

COVID - 19

PREPAREDNESS FOR REOPENING AND CONDUCT OF SCHOOLS DURING AND POST COVID-19 PERIOD***Narmada S******Somasundaram A**

Abstract: *COVID-19 has thrown the educational system of India into turmoil. India with its vast and diverse educational scenario has to prepare itself for reopening and conducting schools, taking into account the disparity in the economic strata among its institutions. Schools serve as nodal centres for distribution of nutritious food, for physical fitness and also take care of psychosocial wellbeing of the children. Hence, closure of schools causes multidimensional effects. Lack of space, resource constraints, disparity in accessing technological advancements are huge challenges in implementing uniform policies while reopening. The introduction of new online and offline platforms of education by the efforts of government has paved the way for a new learning methodology. This combined with additional efforts to take care of the nutritional and physical needs of the children will usher in a different era in Indian educational system. This article discusses policies that can be implemented by schools with the support and willingness of all stake holders from the students to the society at large. The methods and need to implement principles of social distancing, respiratory hygiene and etiquette, minimising large gatherings, restructuring of seating arrangements, self-discipline in reporting and treatment of illnesses are discussed.*

Keywords: *Educational system, India, COVID-19 impact, Reopening schools.*

Nobody would have expected a scenario where a tiny virus would shake the entire world. As of 27th April 2020, approximately 1.725 billion learners are affected due to

school closure worldwide. One hundred and eighty six countries have implemented nationwide closures with another eight countries implementing local closures.¹ The Indian system of education was left perplexed when the much awaited public exams and other competitive examinations had to be postponed or cancelled. Given the uncertain trajectory of this pandemic, there is confusion among students and school authorities of how the upcoming academic year will be. In addition to this, it is difficult to predict the impact on children of the extended absence from regular school. India with its 15 lakh schools and 50,000 higher educational institutions is home to one of the most diverse and largest educational system in the world.^{2,3} The system here is unique, in that we have government schools with minimal infrastructure and international schools with the best possible infrastructure, existing under the same boards. The following article focuses on the issues faced by the schools in India and the measures to be implemented during and post COVID period.

Impact of COVID-19 on schools - the Indian scenario

India ordered closure of the schools and colleges on 16th March 2020. This is a crucial time for our education sector as board examinations, entrance to various universities, competitive examinations were all set to happen during this period. The new academic year also starts by June. Around 32 crore young learners in India have been impacted and the most severe among them, are approximately 13 crore students in classes 9 to 12. The resultant impact on the students are :

1. Interrupted learning
2. Poor nutrition - mid day noon meal scheme providing significant proteins and calories is unavailable
3. Confusion and stress for parents and teachers
4. Challenges of e-learning and home schooling
5. Gaps in child care and high economic burden for parents
6. Rising exposure to child pornography, sexual exploitation and domestic violence
7. Social isolation⁴

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Unique challenges of Indian educational system

Indian education system has 70% of students in government institutions with minimal access to online system of education.⁵ The considerable gap in the infrastructure between government and private schools and the domestic environments of students is a huge challenge.

The main issue is the space constraint in schools. The average work area a student gets in India is only 2 feet. With an average student's shoulder width of 2 feet, even in the most elite of schools, children are made to sit very close to each other. Some classes cater to around 150 students which means they are in close proximity to each other. Almost 45% of schools lack playgrounds.⁶

With schools shut down, remote learning is the only way available. However, the major challenge in India is the access to electricity and internet connections. A nationwide survey of villages done in 2017-18 showed that though 99.9% of homes had access to power connection, 53% of the houses did not have electricity for upto 12 hours in a day. Only 24% of Indians had access to smart phones and hardly 11% of households had access to any form of smart devices like net books, palmtops, desktops or tablets. Besides, there are interstate variations in the availability of the electricity and internet.⁷

The other issue is the nutritional needs of the children. There is now a logistic challenge in providing food for nearly 12 crore children who are dependent on the midday meal, which is probably the only nutritious meal they get. On the other hand, there is a growing incidence of obesity from 3.6 to 11.7% among affluent school students.^{8,9} We are at the crossroads where the double challenge of obesity and undernutrition have to be addressed.

In the following sections, we would discuss the measures to be adopted by various stakeholders, keeping in mind the unique challenges of the Indian education system.

Measures to be adopted by the school administration

When schools are fully or partially open, COVID-19 prevention and control strategies should be maintained. The recommended actions and requirements outlined in the following section are simple and can be adopted in all schools irrespective of the economic discrepancies.¹⁰

1. Hygiene and environmental cleaning to limit exposure
2. Physical distancing at school

3. Regular screening and management of symptomatic students, teachers and other school staff
4. Communication with parents and students
5. Additional school-related measures
6. Regulations to be followed in Residential schools¹¹

1. Hygiene and environmental cleaning to limit exposure

a) Educate everyone in the school about COVID-19 with emphasis on its prevention; this includes appropriate and frequent hand hygiene, respiratory hygiene, mask use, symptoms of COVID-19 and what to do if one gets sick. Non-contact greetings should also be advised. Weekly updates must be provided as the pandemic evolves.

b) Create a schedule for frequent hand hygiene, especially for young children, and provide sufficient alcohol-based rub or soap and clean water at school entrances and throughout the school. Hand washing strategies include washing with soap and water for at least 20 seconds, especially after using the toilet, before eating, after blowing their nose, coughing or sneezing. Where feasible, using an alcohol-based hand sanitizer that contains at least 60% alcohol can be encouraged where water is scarce.¹²

c) Schedule regular cleaning of the school environment, including toilets, with water and soap/detergent and disinfectant. Clean and disinfect frequently touched surfaces such as door handles, desks, toys, supplies, light switches, doorframes, play equipment, teaching aids used by children and covers of books.

d) Limiting the timing of exposure or direct physical contact is mandatory like in physical education classes, sports or other physical activities and play in playgrounds, wet areas and changing rooms. Can avoid contact sports/swimming classes and encourage alternate methods of individual sport activities.

e) Increase frequency of cleaning in gym, sports facilities and in changing rooms, provide hand hygiene stations at entrances and exits, establish one-way circulation of students through the facilities and limit the number of persons allowed in the locker room at one time.

f) Put in place respiratory and hand hygiene and physical distancing measures in transportation such as school buses and tips for students on safe commute to and from school, including those using public transport. Allow only 1 child per seat and at least 1 metre apart in school buses, if possible. This may lead to a need to increase the number of school buses per school. If possible, windows of the bus should be kept open.

g) Develop a school policy on wearing a mask or a face covering in line with national or local guidance. If a child or school staff is sick, she/he should not come to school. Provide sufficient medical masks for those who need it, such as school nurses and children with symptoms.

2. Physical distancing at school: Measures given here also addresses the issues of spacing in schools especially staggering the opening hours and modification of timetable.

a) Maintain a distance of at least 1 metre between everyone present at school.

b) Increase desk spacing (at least 1 metre between desks), putting dividers in between desks, altering the arrangements like a circular class room, staggering recesses/breaks and lunch breaks (if difficult, an alternative is to have lunch at the desk).

c) Modify the timetable, with some students and teachers attending in the morning session and others in the afternoon session. Another alternative is to have half the students attending on 3 days of a week and the other half on the other 3 days {odd-even plan}.¹³

d) Consider increasing the number of teachers, if possible, to allow for fewer students per classroom (if space is available).

e) Advise against crowding during school pick-up or day care and if possible, avoid pick up by older family or community members (e.g. grandparents) and stagger arrival and/or dismissal times.

f) Move lessons outdoors or ventilate rooms as much as possible (and try to avoid use of air conditioners, especially central type).

g) Create awareness to ensure the students do not gather and socialize when leaving the school and in their free time.

h) Cancel field trips, assemblies and other large gatherings.

i) Limit nonessential visitors and reduce congestion in the office.

j) Limit bringing in students from other schools for special programs (e.g., music, robotics, academic clubs)

k) Parent teacher meetings can be restructured via phone rather than face-to-face, - enabling easier communication both ways.

l) Discourage staff, students and their families from gathering or socializing anywhere at places like a friend's

house, a favourite restaurant, a birthday party or the local shopping mall.¹⁴

3. Screening and management of sick students, teachers and other school staff

a) Enforce the policy of “staying at home if unwell” for students, teachers or school staff with symptoms.

b) Create a checklist for parents/students /staff to decide whether students /staff can go to school taking into consideration the local epidemiology of COVID-19. The checklist could include:

- underlying medical conditions and vulnerabilities, to protect the student/staff
- recent illness or symptoms suggestive of COVID-19, to prevent spread to others
- special circumstances in the home environment, to tailor support as needed
- special considerations regarding school transport as needed.

c) Consider daily screening for body temperature, and history of fever or ‘feeling feverish’ in the previous 24 hours, on entry into the building for all staff, students and visitors to identify persons who are sick. Ensure that enough personnel are available for this screening.

d) Ensure students who have been in contact with a COVID-19 case stay at home for 14 days. The school officials should notify public health authorities in case of a positive COVID-19 case.

e) Establish procedures for students or staff who have symptoms of COVID-19 or are feeling unwell in any way to be sent home or isolated from others.

4. Communication with parents and students

a) Inform parents about the measures the school is putting in place and ask for cooperation to report any cases of COVID-19 that occur in the household. If someone in the household is suspected to have COVID-19, keep the child at home and inform the school.

b) Explain to the students the reason for school-related measures, including discussing the scientific considerations and highlighting the help they can get through schools (e.g. psychosocial support).

5. Additional school-related measures

Ensure that during school entry, all age appropriate vaccinations especially those against vaccine preventable diseases are completed.

6. Regulations to be followed in residential schools

Most of the policies discussed above will also be applicable for boarding schools. The following are some of the policies specific for Residential school

- a. It is imperative that the students are screened on arrival to the hostel
- b. There is a need to have an inhouse nurse and if students are more to have an inhouse doctor on call
- c. Students to be encouraged to report even if there are minor health related complaints
- d. Seperate facilities or local guest houses to isolate children or staffs who turn out to be positive with minor symptoms need to be prepared in advance.
- e. Cleaning of the exposed areas according to government protocols should be followed - Close and Clean response.¹⁵

Measures to be adopted by the students

1. Learning the steps for hand washing

It is mandatory that every student learns the techniques of hand washing which should be done on school entry, before and after food and snacks and after using the rest rooms. Remember not to touch the face.

2. Maintaining social distance in the school

They need to maintain their designated places with 1 metre distance between friends, avoid touching each other during free time and avoid sharing cups, eating utensils, food or water bottles.

3. Training the children to be leaders in keeping themselves, their school, family and community healthy

They need to learn about preventing disease spread and model good practices such as sneezing and coughing into elbows.

4. Learn to accept other children who return after recovering from illness

Children should be taught to accept others and not tease anyone since everybody is prone to the infection.

5. Should learn to immediately contact the caregiver if they feel slightly sick

Children should be encouraged to seek the help of the caregiver if they feel sick and should be supported psychologically so that they are not frightened by their sickness.

6. Age appropriate technique to be adopted - For e.g. The kindergarten schools can be close. If open, pre-schoolers can be taught all these etiquettes with simple rhymes and manoeuvres like flapping their wings or extending their arms to instill the concept of safe distance.

7. E- learning - Children should be encouraged to adapt to this new method of learning, to have their doubts clarified and supported.¹²

Role of parents and care givers

Parents and caregivers have seldom spent so much time with children as during this pandemic, therefore this is a unique opportunity to mould their children's behaviour. With no other diversions or people to distract them and with so much uncertainties around, parents' presence and their psychological support is essential to all children from pre-schoolers to adolescents.

1. It is of utmost importance for parents to update themselves on the latest facts from reliable sources about COVID-19. They should take care not to share inaccurate information or videos regarding the negative aspects of illness.

2. They need to recognise symptoms of COVID-19 like fever, cough, sore throat or shortness of breath and seek immediate medical attention. They need to notify the school and also reassure their child in simple language. Unnecessary panic by the parents will further frighten the children.

3. Encourage the children to attend school when they are healthy.

4. It is their responsibility to reinforce basics of hand washing, cough etiquette and social distancing.¹²

5. Parents should be supportive to their children in their efforts to attend classes online. Make provisions at home to install gadgets and monitor their use by their children. Many NGOs are ready to help with distance learning. Pooling of resources in the community to help less fortunate students in the area can also be initiated by parents.

6. It is the duty of the parents to ensure a child friendly and calm environment to facilitate learning at home as school timings may change allowing the children to do their work predominantly through e-learning.

7. Domestic violence to be strictly condemned as it is the right of every child to have a safe environment at school or home.

Future of education

This pandemic will change the course of education as we know it. We need to teach the guardians of tomorrow, resilience, adaptability, communication, empathy, creativity, emotional intelligence and other life skills for the future. Theory based learning should give way to experiential learning, taking greater recourse to technology. Schools need to keep these challenges in mind while designing the curriculum. Government schools have commenced smart classes and Montessori system of learning and in due course will learn to keep pace with these changes.¹⁶

New systems of learning

We need content and delivery systems that harness and utilize technology to its fullest. Looking at these challenges of colleges and schools, various initiatives have come up from the Ministry of Human Resources, Department of Technical Education, National council of educational research and training (NCERT) and NGOs.

Some of the new initiatives are Swayam - online courses for teachers, UG/PG teachers for non technology courses, e-modules on various subjects. National digital library, google classroom and e-Yantra are other resources. Swayam portal integrates NCERT textbooks, engineering and non-engineering courses and e-books for students. It is a viable alternative and easy learning to grasp the course. The portal was set up by Government of India nearly two and a half years ago and it definitely endorses the fact that e-learning may not be a distant dream.¹⁷

Government has created National Knowledge Network, National Project on Technology Enhanced Learning (NPTEL), National Mission on Education Through Information and Communication Technology (NMEICT). These connect easily with institutions and provide the high speed band network for education institutes.

Efforts need to be made by all of us to make sure PC/ Desktop/ Mobile for end delivery are available to every student irrespective of the strata of society. Giving away laptops to all students studying in 11th standard and above in Tamilnadu is an example which shows us that this is feasible.² Future of education is going to be global teachers, global university, degrees obtainable from reputed universities offering interesting distant learning content and a global outlook. Faculty will also need to stand up to this challenge of integrating technology in their teaching. Accreditation criteria need reconsideration.

New laws to maintain online privacy of children

While online platforms are being developed, commitment to protect the privacy of children should be a top priority and all stake holders especially vendors need to be covered by the law.¹¹ Children's Online Privacy Protection Act (COPPA) adopted now in USA may have to be integrated in India too.

New system of arrangements of classes

With greater space constraint, effective and efficient ways of conducting classes have to be devised. We need to do away with traditional bench system of seating and use alternative type of seating like a circle, or running school in shift systems.

Future modalities to maintain physical fitness

Opening up of other avenues for physical fitness becomes essential. Starting of online yoga instructions and short physical education videos for students of all ages may be a viable alternative. The portal needs to integrate social/ club virtual hangouts and online school counselling.¹¹

Adopting new ways to deliver and maintain nutrition of children

Unfortunately India would be one of the 88 countries to miss its nutrition related target of reducing stunting in children. India is identified as among the three worst countries, along with Nigeria and Indonesia, for wide, within-country disparities on stunting, where the levels varied four-fold across communities. It is imperative that alternate system to maintain nutrition is facilitated even if children stay at home due to new modes of learning. This can include delivery of foods to their homes using public distribution system, making available nutritious powders for collection at the school and provision of cash or vouchers.^{18,19}

Conclusion

In conclusion, a joint effort by all stake holders from the management of schools, parents, students, government and NGOs have a great part in preparing the schools to handle the post COVID situation. Future of our younger generation will be protected by our willingness to bring in changes in the system that not only raises them to be responsible individuals, but also fosters a responsible community that appreciates and protects nature and nurtures posterity.

Points to Remember

- *COVID-19 has disrupted India's educational system which is vast and varied with wide disparity in resources amongst the schools in the public and private sector.*
- *Schools are not only centres of education in India but take care of nutritional and physical needs of children through various schemes.*
- *Schools need to implement uniform policy to maintain social distancing, respiratory etiquette as well as usher in new modalities of education for the coming years.*
- *The future of the education system will involve more of e-learning platforms with policies to maintain the privacy of children and newer modalities to take care of nutrition and fitness with significant changes in infrastructure.*

References

1. Impact of the COVID-19 pandemic on education. In: Wikipedia [Internet]. 2020 [cited 2020 May 10]. Available from: https://en.wikipedia.org/w/index.php?title=Impact_of_the_covid-19_pandemic_on_education&oldid=955684360.
2. www.ETGovernment.com. COVID-19 Pandemic: Impact and strategies for education sector in India - ET Government [Internet]. ETGovernment.com. [cited 2020 May 3]. Available from: <https://government.economictimes.indiatimes.com/news/education/covid-19-pandemic-impact-and-strategies-for-education-sector-in-india/75173099>.
3. Sharma K. In India, over 32 crore students hit by COVID-19 as schools and colleges are shut: UNESCO [Internet]. The Print. 2020 [cited 2020 May 10]. Available from: <https://theprint.in/india/education/in-india-over-32-crore-students-hit-by-covid-19-as-schools-and-colleges-are-shut-unesco/402889/>.
4. <https://plus.google.com/+UNESCO>. Adverse consequences of school closures [Internet]. UNESCO. 2020 [cited 2020 May 10]. Available from: <https://en.unesco.org/covid19/educationresponse/consequences>.
5. Khanna PKN Pretika. Every house a school, every parent a teacher as COVID-19 impacts education [Internet]. Livemint. 2020 [cited 2020 May 10]. Available from: <https://www.livemint.com/news/india/every-house-a-school-every-parent-a-teacher-as-covid-19-impacts-education-11585140662556.html>.
6. S B. Ministry relaxes rules on play space requirements under RTE. The Hindu [Internet]. 2012 Dec 2 [cited 2020 May 17]; Available from: <https://www.thehindu.com/news/national/karnataka/ministry-relaxes-rules-on-play-space-requirements-under-rte/article4154277.ece>.
7. Kundu P. Indian education can't go online - only 8% of homes with young members have computer with net link [Internet]. Scroll.in. <https://scroll.in>; [cited 2020 May 10]. Available from: <https://scroll.in/article/960939/indian-education-cant-go-online-only-8-of-homes-with-school-children-have-computer-with-net-link>.
8. Midday Meal Scheme. In: Wikipedia [Internet]. 2020 [cited 2020 May 10]. Available from: https://en.wikipedia.org/w/index.php?title=Midday_Meal_Scheme&oldid=955148909.
9. Sashindran VK, Dudeja P. Obesity in School Children in India. Public Health in Developing Countries - Challenges and Opportunities [Internet]. 2020 Jan 30 [cited 2020 May 10]; Available from: <https://www.intechopen.com/online-first/obesity-in-school-children-in-india>.
10. Considerations for school-related public health measures in the context of COVID-19 [Internet]. [cited 2020 May 19]. Available from: <https://www.who.int/publications-detail/considerations-for-school-related-public-health-measures-in-the-context-of-covid-19>.
11. NAIS - Coronavirus (COVID-19) Guidance for Schools [Internet]. [cited 2020 May 3]. Available from: <https://www.nais.org/articles/pages/additional-covid-19-guidance-for-schools/>.
12. <https://www.who.int/docs/default-source/coronaviruse/key-messages-and-actions-for-covid-19-prevention-and-control-in-schools-march-2020>.
13. Schools reopening News: Schools may go for odd-even system post lockdown [Internet]. [cited 2020 May 19]. Available from: <https://www.timesnownews.com/education/article/schools-reopening-news-schools-may-go-for-odd-even-plan-post-lockdown/588705>.
14. CDC. Coronavirus Disease 2019 (COVID-19) [Internet]. Centers for Disease Control and Prevention. 2020 [cited 2020 May 3]. Available from: <https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html>
15. NAIS - Coronavirus (COVID-19) Guidance for Schools [Internet]. [cited 2020 May 3]. Available from: <https://www.nais.org/articles/pages/additional-covid-19-guidance-for-schools/#boarding>.
16. Delhi May 4 ITWDN, May 4 2020 UPDATED:, Ist 2020 18:36. COVID-19 lockdown: How the pandemic bringing change in Indian education system [Internet]. India Today. [cited 2020 May 13]. Available from: <https://www.indiatoday.in/education-today/featurephilia/story/covid-19-lockdown-how-the-pandemic-bringing-change-in-indian-education-system-1674322-2020-05-04>.
17. Amidst COVID-19, an air of change in the Indian education system [Internet]. Express Computer. 2020 [cited 2020 May 13]. Available from: <https://www.expresscomputer.in/news/amidst-covid-19-an-air-of-change-in-the-indian-education-system/52699/>
18. India may miss nutrition targets. The Hindu [Internet]. 2020 May 12 [cited 2020 May 13]; Available from: <https://www.thehindu.com/news/national/india-may-miss-nutrition-targets/article31568549.ece>.
19. 320 million children worldwide missing out on meals due to COVID-19: WFP [Internet]. [cited 2020 May 13]. Available from: <https://www.downtoearth.org.in/news/food/320-million-children-worldwide-missing-out-on-meals-due-to-covid-19-wfp-69976>.