems in connection with online class and we have few examples in which students from these areas walk miles away from their home in search of suitable internet connection.

- Students belonging from economically weaker sections and marginalized groups cannot afford equipment and devices which are essential for online and ICT based teaching and learning.

- Sometimes education based on ICT is more costly and monotonous in comparison to face to face mode of teaching in which students have enough time for collaboration, work in groups, discussion in face to face mode, learning through hands-on activities and environment works as a catalyst for learning.

- Online and ICT based teaching and learning may affect the health of students negatively because such types of learning provide limited scope to engagement of psychomotor skills and physical skills.

Issues and Challenges for School Teachers

India is a developing country, research and data of National Achievement Survey (NAS)-2017 by NCERT and Annual Status of Education Report (ASER)-2018 shows alarming signs for school education. National Education Policy-2020 accepts the reality of school education in India and has given the recommendation for restructuring the school education and reframe Curriculum and Pedagogy for School Education. The biggest reason behind the poor performance of school education in India is the presence of unskilled and untrained teachers already present.

- Teachers who are not well equipped with online and ICT based teaching and learning feel difficulty engaging students through online mode because sudden lockdowns in the country don't provide them enough time to train themselves (Martin, 2020).

- Since pedagogy is the integral part of teaching and learning so it is difficult for teachers in online and ICT based teaching and learning to implement few aspects of pedagogy like nonverbal communication, gesture-posture, use of voice pitch.
- Sometimes online class is more time consuming than face to face mode of education so it may put extra workload on teachers.
- This is very important to develop faith and believe about online teaching and ICT based teaching among students and parents.
- Try to include students of different needs and individual differences in their online and ICT based classroom.
- Since the need of online and ICT based classrooms in comparison to face to face mode of teaching is completely different, so to catering of these is also a challenge.
- Try to use online software like Google classroom, Mentimeter, Polleverywhere etc. for online assessment of students.

Challenges for School Management

- The big issue in front of school management in the time of pandemic is how they implement their curriculum in online mode? And when they don't have any official or authorized documents which can build trust among students and teachers.
- To provide online teaching and learning material to our students so that the learning can go on uninterrupted and also assess the learner's achievement with transparency.
- To prepare a pool of teachers in a short period of time who can give online teaching and can implement ICT based teaching and learning efficiently.
- To provide seamless internet connectivity to the school staff so that they can update all online reports of students timely and ensure all teachers can deliver their lectures on time to students.
- Publish the result of online assessment timely and full transparency so that students can participate in assessment process with full enthusiasm.
- Since evaluation is an important part of any education system, through which we can know to what extent and how we have to improve. During the pandemic, students were assessed through a variety of online assignments, and in some cases through open book exams. But the lack of knowledge about how to check an online assignment, how to give feedback to the students in online assessment, etc. was clearly visible among the teachers.In such a situation, along with training teachers for online assessment, there is a need for policy makers to prepare a criteria for online assessment which should be shared with students and their parents so that positive confidence can be generated within them regarding online assessment.

Challenges for Policy Makers

- In the time of pandemic there is no special curriculum available for students which are specially designed for online and ICT based education. So there is an urgent need for such types of documents, curriculum or policy which is specially focused for online and ICT based education.

- Policy making for large groups is a time consuming task because it requires a lot of expertise, studies, grass root level researches, areas of priorities increases with time and also experience in specific field needs is a must. In this time of pandemic there is really less time to interact with such type of target groups who can actually suffer problems in online/ICT based education so it is quite challenging for the government to prepare policy in this small span of time.

- Sometimes implementation of policy takes time because geographically India is a large country and there are state wise many languages and cultures followed by a group of people therefore preparing a single policy for the whole nation and translating it to different regional languages will take time. And preparing modules for heads, principals and school teachers and providing them formal training district level to block level definitely time consuming tasks for government and policy makers also.

- To make sure whatever document they prepare must be flexible and give autonomy to students so that they can build their understanding through reflecting over text and discussion.

Suggestions

- In researchers point of view there is urgent need for official documents or policy for online and ICT based teaching and learning and also for assessment of same.

- Central government and state government in collaboration with different universities and institutes must initiate few awareness programs about online/ICT based teaching and also for assessment so trust can build up among students and teachers.

- Since most of the working staff in schools are not much familiar with equipment and use of online/ICT based education so there is a need for formal training by school management and state government so they can adopt such type of technology easily.

- In the time of COVID-19 pandemic many good institutions in India conducted Open Book Exam for semester assessment and evaluation of students but from the side of teachers and students a lot of problems arose. So in this regard clear and structured guidelines for examination and submission should be prepared and provide proper time for answer scripts submissions of the students. If any students fail to upload their answer scripts due to various reasons then alternative options should be designed for the submission of the same.

- We see in the past few months' assessment and evaluation of answer scripts of the open book exam is not an easy task for universities and Institutes. Because for timely

assessment and evaluation they need well equipped and trained evaluators in large numbers so in researcher's point of view they can prepare a pool of trained and skilled evaluators in advance according to various subjects to complete the work on time.

- Periodically e-assessment should be the part of Online/ICT based teaching and learning and course design. And provide online remedial teaching to weak students or those students who need this.
- At this critical time of COVID-19 pandemic principals or head of schools tried to conduct online parents and teachers meetings wherein parents can share their doubts, worries about their child and online/ICT based education to their teachers. So such types of meetings will become a good bridge between parents and teachers.
- This is important for students in online or open book exams; they must write their genuine and original thoughts based on their understanding. So in this sequence it is important for school managements they should use software like plagiarism checkers etc. to avoid repetitive thoughts and answers during student's assessment and evaluation.
- In today's scenario a lot of online softwares are available for periodic assessment of students but school management tries to use such types of software which are user-friendly and keep information of students confidential.
- Heads and principals must establish good relationships with teachers, staff, students and parents and arrange periodic meetings with all school families to transmit love learning among all.
- Since all types of households cannot be uniformly available online and ICT based devices with good internet connection during the pandemic. That's why the government should take cognizance of this issue and identify such families as much as possible and help them financially.

Conclusions

School education in India has faced a variety of challenges due to the COVID-19 pandemic. Providing constant and uninterrupted learning for students was the motto of the government in India. So for constant teaching and learning during the pandemic we are using online/ICT based teaching and learning because at this time no better alternative for education is available for us. In this pandemic we used online/ICT based teaching as an opportunity but this sudden shift of education brings some challenges for school education (Saxena, 2020, Realey,2020). This pandemic creates new learning opportunities for students and teachers at their homes but at the same time they feel some issues and challenges which is quite obvious for this sudden change of school education.

Since in absence of uniform policy or documents regarding online/ICT based education in India some students and parents are quite uncertain about assessment and evaluation process so there is urgent need for the same. There is a need for properly structured and Planned Open Book Examination but at the same time it must be flexible so that students from all socio economic status can easily participate in such types of exams. In this pandemic lot of students

feel discomfort and uneasy with online/ICT based teaching learning so school heads and principals should take initiative for that and arrange periodic meetings with students and teachers so that it boosts up some confidence and positivity inside students about online teaching and learning.

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