

REMOTE DELIVERY EXECUTION FRAMEWORK FOR SCHOOLS

In accordance with PRAGYATA, guidelines on Digital Education by the MHRD

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Perspective on Screen Time

Screen time is the amount of time spent using a device with a screen such as a smart phone, computer, television, or video game console. The concept is under significant research with related concepts in digital media use and mental health. Screens are used for work, education, communication and leisure. Due to their many uses, it is often difficult to measure or control the amount of time children spend using screens.

Small amounts of screen time can be useful and enjoyable for families. They can offer time for children to connect with others, be creative and learn. Screen time can keep children entertained, or distracted, and are used in educational settings by teachers. As a consequence of the pandemic, student screen time as exponentially increased due to online learning. This has raised concern amongst parents as they believe that their children have gone from moderated and supervised gadget use, to unrestricted and extended interface with digital devices.

As schools and regulators grapple with the idea of optimizing student's digital interface, it is important to understand medical viewpoints and contemporary outlook towards the idea of 'Screen Time'.

Understanding Screen Time

There are lots of amazing reasons for kids to use technology—in class, many kids learn with tablets and smart whiteboards, they research facts, they watch tutorials, collaborate with others, build relationships. They gain new skills, play and have fun, and use creative skills. All of these involve a certain amount of screen time.

One of the top experts on children and media - “Mediatrician” Dr. Michael Rich, Director of the Center on Media and Child Health at Boston Children's Hospital/**Harvard Medical School** says:

“Screen time has become an obsolete concept in an era where we are surrounded by screens and move seamlessly between the digital and the physical to use them in virtually all human endeavors - learning, interacting, creating, and having fun. It is how we choose to use screens and to pursue non-screen activities; it is the content we consume on screens and the contexts in which we consume it that affects our well-being.”

Screen Time Classification

The seamless infusion of technology in all forms of human activity has created a lot of fluff around the duration of screen interface that is actually harmful. There are several situations wherein spending time on screen is essential and productive and should not be confused with screen time invested in avoidable activities such as binge watching, excessive gaming, aimless browsing etc. In general, when people spend a lot of time passively consuming information - reading but not interacting with people - they report feeling worse afterward.

Screen time can also be broadly classified as Productive or Unproductive wherein productive screen time involves cognitive application and yields developmental benefits while unproductive screen time relates to aimless activities. Parents and schools must understand that the time spent on live lessons through online classrooms has direct implications on the cognitive development of the child. The discussion should therefore be around regulating unproductive use of screen time that leads to unwanted developmental side effects.

Measuring & Moderating Screen Time

Researchers interested in studying the role of screen time in sedentary behavior have sought means of measuring the increasing amount of time that children and adolescents are using screens. A Statistics Canada report from 2016-2017 found that only 53% of Canadian children and youth aged 5-17 years met the recommendation of spending no more than two hours a day on screens. With so many exceeding the recommended screen time limits, it is important to accurately measure the amount of time spent on screens in order to study its effects.

Most parents today employ estimations rather than measuring the amount of screen time a child spends on core (learning) and non-core activities throughout the day. In the course of such estimations, parents have a tendency to inflate the time spent on unproductive activities. Objective measures are especially important in the study of screen time as subjective measures have been found to be inaccurate. For example, a study which compared parent reported to objective measures of physical activity and sedentary behavior found that parents overestimated their children's physical activity by 40 minutes a day and underestimated their sedentary/screen time by several hours. In certain scenarios, parents fail to take into account the sporadic nature of screen time their child is exposed to. It may well be the case that the child has had sufficient breaks and pauses during the course of their online learning which is also a key highlight of screen time recommendations by leading health and wellness bodies globally.

The American Academy of Pediatrics recommends screen time that is not video conferencing* for learners and teachers should be:

- *Ages 2–5:* 1 hour, broken into sessions of a maximum of 30 minutes.
- *Age 6 and above:* no specific screen time limits, but screen time should not affect physical activity and face-to-face interactions at home and school. Consistent limits on screen time are important.

* It must be noted that the video conferencing is not considered as a part of screen time for the purpose of restrictions

MHRD Guidelines for Digital Education

The HRD Ministry has launched '[Pragyata](#)', which provides guidelines for digital education to help school heads, teachers and parents effectively implement digital learning practices. The digital education guidelines also comprise of recommended screen-time for children along with tips on coping with mental or physical stress during the digital learning process.

1. Planning

- School heads should not expect teachers to be engaged in six to eight hours of online teaching in a day. Rather they may be engaged for about two to three hours of online activities per day for the classes they teach.
- Do not make adoption of digital learning burdensome for students and their parents. Avoid setting unrealistic goals for students as well as yourself.
- Involve teachers and representatives of parents in chalking out modalities of digital education. A systematic timetable (with detailed online and offline activities) for each class may be planned in consultation with all the teachers.

2. Capping of Screen Time

Class	Recommended Screen Time
Pre-Primary	On a given day for interacting with parents and guiding them, not more than 30 minutes.
Classes 1 to 8	Online synchronous learning may be undertaken for not more than two sessions of 30-45 minutes each on the days the States/UTs decide to have online classes for primary sections
Classes 9 to 12	Online synchronous learning may be undertaken for not more than four sessions of 30-45 minutes on each of the days as decided by States/UTs

3. Specific Guidelines for Preschool, Grades I and II

Organizing brief and casual meetings occasionally with the parents and children through video conferencing to give students a chance to narrate their feelings and experiences.

4. Specific Guidelines for Senior Students

A 10-15 minutes break between two consecutive classes should be provided for students to freshen up, relax and re-energize themselves to focus on the next class

Classroom Interaction & Student Engagement

Teaching is an interactive act. In the classroom, communication between the teacher and pupils goes on constantly as initiatory or responsive acts. Classroom learning is a co-operative effort between the teacher and the students. It points to how the teacher and the students interact and how students interact amongst themselves, all of which affects learning.

The dominant pattern of interaction is that of the teacher's question, the student's response and the teacher's feedback. This is commonly found in all classrooms and is typical of classroom exchange. Teacher's talk not only takes up the largest portion of talk but also determines the topic of talk and who talks. It is therefore a very important component of classroom interaction.

Interacting with students has varied dimensions that serve the central purpose of simply activating the learners in such a way as to get them to engage with the material to be practiced. Activities such as paragraph writing, functional grammar, reporting statements, discussions etc. help cement concepts in the mind of learners. It is therefore essential to provide sufficient opportunities to students to test their theoretical knowledge through activities across all sessions so as to help them discover knowledge gaps that the teacher can help them address.

Real interaction is not unidirectional, nor a single round. True interaction requires the teacher continue to ask students more questions according to the answer from the students and go on in this way to further the communication with students to deepen the mutual understanding of each other, and make both sides enjoy happiness. Some strategies that can be implemented to promote classroom interaction and engage learners are listed as under:

- **Improving Questioning Strategies** - The attention of the teacher to the learners can activate the teacher-learner interaction. The teacher should ask the question that can be answered by the learners and taper their strategy based on response received.
- **Implementing Cooperative Learning** - Working cooperatively can help develop learner's social skills. Cooperative learning means that every member of the group is included and differences among group member are resolved by the group members themselves
- **Building Positive Teacher-Learner Rapport** - Mutual respect between teacher and learners is essential part of education. The dynamic qualities of classroom learning assign this responsibility to both the teacher and the learner.

Recommended Remote Delivery Execution Framework for Schools

The guidelines and safeguards recommended by the MHRD creates an exciting opportunity for schools to structure their curriculum and delivery in a manner that maximizes student learning. A remote classroom delivery environment is comparable to a traditional classroom setting wherein the student focus is on one of the three aspects:

- a. Blackboard or the computer screen with content (e.g. audio/video/image etc.)
- b. Teacher delivering instruction (e.g. dissemination of knowledge and explanation of concepts)
- c. Project or individual activity (e.g. writing, taking a test, reflection, self-learning, assimilation of information etc.)

With adherence to the government directives and expert recommendations, the following functional framework has been suggested:

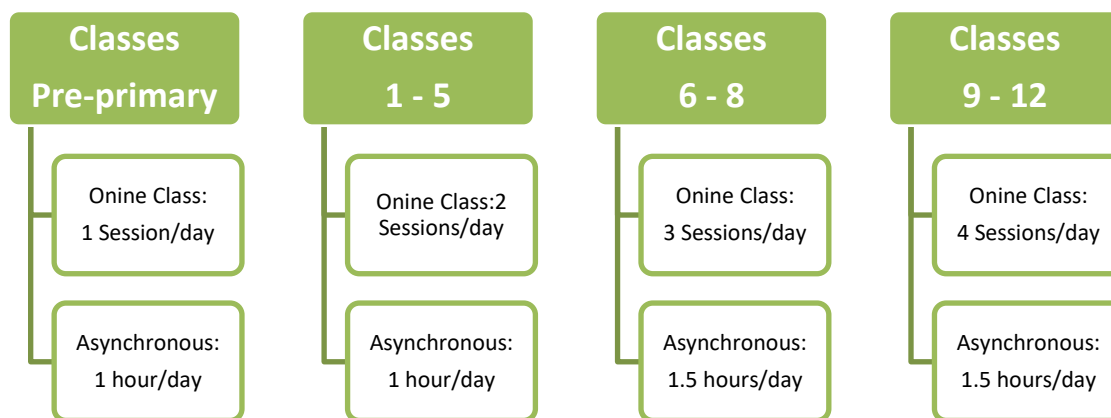
Framework for each “Session”

Activity	Description	Time Off Screen (mins)	Time On Screen (mins)	Focal Intensity
Introduction	Attendance & Briefing	-	5	Low
Initial Interaction	Ice-breaking and warm-up	10	-	Low
	Contextual Association	-	5	Low
	Topical Overview	-	5	Moderate
Warmup & Engagement	Reading, writing, workbook, project, Individual expression	20	-	Low
Instruction & Lesson Delivery	Activity Demonstration	-	5	High
	Explanation of key concepts	-	10	High
Learning Evaluation	General Classroom Questions	10	5	Moderate
	Targeted Questions	-	5	High
Session Recap	Session Summary/Recap	-	5	Moderate
	Assignment Allocation/Closure	5	-	Low
Effective Screen Time* / Cumulative Screen Time			35 / 45 mins	
Cumulative Session Duration			90 mins	

**Note: All figures in minutes per session. Effective Screen Time = Moderate + High Focal Intensity Activities*

Keeping all factors and perspectives into consideration, a suggested school schedule is presented here for Covid-19 impacted period. It has 3 components across class levels.

1. **Synchronous Learning:** it refers to as Online Class. It is a learning event in which a group of students are engaging in learning at the same time.
2. **Asynchronous Learning:** it refers to a learning event in which teachers provide materials, lectures, tests, and assignments etc. that can be accessed by the students through digital medium.
3. **Small Group or Individual Learning Activities:** It refers to the learning event where student engages in learning activities that are performed by an individual or in a small group. This can be done in addition to the Synchronous or Asynchronous Learning.



In summary, the recommendations are as follows:

- Synchronous Learning to be carried out via Online Classes, which are delivered by one or more Sessions of 90 mins duration and with screen time of upto 45 mins.
- Sessions for Synchronous Learning to be restricted based on the level of the class - from a minimum of 1 per day (pre-primary) to a maximum of 4 per day (classes 9 to 12).
- Asynchronous Learning to be from 1 hour a day to 1.5 hours a day.
- About 15-45 mins per day to be allocated for Small Group or Individual Learning Activities. These are self-paced and not teacher-led activities and have no requirement of screen time.

For successful implementation of the framework above, teachers would need to be connected to the platform for the entire duration of the session in order to swiftly respond to student queries at any point during the synchronous learning process. Session frequency and time considerations can be modulated to suit senior grades as *per* the suggested norms. This framework provides an initiation point for schools to structure their online classroom delivery in accordance with the issued guidelines and ensure efficient remote delivery of school education.

IMPORTANT NOTE: These are suggested guidelines only. Depending on the individual circumstances, school communities may or may not have the resources, technology or wherewithal to implement this in spirit and there may be those who can do even more and better. Context, is extremely important and schools must adopt suitably to best meet the needs of their students.

Summary of FICCI ARISE Webinar on the topic, 'Good Screen Time vs Bad Screen Time'

FICCI ARISE (Alliance for Re-imagining School Education) organized a webinar on 'Good Screen Time vs Bad Screen Time' on 4th July, 2020 which aimed to make a fair assessment of the nature and need of online learning. The idea was to establish what kind of activities or screen time is positive and what may be detrimental for a child and understand this from a holistic perspective of socio emotional health, learning, eye care and student safety in the cyberspace.

The webinar consisted of a panel of eminent speakers that included experts in the field of neuroscience psychology, medicine and cyber security.

Highlights:

- Virtual classrooms are not to transact curriculum but to exhibit care and build an effective relationship with the students and added that rhythm, routines and rituals are provide the necessary cognitive comfort to growing brains.
- 90 percent of the child's brain develops by the age of 6, so we cannot lose this time, especially given the uncertainty around how long this might take.
- The brain of a child thrives when there is predictably in the day order. According to a study done by the Brookings Institution, there is significant disruption in learning capacity during summer vacations. The study indicates that for 8 weeks of break there is a learning loss of 4 additional weeks especially with regard to numeracy and literacy in young kids. In our case if the break is six months, the loss would be significant.
- It is not the screen time that matters but the content that is consumed and the context of it that affects one's well-being. Thus, it was imperative to make a distinction between productive and unproductive screen time.
- World Health Organization guidelines indicate that the screen time where an adult is on the other side engaging children in the process of learning cannot be viewed as harmful. In effect, it is the quality of the interaction and content that matter and not so much the time.
- A productive screen time would allow personalized learning, self-directed and group interaction as against media for just passive consumption or for soothing. What should be avoided is fast paced, violent and distractible content.
- As long as there is a healthy diet being followed, adequate sleep and sufficient play time and no extra-ordinary signs of distress, any anxiety over too much screen time is not necessary
- Instead of stigmatising and demonising screen time, focus should be laid on training the teachers to make the experience more engaging and leave education to educators
- It is imperative to make distinction between paranoia over screen time and identifying deviant behaviour or digital addiction.

- It is time to give children the values of digital citizenship- Responsibility, Respect, Compassion, Resilience, Integrity and creating awareness about developing positive digital footprints.
- It is imperative to make digital citizenship and netiquette part of the curriculum that helps teachers and students learn about internet safety and make them better prepared to reap its benefits, while steering clear of the potential pitfalls.
- Currently there is no scientific evidence that screen time causes long term damage to the eyes. In the short term it can cause dryness and irritation, which can be dealt with by doing some simple exercises
- The Ophthalmologist on the panel clarified that many of the initial search results on screen time will be full of material posted by eyecare/ eyeglasses vendors who want people to believe there is potential damage to lure unassuming buyers. We should not be misled by those.
- Eyes are sturdy to take all kinds of radiations, however what matters the most is when the blinking rate goes down or if the exposure to a screen is at a close distance which could potentially lead to eye fatigue or tiredness
- She added that the size of the screen matters, a laptop and computer at an arm's length distance is intermediate and are therefore more suitable as against a tablet, book or mobile phone held closely to the eyes
- The best way to deal with the harmful effects is by taking enough breaks, for instance, a 10 10 rule or the 20 20 rule, wherein after every 10 minutes one must practice shutting the eyes for 10 secs, similarly for the 20 min rule. Frequent blinks and position of the laptop and maintaining adequate brightness in the room, right posture, every fifteen- twenty minutes do some stretching exercise
- One could also download applications to set reminders about these healthy practices. She also confirmed that screen time does not cause any long- term damage to eyes.