

# **A FUTURE AT STAKE**

## **Organizing the Education Recovery for the Most Vulnerable**

### **PRINCIPLES AND GUIDELINES**

#### **FOR RESUMING AND RENEWING SCHOOL EDUCATION**

#### **Part 1**

*Version 2.0 – October 2021*

National Coalition on Education Emergency

These guidelines have been prepared by education experts working with the National Coalition on Education Emergency (NCEE). Part 1 was drafted by Sajitha Bashir, with inputs from Gurumurthy Kasinathan, R. Ramanujam, Rishikesh B.S, Sriranjani Ranganathan and Venita Kaul. The team received many insights from discussions in the three working groups of the NCEE, namely (i) education interventions group (ii) research group and (iii) social mobilization group, which involved discussions with different organizations in various states. The draft will continue to be updated with additional inputs and experience from different states.

India faces an education emergency like none other since independence. Possibly over 200 million children have not been regularly benefitting from any form of structured learning opportunities for close to 1 ½ years. During this period, the majority of them will not only not have progressed in their learning, but they are likely to have lost skills and knowledge that they knew, due to lack of practice, mentorship and guidance from teachers. Children who are entering grade 3 will not have experienced any form of schooling. The deep inequality in the Indian education system has been deepened. In addition to the learning losses, the ravages caused by the pandemic on the health and livelihoods of their parents have increased the physical, mental and emotional stress on the most vulnerable and disadvantaged children.

These guidelines are based on the following principles

- Every child is important and requires individual attention, from bringing them back to school to helping them learn. **Equity** should be at the forefront of the education recovery effort; it means providing additional time, resources and effort to those who have suffered the greatest deprivation of learning opportunities
- **In person teaching learning**, even for a few hours per day, is preferable to prolonged school closures, even if there are new waves of the pandemic
- Regular and meaningful two-way **communication** by education authorities with parents and teachers is essential
- Supporting the **socio-emotional needs** of children is vital for supporting academic achievement. **Effective literacy, reading instruction** and conceptual understanding of **mathematics** are critical for student success in all areas. **Instructional time** must be structured to focus on socio-emotional learning, language learning and mathematical competences across the curriculum
- Teachers require empathetic regular, on-going support, not one-off training, to address the diversity of teaching-learning situations they will face in the classroom
- The education recovery effort requires sustained commitment over several years, a strong organizational effort to coordinate activities and additional funding

This first version of the guidelines (Part 1) focus primarily on elementary education with some suggestions for secondary education. Issues relating to early childhood education, which are critical for foundational learning, and more detailed consideration of secondary education will be covered in subsequent versions of the guidelines. Part 2 will include more specific guidance and examples on language, mathematics and other subjects.

These guidelines do not address major policy issues such as policies towards low cost private schools, which are attended by the poor and disadvantaged, especially in urban areas. These include issues such as interim financial support to struggling private schools, recruiting and retaining teachers and so on. However, the educational and pedagogical issues covered in these guidelines are relevant for these schools as well.

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## 1. The Nature of the Education Emergency in India

India has suffered one of the longest school closures in the world. For close to 18 months (in some states more than that), 265 million students have not been to school. The learning experiences of the vast majority of the poor and disadvantaged children have diverged sharply from those of the small minority attending better off, private schools. The education inequalities that existed before the pandemic have deepened to an unfathomable extent. Unless a sustained education recovery effort is organized over multiple years, the effects of these widening inequalities will become glaring in the years to come.

**All surveys and research done during the period of the pandemic between May 2020 to July 2021 show that there has been no meaningful teaching-learning for the children of the rural and urban poor, dalit, Adivasi, OBC, minorities, migrant workers and other vulnerable groups.** Together, these sections comprise over 70 percent of the population. Remote learning was completely remote for them, as many lacked access to online learning, materials and teacher support. The recently completed SCHOOL survey done in 15 states and UTs, over 72 % of elementary age children were not studying regularly (or not studying at all) at the time of the survey using any method and only 8% of rural children were studying “regularly” online. A majority of children had not had any interaction with their teacher during the 30 days preceding the survey. The overwhelming share of parents said that teachers had not helped their child to study over the previous 3 months. Nearly half the children in the sample were unable to read more than a few words of simple text. These findings are confirmed by many other state level studies. (See Research Brief of NCEE).

Imagine these students who were in grades 1-8 during the 18 months of the pandemic lockdown, who may now re-join the school system. After such a long period of disconnect, will encounter difficulties which will accumulate as they pass from one class to another. Tens of millions will therefore arrive to the end of the schooling cycle, ill prepared and with few skills. But millions of others are likely to abandon schooling altogether, either due to disengagement with education or rising poverty, or both. Many children in “lowcost” private schools have either dropped out or rejoined government schools, due to the inability to pay fees. Even the gains in enrolment of recent years are in jeopardy. A shock of this nature to the education system usually requires years to recover. Studies of conflict affected states, that the educational attainment of the country’s adult population can decline by a couple of years.

**Therefore, “school re-opening” cannot be “return to school” as it was before. While health and safety measures are important, they should not be the only focus of the guidelines for school opening. Nor should the main directive to teachers be to resume teaching of the grade level textbook and preparation for examinations.**

This education emergency comes on top of the health emergency and livelihood crisis. Children have lost parents or other caregivers and unemployment is at an all time high. Faced with emotional trauma, forced to take up jobs to support the family, or look after younger children, children from the poor and disadvantaged sections face adverse conditions for learning. Schools must compensate for and remedy these heightened disadvantages, by providing a caring environment and focused academic support.

Teachers have also suffered death and losses and require support. Unprepared and unequipped for remote learning, many have tried to keep in touch with their students

through phone messages and other means. Many are conscious of the deep damage done to their students. Meanwhile, hundreds of low cost private schools are no longer financially viable, threatening the livelihood of thousands of teachers.

**The crisis can be an opportunity for renewal of the education system, by focusing attention on the most vulnerable children and reducing the deep inequalities in the education system.** This is the time to prioritize socio-emotional learning and core cognitive skills, to enable children to become independent learners and gain confidence and interest in learning. This is the chance to allow greater flexibility in the curriculum and local level adaptations, providing a rich variety of learning materials for children at various levels and providing continuous pedagogical support to teachers as they confront the daunting realities of children who have lost foundational skills.

Addressing the education emergency and renewing the system cannot be done without additional resources. The cuts in the education budgets of the Centre and of many states are ominous. Other countries are infusing funds into their education system. **India's children, who have been battered by COVID, need MORE support, not less at this time of crisis.** The recovery and renewal effort also requires a major, sustained organizational effort and high level monitoring and leadership. Anything less will mean condemning India's disadvantaged children to a grim future and a deeply unequal society.

## 2. Bringing Children to a Caring, Healthy and Safe Learning Environment

### *A caring learning environment*

The first and foremost priority is to **welcome** children to schools and to re-establish and strengthen the connection between the student and the teacher, as well as between students. This requires time and space and an environment that is conducive for open interactions. Similarly, teachers too should enjoy their interaction with children and establish connections with children individually.

**Story-telling, songs, games, sport and other group activities** are the best pedagogic tools available to achieve this trust and connection, which are essential for socio-emotional development and academic learning. Outdoor activities through which children study nature are both safe and rich in educational opportunities. They simultaneously provide opportunities for language use and mathematical thinking. In the first instance, however, they are not primarily to be seen as instruments for realizing curricular outcomes; instead, they are the primary means to **re-engage children with education**. Such activities need to be emphasized and prioritized across all levels of school education.

### *Every child is important – bring them back to school*

The levels of dropout and/or disengagement from school after the 18 month school closures are not known but they can be expected to be high. There are five main reasons why this is likely to happen: (i) lack of regular study during the school closures (ii) the difficulties for parents to pay fees for children enrolled in private low cost schools (iii) the disruptions caused by the migrant crisis (iv) socio-emotional, mental health and health problems and (v) children are doing paid or unpaid work to support the family or look after younger siblings. Due to increasing poverty, cases of child trafficking, early marriage and child abuse are also likely rising.

Such prolonged absence from learning is known to lead to drop out. Another survey of school leaders showed that over 60 percent of private school leaders were highly concerned about dropout from their schools. While some of these children may have transferred to government schools, it is possible that many will simply drop out. Difficulties in getting transfer certificates, noted in some surveys, will also contribute to the problem. The migrant crisis affected many states during 2020. It is not known how many children were affected or where they rejoined school.

### Steps to bring all children back to school

- Conduct a household census at the village/block level and identify every child of school-going age, and where they are currently enrolled and the reasons for not enrolling
- Organizations working with migrant labour can identify migrant worker households whose children should be enrolled. This needs to be done sensitively and keeping in mind the safety of children
- Contact all private schools in the village/block level and identify which children have dropped out. Contact the families of those children to find out whether they are enrolled.
- Organize back to school campaigns involving local governments, teachers and principals.
- At the school level, ask teachers to locate absent or disengaged students, follow up and communicate individually with them
- Inform private schools to issue transfer certificates or instruct government schools to accept students from private schools without transfer certificates
- Focus on children most affected by absence of meaningful remote learning – SC/ST/ minorities/ migrant children; children in Standards 1-3, who have had no or limited experience of being in school; children who are transitioning between primary and upper primary, or upper primary and high school, and likely to drop out
- Provide socio-emotional support within schools. Link families with child health services, including mental health services
- For working children (paid/unpaid), help families to see that they are getting all due social assistance benefits. Increase in social assistance benefits should be considered for families that are relying on children's work because of loss of livelihood or death of an adult earner.
- Strengthen the state's child protection services/ help lines to prevent child trafficking, early marriages and other such abuses.
- Do periodic checks with community surveys to cross-check reliability of school level administrative data

### *Addressing children's nutrition and health needs*

High levels of malnutrition and stunting (over 40%) were prevalent in many Indian states before the pandemic. Even in states with lower levels of chronic malnutrition, about 20-25% of children were malnourished. The extended school closures meant that children were not provided with cooked mid-day meals in most states. The SCHOOL survey showed that about 20 percent of families did not receive either uncooked rations or cash. The sharp drop in incomes would most likely have reduced food availability at home. Therefore, there is an urgent need to increase food support to children. Malnourishment also makes children



susceptible to infections . With reductions in family income, treatment of illnesses will be postponed by poor families, perpetuating a vicious cycle of malnutrition and disease.

Malnutrition and illness affects concentration and the ability to learn and must be addressed as a priority. There are immediate risks of rising child mortality and life-long impacts on health and neurodevelopment. Due to these risks and because of the possibility of periodic school closures, arrangements must be made for providing nutritious meals throughout the school year.

Steps to address malnutrition and children's health
<ul style="list-style-type: none"> <li>• Provide school meals regardless of school re-opening status. Plan for delivery of dry rations and additional provisions which were being provided (such as eggs) if schools are closed in certain areas due to rising infections.</li> <li>• Even if schools have to be closed, the school feeding program can be sustained, with staggered arrival times for children in different grades to reduce crowding.</li> <li>• Establish food banks in every district/block to collect donations and mobilize the distribution of food to the neediest</li> <li>• Consider the possibility of providing additional food vouchers/ rations to needy families specifically for children. The vouchers should be for goods needed to boost the nutrition of children. The existing PDS can be used</li> <li>• The school should enable rapid access to health services for children suffering from common childhood diseases, such as diarrheal illness and respiratory infections.</li> <li>• Provide resources to teachers and parents to assess mental health problems amongst children and how to refer them to services.</li> </ul>

### ***Restoring school premises, creating a physically healthy school environment***

Many school facilities have not been maintained for close to 1 ½ years. They pose physical dangers as well threats to the health of children, teachers and other staff. Restoring the premises is part of the program to create a welcoming environment for children.

In addition to this, essential public health preventive measures need to be carried out on a regular basis to prevent the spread of the disease. Conditions will differ from locality to locality. Introducing flexibility in school opening and dismissal times to avoid overcrowding should be considered, along with clear communications to parents. . Organizing school transportation in a safe way is a priority and one which should be dealt with at the district or block level, as it may be difficult for each school to manage this. This can also be facilitated by staggered arrivals and departures. A major organizational effort with detailed implementation protocols need to be developed to ensure that there is enough instructional time for each grade or group of students.

It is extremely important to ensure that physical distancing measures do NOT reinforce existing social rigidities and exclusion.

**Steps to create a physically health school environment**

- Essential public health interventions, such as face masks and handwashing; provision of water and soap and teaching children how to do this.
- Regular cleaning of toilets and water tanks. Provide protective equipment for cleaning staff.
- In urban/overcrowded schools, physical distancing can be ensured by requisitioning more learning spaces (local community halls) to reduce class size or teach children in shifts (shorter school day)
- In rural schools, hold open-air classes if safe and with adequate protection against rain etc.
- Stagger the arrival of children of different classes into school to avoid overcrowding at school opening and leaving times.
- Prioritize vaccinations for teachers and staff on a priority basis
- Identification, testing and contact tracing of COVID cases
- Monitoring of school outbreaks
- Regular publication of health statistics

### 3. Communication for resuming and renewal of education

Communication is essential for a successful return to school, to involve and motivate families, as well as teachers who are facing a daunting task. The SCHOOL survey showed that communication from schools was extremely weak during the school lock out: less than 40 percent of urban families and only 13 percent of rural families said that the teacher had phoned to enquire or advise. Most families received no information about how classes were organized or when schools would resume.

At the same time, school principals and teachers also have not received regular or precise information, including about when schools will re-open or how classes should be structured.

Regularity and simplicity of communication is essential. The usual government orders will not be sufficient. Further, a variety of methods have to be tried because many families may not have access or cannot read. Finally, there should be the possibility of listening directly to parents and teachers.

Steps to ensure regular and effective communication
<p><b>With families</b></p> <ul style="list-style-type: none"> <li>• Regular communication is best done at the school level, but helplines for two way communication can be at different administrative levels</li> <li>• Simple communication messages covering the topics of most interest to parents such as the schedule, the structure of school classes, what students are learning can be conveyed at regular intervals (for example, every month). Messages should be in multiple languages if required.</li> <li>• Additional messages, if possible, could indicate how parents can support their children's sense of emotional well-being, which is at risk, as well as learning at home, including templates for weekly homework schedule.</li> <li>• Educational authorities can assist teachers/ principals with templates for such communication.</li> <li>• Audio as well as written communication should be used. Simple voice broadcasting software can be used</li> <li>• Involve local volunteers to communicate messages</li> <li>• Organize a helpline at locality/block/district level to answer parents' questions about their child's problems and to find out how to access the right authorities.</li> <li>• Create a grievance redressal mechanism for parents, especially to deal with issues of exclusion and discrimination.</li> </ul> <p><b>With school principals and teachers</b></p> <ul style="list-style-type: none"> <li>• Communication must be empathetic, and recognize the tough job that teachers are undertaking.</li> <li>• Communicate the instructional priorities for teachers – what should be taught within major areas of the curriculum at each grade level. Teachers and school</li> </ul>

principals need to know what to focus on, what areas can be cut or minimized. Communication should emphasize the competencies to be acquired and how to bring in children's experiences to serve cognitive learning and meet socio-emotional needs.

- Provide regular coaching support to teachers to address their instructional needs and reduce bureaucratic demands on their time. This allows for the regular feedback and two-way communication that teachers need. (also see later)
- Provide clear guidance to principals and teachers about school opening/closures and how to communicate them to students, including how classes will be organized during school closures and how they will be supported.
- Inform staff about matters relating to vaccinations, pay, additional days and leave
- Create a guidance note about how schools should switch to remote learning if schools have to close again. Take into account the lessons from this pandemic, and focus specifically on how to keep children engaged and connected, including options for small group instruction on alternate days.
- Organize a helpline for teachers to support them on health, safety, and other conditions

#### **4. Focus on Supporting the Most Disadvantaged Children – An Opportunity to Renew Education, not Returning to “Business as Usual”**

##### ***Helping schools prepare instructional plans for education recovery***

Although no precise estimates are available, it would be reasonable to suppose that the overwhelming majority of rural children, children in urban slums, and educationally disadvantaged groups such as dalits, adivasis, minorities and so on, have not received formal education from their teachers for about 18 months. However, even with this category there could be some differentiation, as some children will have received private tuition, support from elder siblings or parents (if they are literate) or had been able to access some online instruction.

Because of the wide variation of children’s educational experiences during the pandemic, it is essential that each school prepare an instructional plan on how to help their children onto the path of learning. While states must produce detailed supporting guidance, it is the school that must produce an instructional plan. School leaders and teachers should be helped to develop such instructional plans, including with templates.

Schools should be encouraged to prepare multi-year educational recovery plans. The extent of lost instructional time during the pandemic will require years of patient work to help students reach their potential. This will also signal to school principals and teachers that the aim is not to rush through the curricular content of this year (along with the missed content of previous years), but to focus on developing core competences and enabling students to become independent learners. For this, templates can be provided, but more importantly, technical support to create meaningful plans.

Because of the possibility of school shut downs due to future waves of the pandemic (or in fact, due to other crises), schools should also prepare for “hybrid learning”. It is highly desirable to continue schooling in person, especially for the youngest children or those at risk. But if this is not possible, plans should be made about how to continue teaching-learning, which does not rely on online learning, to avoid the massive disruption caused by school closure.

##### ***Equity requires more time, resources and effort for those who have been deprived of learning opportunities during the pandemic***

There were deep inequalities in the Indian school system before the pandemic. These have been exacerbated because one big group of students had almost entirely lost on all formal learning opportunities. To provide the “same” treatment to them as those who could continue to their learning (because they were in better schools with better technology for learning, or their parents could afford high quality tuition) would be highly inequitable. It will not make up for the lost learning opportunities.

What does this mean in practice? It means, for instance, re-structuring/ prioritizing the curriculum to enable deep conceptual learning, not leaving this group behind by rushing through the textbook or official syllabus (see also next section). This is not a watered down curriculum, but an enriched curriculum. It means providing extra learning materials (graded readers, activity and workbooks, mathematical puzzles and games) that are linked to the

restructured curriculum and areas of focus. These additional learning materials should be in addition to textbooks, and could even be in lieu of textbooks, since many children will not be able to read their grade level textbooks. It means assessing each child's learning level/needs is important, for which formative assessment tools and techniques need to be shared with teachers. It also means providing extra coaching support to the teachers working in these schools to help them face these daunting tasks. It can mean providing expanded learning time (after school, on weekends, vacations) to enable students more time, hiring additional teachers, recruiting volunteers and so on.

It also means avoiding certain strategies that are known to hurt students who are disadvantaged.

### ***Strategies to avoid***

- Short duration “bridge courses” are often a facile temptation, because they apparently allow for a “quick return” to the normal syllabus. The underlying assumption is fallacious – that children can “catch up” through a rapid course, ignoring all norms of child development and the fact that children have had no formal instruction for months. They create the false impression of “levelling the playing field”, but in fact, they leave the disadvantaged children struggling in the classroom, because the “bridge curriculum” usually consists of teaching a few chapters from previous grades which teachers have to complete in a few weeks. This will lead to failures and dropouts later.
- Pulling out lagging children for “remedial education”. The remedial education is often watered down and conceptually weak content, which can leave children permanently behind, because they never “catch up” with grade level content. Inevitably, the children who will be put in these classes will be the disadvantaged children. Negative labelling can be detrimental to learning.
- Using tests to put students into different “tracks”. Such tests can be misleading and will affect the socio-emotional needs of students, particularly those who have been affected by the pandemic. More than ever, it is necessary to avoid stigma, and avoiding using terms such as learning deficits, “deficient” or “academically behind” can create feelings of disengagement and isolation.

### ***Will a focus on the disadvantaged penalize other students?***

A small section of students in government and low cost private schools may have kept up with the grade level textbook syllabus. How would they have managed to do so? Only if their families had invested in higher quality private tuition and/or were able to support them with homework or technology apps, while their schools were perhaps able to provide online schooling.

Because of the typical segregation of Indian schools by socio-economic background, such students would be a minority and mostly in urban areas. The needs of the overwhelming majority should not be sacrificed only for the high achieving kids. In fact, their parents will likely continue to invest in their private education. Further, it is very likely that even these children will benefit from a focused and enriched curriculum which will help them reinforce key concepts.

### ***Assessments and Examinations***

What students already know and can do should be the starting point for addressing their learning needs. This assessment has to be done at the beginning and throughout the school year. However, the focus should not be to get information on what students got right or wrong, but how to help them to deepen their understanding. The number of right answers on a test or a multiple-choice item cannot identify that. In fact, discussing with students how they solved problems in mathematics, for example, will uncover what they already know and how to build on that. Formative assessment of pupils' starting points can be undertaken through quizzes, observation, scrutinizing their work etc.

Therefore, instead of formal, standardized assessments, formative assessments and practices should be made central to the education recovery. Teachers should be given simple assessment tools, built around key learning outcomes, and guided/supported on how to use them for improving learning. Extensive record keeping should not be the focus, as this takes time away from supporting children and also creates wrong incentives to falsify results. Rather, teachers should try to capture basic information on what students know and are able to do, where learning gaps exist, and what they need to learn next in order to progress. This does not mean recording a grade or pass/fail for a student. It does mean systematically capturing where each child is at in relation to key learning goals or standards. This recording, possibly in the form of a checklist, may be done through written or electronic means.

Recording progress in the core areas of language and mathematics should be prioritized, at least initially, but it is also important to capture information on the child's social and emotional wellbeing. This could be in narrative form, perhaps a few notes recorded for each child at the end of each week. It is important to use this assessment information as an input to instructional planning. If students do not appear to have mastered a particular concept or skill, it is more important to address this than to continue to try to cover as much of the curriculum as possible. The focus should be on ensuring that children learn rather than on delivering the curriculum regardless of whether children are able to follow.

Summative examinations should be avoided this year as they are meaningless in the context of the gaps in educational opportunities and variation in learning. Giving extra "grace marks" to ensure that more children pass is a palliative solution that can further destroy the credibility of the public examination system. Solutions can be found for the next academic year. Instead, the emphasis should be on tracking how far students progress on their learning journey, which learning goals and standards they have achieved by the end of the academic year, which remain to be achieved, and how they are progressing emotionally and socially.

### **Steps to focus the education recovery for disadvantaged students**

#### **Helping schools prepare instructional plans**

- Create a technical resource group to provide guidance to school leaders and teachers to create an instructional plan for this year, and ideally, a multi-year instructional plan
- Prepare templates for such plans that can help teachers to focus on the learning outcomes for children
- While instructional plans should emphasize the areas of focus in all schools, there needs to be sufficient flexibility and specificity to cater to the conditions of different schools.

#### **Focus on equity**

- Re-structuring/ prioritizing the curriculum to enable deep conceptual learning
- Provide extra learning materials (graded readers, activity and workbooks, mathematical puzzles and games) that are linked to the restructured curriculum and areas of focus.
- Provide extra coaching support to teachers who are working with disadvantaged students.

#### **Assessments and examinations**

- Provide simple assessment tools to teachers in language and mathematics and train them to use them for diagnostics and teaching
- Emphasize that assessment results should be used to inform next steps in teaching and learning.
- De-emphasize or remove summative, high-stakes examinations



## 5. Three areas of focus: socio-emotional development, language learning, mathematical competences

After such a long period of disruption, students may be lagging in many content areas. The temptation is to try and address all subjects under the illusion of “general catching up”. In fact, focusing on a few areas can build momentum and also contribute to the students’ feeling of agency, accomplishment and growth. Going deep in a few areas is better than skimming over many subjects. Research shows that children’s academic development as well as the ability to become independent learners is supported when they have a sense of belonging and safety, when they are valued for their effort, they can see the progress that they are making in learning and when they engage in tasks that are meaningful and relevant.

Children also need to be re-oriented to the tasks of learning, including completing given tasks, following through on instructions and staying on tasks in a focused manner. It should not be assumed that this readiness to engage with formal learning will come automatically simply with the resumption of schooling. It will need to be taught systematically, even for older children, including young adolescents in the secondary classes.

The primary areas of focus should be socio-emotional development, language learning and mathematical competences which will enable children to make progress across multiple subjects. This means adjustment to the timetable to give adequate time for these curricular areas. Further, language learning and mathematical reasoning and application should be reinforced across all subject areas.

### *Socio-emotional learning*

Children will have experienced a variety of losses during the pandemic. These include direct loss of lives of family members, critical illnesses, the loss of livelihood and possibly uprooting of their homes. Many poor children will have been forced to take up work to support their families. Remote learning, even where it occurred, could not foster the social development that comes with being part of the school community.

Adversities such as these and the loss of positive relationships impact child development and the ability to learn. Socio-emotional development is required to enable academic learning, through cooperative learning, self-regulation, focus and attention. Teachers have to invest deliberately on getting students used to routine, concentration and interacting with others. Children’s socio-emotional needs will vary according to their age and their prior experiences, as well as the level of support they have at home. A critical age group is the young adolescent group.

Supporting students’ social and emotional needs cannot be done by resuming the “usual” teaching of the syllabus and textbooks, without understanding the learning levels of the children, or rushing through all of the current grade-level subjects while simultaneously re-teaching content from 2 previous grades that students would have either missed or not mastered. This can undermine children’s confidence in their own abilities, and feel that they are “deficient” in learning. Unless teachers are also explicitly guided on the socio-emotional competences that have to be developed, they will feel pressurized to complete the syllabus.

At the same time, while children will have faced great difficulties, confronting the crisis would have helped many of them to grow in new ways, to learn new skills and develop

internal resilience. Teachers need to build on this reservoir of experiential learning to prepare students to become independent learners.

An enabling learning environment is required to nurture socio-emotional development, to help children develop their identities, regulate their emotions, relate to and show feelings for others, set and achieve goals, and take decisions for their own and others' well-being. These needs to be nurtured through interactions with teachers and other children, the processes adopted in the classroom, teacher behaviour and attitudes. It has to be integral to the school's culture of caring. While special time in the school day can be set aside, integration of socio-emotional learning across the curriculum enables children to acquire these competences in authentic settings.

<b>Steps to support children's socio-emotional learning</b>
<ul style="list-style-type: none"> <li>• Identify the expectations regarding students socio-emotional development and competences by the end of primary, upper primary and secondary stages or different age groups etc)</li> <li>• Ideally, social-emotional learning should be integrated across all subject areas. Teachers can be provided guidance on how to do this, including in mathematics. For instance, in mathematics, students can interact with others to listen to different approaches to solving a problem; enable students to recognize frustration with a problem, manage the frustration and persist in solving the problem, and empower students to self-monitor and reflect on understanding of concepts. These strategies should be deliberately used as part of the instruction process.</li> <li>• If there is a designated time in the schedule for socio-emotional learning, there should be clear expectations for how best to use the time. Otherwise, this time may be wasted.</li> <li>• Provide enough time in lessons for children to express their emotions about themselves and others, to engage in conversations and team work</li> </ul>

### ***Literacy and language learning***

The importance of literacy and language learning can hardly be over-emphasized. Without competences in all aspects of language development (speaking, listening, reading and writing) as well as understanding of academic language, children cannot progress further in any academic subject. Students in upper primary and secondary school who struggle in many subjects, often do so because they cannot read with proficiency and comprehension.

The problems are compounded because the majority of children will not have had access to ANY reading material (in many cases, not even their textbooks) and nobody to help them at home. A significant proportion of children were studying in English medium schools (private or government/aided) – in some states, the proportion exceeds 50 %. The months away from school have meant a lack of exposure to English.

For children in early grades, who have had no experience of school, even foundational skills will be lacking (at least up to grade 3). Even if parents or siblings in literate families have managed to teach them some letters or words, these children will not have adequate languages competences. Many in the higher grades, who will have not have mastered language competences before the pandemic struck, will be unable to read the language of

textbooks in their current grade. Further, children in middle and high school need to acquire the academic language of different disciplines.

While conditions will vary from state to state, and from school to school, in all likelihood, almost all children will benefit from extended instruction in language, especially reading. In addition, some groups of children may need additional learning time, after school hours or on weekends in order to catch up. This will be especially true for those who have to use English as medium of learning and disadvantaged students from families with low educational background. This additional learning time should be focused on students' specific skill needs and misunderstandings.

Many teachers are not equipped to teach reading effectively, either in the mother tongue or in English as a second language which is supposed to be used as medium of instruction. Even though in practice teachers in English medium schools use the mother tongue to teach, Hence, teachers need detailed guidance on how to use the time devoted to literacy instruction, and the details will vary by grade level.

### **Steps to enhance literacy instruction**

- For all grades, designate specific, extended time for literacy instruction over the school day. Uninterrupted time for making progress in reading is especially important as students return to structured learning.
- What happens during literacy instruction is of importance. Teachers and schools should be provided with more detailed guidance on how the time should be used during this block.
- Writing should be embedded within literacy instruction
- Encourage children to share their own experiences during COVID and write and peer review their writing. This will also support their socio-emotional development

#### **Grades 1-3**

- 120 minutes devoted to literacy, plus additional time for children who need targeted instruction in specific skills
- Time to be divided into blocks on foundational skills
- Additional reading materials to be provided at different levels to enable students to read on their own

#### **Grades 4-5**

- 120 minutes for literacy, plus additional time for children who may need targeted instruction in specific skills
- The literacy time should be divided into blocks and focus on reading to learn.
- However, because many children who were in grade 2 at the time of the school closures, instruction in foundational skills may also be required.
- A variety of reading texts that are at different levels of complexity but appropriate for older children should be available.

**Grades 6-9/10**

- Provide direct instruction in foundational literacy skills, as many students will lack them.
- Provide targeted instruction and support in academic vocabulary and language that is needed across multiple domains (such as mathematics, science and social studies)
- Explicitly teach academic language in other subjects as well, supporting academic language and conversations to express themselves and demonstrate conceptual understanding. This will require coordination between the language and subject teachers to assess each student's progress.
- Formative assessments should include assignments that show language development across content areas.

***Mathematical competences***

The long interruption to schooling may create the feeling that good mathematics teaching is a luxury. The mathematics learning of students will be even more variable than in the pre-pandemic conditions, and the attempt will be to “catch up” rapidly and move on to the current grade level content, in order to follow the units in the textbook. If there is an attempt to rush through all the prior content, many students will be left behind and discouraged.

It should also be remembered that lack of language competences (in addition to lack of academic vocabulary) will impede children's learning of mathematics, particularly in the later grades.

In mathematics, in particular, the depth of instruction about key concepts that are essential to children's mathematical understanding and reasoning, is more important than the pace. In dealing with what children have missed, the focus should not be on the chapters of the textbook; it should be on the concepts that need to be taught or reinforced. Prioritization of the content in the current has to be undertaken and some material must be omitted entirely or almost entirely.

As with literacy instruction, even students in upper primary and lower secondary grades will need instruction in foundational mathematics. This should focus on building arithmetic fluency, basics of geometry and treatment of data. Modules can contain teacher-led activities as well as adequate materials for practice and self-learning.

Steps to enhance mathematical learning
See Annex 1 for an example of how mathematics could be taught in the primary grades, following the approach of grouping the curriculum into 'self-learning', 'peer-group' and 'grade level' topics.

## 6. Providing supplementing support to learning

Even with a focus on a few areas, the extent of lost instructional time requires a change in teaching strategies as well adding additional time. States, districts and schools have to think of how to organize students into groups for effective learning, extend instructional time, use additional teaching resources and support students' learning at home. Taking steps such as these can actually put the education system on the track to better education outcomes by focusing on student socio-emotional and academic learning, encouraging team teaching, using differentiated approaches to promote student learning and involving parents more in the education of their children. These changes can also potentially allow for a pivot away from a return to business as usual, ie seeing education as a way of sorting out the “achievers” from the “failures”, and as a preparation for examinations.

### *Organizing students into groups*

As stated earlier, students should not be put into “remedial classes” on the basis of learning levels, as this typically further isolates disadvantaged students and puts them in a permanently “inferior” track and affects their self-esteem. Further, a child may have progressed more in language than in mathematics, and hence categorizing the child as “lagging” or “backward” overall can be damaging to them.

However, since children may bring different levels of learning to the school, particularly in urban areas (due to tuition or support from more educated parents), it is necessary to guide teachers on different strategies that can be adopted to address these challenges.

One possibility is to group the prioritized curriculum into ‘self-learning’, ‘peer-group’ and ‘grade level’ concepts/ topics (see Annex 1 for an example for primary mathematics). These are concepts that could be learnt by children at that grade through self-learning or minimal support, concepts that require partial guidance by the teacher or with support from peers and concepts that require full teacher support (new and complex concepts that will need sustained teaching learning efforts. As children re-join school, teachers can use simple formative assessment tools (eg. worksheets) for different concepts in the ‘self-learning’ group of topics to identify where children stand. Based on this, ‘peer groups’ with mixed student abilities could be established to reinforce learning (which may require several months), followed by a transition to the teaching of grade level concepts.

Schools can also consider grouping children in grades 1-3 (since those who will be in grade 3 were in grade 1 at the start of the lockdown, and would likely not have acquired foundational skills). Children within these grades can be put into smaller groups (ie multi-age/grade groups) according to the prior learning they have for language and mathematics so that specific skills can be taught. Similarly, students in grades 4 -5 can also be considered together, and at the upper primary level, grades 6-8 can be similarly treated. This approach can be taken for the core subjects of language and mathematics. For other subjects, children can remain in their grades, depending on the decisions taken about the content of other subjects and time devoted to them.

It is essential to note that the instructional groups must be manageable to allow the teacher to provide individualized attention to each child. As children progress in their learning, they can be re-assigned to different groups, and eventually grade level teaching can be resumed. Some children will require additional time and support and these should be organized within the school time for at least the core literacy and mathematics competences.

Teachers require detailed guidance and support to organize instruction in this manner. Those best placed to do this are the school principals and teacher mentors.

### ***Extending learning time***

It is highly likely that the school calendar will need to be extended. Again, this should not be done as a one off action. The recovery period will take many years.

For instance, a number of days (to be determined) can be added to the calendar for grade 1 students in the 2021-22 year for the rest of their elementary years. Those who are in higher grades would similarly have additional days for another 4-5 years.

Another strategy is to repurpose certain days that are typically used for other purposes. Adding days during vacation days or weekends will also help students to get into regular practice. Finally, extending the school day by an hour can also be helpful.

However, the main purpose of extending learning time is to allow for focusing on priority content and socio-emotional learning, and allow for other activities, not to cram in all other subjects. This would be counterproductive and self-defeating.

### ***Additional teaching resources***

During the COVID health emergency, health systems made use of medical students, nursing students, retired personnel and volunteers to augment the health workforce. The education emergency also requires a similar approach.

In order to use these new teaching strategies and/or extending learning time, as well as to cope with the possible influx of students from private schools, there will likely be a need for additional teaching resources. States can consider the following possibilities:

- Teaching aides, consisting of recent college graduates or even those who are currently studying.
- B.Ed and M.Ed. students, current or recent graduates
- Retired teachers, carefully selected, especially with expertise in desired areas of teaching

All such additional teachers or teaching aides must have adequate content knowledge (for instance, if college graduates are used for mathematics classes, they must have studied mathematics). Deploying these additional resources effectively requires training /coaching and careful planning. The danger is that there is inequity in using these resources or that disadvantaged students are provided with teaching personnel who lack content knowledge and/or basic training.

### ***Supporting learning at home***

While online and remote learning based on TV/radio was not successful during the pandemic lockdown, many teachers and NGOs devised simple tools and strategies and resources to support students at home, in mohalla schools, and so on, during COVID. State

governments can compile a compendium of such resources and schools can share them with parents, as part of the communication outreach.

While poor parents will not have the time or resources to extensively support their children's academic learning, they can help in many informal ways, such as by listening to reading, asking questions, getting children to help with simple accounts at home and so on. This will in fact be better than sending children to extra tuition classes.

Communication with parents should focus on these aspects of home-based learning. Parents can be provided with simple guidance tools, which can be used even by those who cannot themselves read, that accompany children's learning in the classroom. A list of such resources can be prepared by the education

## 7. Supporting Teachers

### *Educational equity and teachers*

Teachers are central to how well the education emergency will be addressed. Many of them have suffered losses and they are understandably worried about their own safety and those of their families. Teachers in private schools may not have received wages for long periods.

The majority of teachers are concerned about the fact that children would have lost the habit of coming to school and forgotten whatever they have learned. They will be faced with an unprecedented situation, and faced with either unreasonable demands to “catch up” or their own inability to deal with masses of children who have had no learning for 18 months, they may either do nothing, or just repeat what they are used to doing.

Educational equity is greatly affected by decisions on teacher allocations and the support teachers receive. Students who need the greatest support should have the best and most dedicated teachers. This is contrary to current practice, where such students are often provided with less instruction from better teachers. The teachers who take on these formidable challenges of addressing the education emergency should also be rewarded with professional recognition at the very least.

Schools with large numbers of students who have been deprived of learning during the pandemic should also receive priority allocations of teachers in order to reduce class sizes and have manageable groups for instruction. This requires planning at the district level.

### *Regular teacher support and coaching*

The pedagogical approaches suggested in these guidelines will require teachers to fully internalize, understand and creatively apply new approaches in their contexts. Apart from clear and detailed guidance, and some initial orientation, they will need regular support over the entire school year. Research shows that mass training and “orientation” programs, whether one day or more, produces little change in teacher understanding and even less in teacher practice. Teachers are likely to new approaches when training is coupled with coaching which allows them to practice and also discuss feedback.

How to organize this mentorship is a major challenge that should be addressed as a priority. Ideally, it is best done at the school level through the school leader or mentor teachers. But given the scale of the emergency, and the fact that not all school principals may be suitable to play the role of a mentor, a program of rapidly training up mentors to support teachers is warranted. Mentors can be selected from block and district resource personnel and will themselves need orientation and training on new approaches.

### *Collaborative teaching*

Although well recognized as a way to improve the effectiveness of teaching, collaborative teaching is rarely practiced in Indian schools currently. Research shows that teachers who work collaboratively (team teaching, observing each other etc), learn more, become more effective and are likely to stay in the profession. Unfortunately, due to the long period of school closures, teachers in India have also been isolated; in countries that succeeded in organizing structured remote or online learning, the pandemic actually forced greater collaboration than before.



The approach proposed here to focus on a few areas (socio-emotional learning, language learning and mathematics learning) and organizing students by groups will necessarily demand a certain level of collaborative teaching. Teachers will need to know the language demands of the mathematics class, while maths teachers will need to teach the academic vocabulary of the subject. Teachers also need to know how children's learning is progressing between grade levels. Further, if the teaching force is augmented with volunteers and teaching aides, it is also best to involve them in collaborative teaching.

Such approaches will be required providing time in the school week for feedback, discussion and planning instruction for the following week, including some adjustments to schedules. As innovative teaching and learning schedules are considered (by grouping students of different grades), providing time for collaborative planning for teachers should be explicitly included.

Providing opportunities for teachers to come together periodically for sharing learning and to come together will enable them to adopt the new measures.

### ***DIETS and Block Resource Centres***

DIETs and BRCs will play a major role in resuming and renewing education, especially in helping to design and implement the restructured curriculum. A few additional ideas are suggested here

- Selected faculty, after training, can serve as teacher mentors and help to train additional teacher mentors
- DIETs can prepare additional contextual learning materials to meet the varied needs of students and also simple materials for parents to use to support their learning
- DIET students can be volunteers to support teachers in creating and supporting individual learning plans.
- DIET students can conduct extra curricular activities periodically or participate in extra tutoring classes to support students in their areas.

## 8. Organizing the Education Recovery for the Most Vulnerable

The scale of the recovery effort and the multiple activities that need to be organized require a strong organizational framework for implementation. As in the case of all disasters, it is well known that the recovery phase is the most difficult.

While some efforts related to the education recovery are administrative, others are pedagogic in nature, as discussed earlier. Most of these pedagogic activities have to be done at the school level, with support from pedagogical support institutions. However, there is a great deal of administrative coordination to be done as well, especially to deal with the tracking of children to ensure re-enrollment, implementation of health and safety measures, coordination with health authorities, managing school closures/re-opening in case of outbreaks, coordinating external communications and helplines, ensuring supplies to schools, helping to resolve decision-making between different government agencies and levels of government, and communicating information to higher up authorities, etc.

The experience of the recent health crisis and the migrant crisis shows that states and districts with effective decision-making, coordination and implementation mechanisms that go right down to the gram panchayat level, were much more effective. Dashboards and other such mechanisms helped to monitor the situation as well as communicate with the public. The education emergency requires a similar approach.

Coordination and decision-making at this level is not meant to supplant local school level decision making on issues relevant to them. On the contrary, the two complement each other, and the district level coordination should support schools and teachers, while also helping to monitor implementation.

### ***An Education Emergency Situation Room in every district***

While each state will have to work out details depending on its circumstances, establishing an education emergency situation room in every district will signal the importance that is being given by education authorities to addressing this crisis.

An important role for the district situation room is to ensure that teachers are not pulled off for other administrative duties, or if that happens, to ensure that lost instructional time is made up.

Specific tasks that would be undertaken at this level include the following

- **Planning and estimation of resource requirements**
  - This will require a 6-12 month recovery plan covering each school in the district.
  - Specific activities targeting the vulnerable children such as food banks with support from civil society/ NGOs
  - Streamline the health and safety measures that can be meaningfully implemented at the school level, focusing especially on sanitation.

- Aggregate/ estimate teacher requirements and teacher reallocation requirements between schools
- Develop meaningful indicators of progress in the recovery effort, covering both quantitative and qualitative aspects, with a focus on the disadvantaged groups
- The additional resource requirements would also need to be estimated
- **Monitoring**
  - A specific area of focus should be tracking of children, the transitions between private and government schools, re-enrolling children who have left the education system, eliminating child labour and so on.
  - Monitoring of instructional time and use/ deployment of teachers
  - Tracking implementation of mid-day meals and child health services
  - Tracking sanitation and cleanliness of school premises to ensure health and safety
  - Monitoring expenditures, especially additional expenditures for the recovery effort
- **Communication and information dissemination**
  - Operating a daily help line and citizen grievance redressal system, for easy resolution of bureaucratic hurdles (for example, getting transfer certificates; being clear about the timetable in each school; the problems of migrant workers' children; discrimination and exclusion etc).
  - Operating a helpline for teachers and school principals to resolve school related issues in delivery of supplies etc
  - Publicizing the additional resources that have been made available and how they are being deployed
- **Coordination of government agencies**
  - Timely provision of additional learning materials, textbooks etc.
  - Coordination with pedagogical support institutions
- **Making data available for monitoring and analysis**
  - Collection of key data in a timely fashion
  - Public sharing of data for cross-validation and analysis

## 9. Additional Funding for Education

The nature of the emergency requires additional spending over several years, especially in government schools to take in the large numbers of private school students as well as the nutritional, health and pedagogical measures. In many countries, despite fiscal stresses, efforts have been made to increase budgetary allocations, or at the very least to protect these allocations. Further, in several countries, there have been explicit efforts to concentrate efforts to reduce historical disparities and to bridge the educational inequalities created by the pandemic (for instance, through explicit targeting of resources for particular groups of children, or particular geographic areas).

It is a disturbing trend that, in India, budgetary resources have been cut at the Central level and in several states. This must be reversed and allocations must be increased. This is an indicator of the seriousness of the education recovery effort and should be monitored.

Additional expenditure should prioritize expenditures that benefit the disadvantaged students, for evidence-based pedagogical measures and for re-engaging children with education. Expenditures on sanitation and health measures should not dominate the increased spending. The bulk of the enhanced allocations should reach the schools to support enhanced learning. Additional financial allocations must also be allowed to be spent easily, together with appropriate controls and oversight, for instance, through untied grants.

Resources can be mobilized from the budgets of multiple government agencies for actions at different levels, including local level governments. Finally, targeted efforts can be made for raising voluntary contributions with the ability to track the use of funds.

There are also some areas where savings can be made in the education budget, if pedagogical activities are re-focused on core competences, as suggested in these guidelines. These savings can be used to finance part of the additional expenditures. For example, it may not be necessary to print all textbooks for all grades, if textbooks are not going to be used in the same manner. This can allow for using resources for the additional learning materials and for pedagogic support. Similarly, “normal” teacher training expenditure (on one-off training) can be re-allocated to the teacher coaching model.

### ***Broad categories of additional expenses***

- Sanitation, repair and health measures in school
- Enhanced nutrition
- Communication materials for parents and teachers
- Untied grants for schools to meet local expenses for their instructional plans
- Additional learning materials (graded readers, puzzles, games etc) for restructured curriculum
- Teacher guides on the restructured curriculum
- Assessment tools
- Teacher support – training together with coaching/mentorship
- Additional teaching resources – teacher aides, retired teachers etc
- Extra learning time costs
- District level management expenses

## *Part 2 - Suggestions for initiating and strengthening the learning processes on school re-opening*

### **Taking stock of the current crisis in education**

Children are coming to school after an unparalleled disruption and the foremost objective of schools should be to welcome children to school, to make the school a place they want to come to, everyday. Similarly, teachers too should enjoy their interaction with children and re-establish their connections with children individually, re-establish trust. We are likely to see more variation in the learning levels and learning readiness of children within a class, and the teacher needs time and space to respond to this adequately. Empathy with the children, with the teachers and within the school are essential for the school to become a welcoming, enriching learning environment.

### **Deconstructing the impact of school closures.**

The impact of school disruptions includes physical, cognitive, emotional, and behavioral effects and this will vary depending on the age of the children. Where children have gone into the labour force, bringing them back will pose additional challenges. While the learning loss can be categorized along different domains, the most crucial thing to keep in mind is that it will be widely variable across any given group of children.

We recommend that the expected outcomes for the statewide intervention plan be formulated in terms of: Effects on physical health and well-being, Behavioral and emotional health, and Learning levels in language, mathematics and other school subjects. Children with special needs would have been impacted much more harshly during the disruption, and need special programmes for their engagement. Responding to this adequately requires us also to recognize that different children (from different contexts) will be impacted differently and strategies need to be developed appropriately. A standardized plan of work for all schools is unlikely to be effective.

### **Redesigning curricular processes**

Broadly speaking these are some of the areas that could be kept in mind while designing curriculum and resources for children, as they resume schools. These are suggested for two broad age groups of children: Classes 1-8 (with some differences for classes 5-8) and 9-12.

### **Curricular changes**

#### **Classes 1-8**

- A period of open learning – where the focus is on helping children acquire/ re-acquire skills of learning in a formal environment, reorienting to tasks of learning, including completing given tasks, following through on instructions and staying on tasks in a focused manner

- Arts, storytelling and games for children to learn/ re-learn communicating with one another, listening, collaborating, and expressing themselves. These need not be tied to specific math or language learning outcomes, academic learning will come as children get adjusted to working with one another; arts and music can also be therapeutic expressions for young children
- Plenty of outdoor activities and games – the outdoor activities can be linked to the environment around the school and these will often give enough opportunities for numeracy and language skills to be integrated, specifically for children to communicate
- Focus on building/ rebuilding language learning through creation of an immersive language environment (mother tongue), integrating arts, stories and games. Where possible, outdoor activities around the local ecology to be integrated within the curriculum for language learning.
- Focus on building/ rebuilding math learning – through a combination of hands-on activities, self-directed learning materials. Where possible, stories, outdoor activities and games to be integrated within the curriculum for math teaching.
- Ideally, the classes could be conducted in mixed age/ mixed learning groups – where the lessons can be designed in such a way that children can work at their level (broad groups can be classes 1-4 and classes 5-8)
- For children in Classes 5-8, a project based approach could be taken up allowing students opportunities to do hands-on work, observe, measure, document integrating multiple curricular areas.
- Assessments to be only formative – with opportunities for combining hands-on demonstrations of learning as well as oral and written assessments
- Adequate materials should be available for children for self-practice
- Counseling resources for teachers and children should be available at the school/ cluster level
- Special educators and flexible materials should be available for children with special learning needs

## Classes 9-12

Students have not had uniform access to learning resources over the year and this is likely to result in different levels of readiness for grade-level learning. Where they have had access to the more flexible and “open” modes of learning, students would need to readjust back to the traditional models of instruction.

- A preparatory module for all students entering high school (Class 8-10) atleast for a period of 2 months focusing on language and mathematical competencies. This preparatory module is not in the nature of a bridge course but rather to acclimatize students back to methods of learning. Each content area may need to be revisited with appropriate reference to pre-requisites.
  - i. Language readiness package - Focus on strengthening language learning for building students’ fluency in reading, comprehension and written expression
  - ii. Mathematics readiness package - Focus on building arithmetic fluency, basics of geometry and data handling
  - iii. The module should contain teacher-led activities as well as adequate materials for practice and self-learning

- Once the preparatory phase is over, students can be eased into the study of different subject areas
  - i. In the case of mathematics a rationalization of the syllabus must be undertaken, focusing on the core areas of mathematics that must be completed.
  - ii. Language instruction can proceed at grade levels, with the support of adequate (self) learning resources for the students, with a greater focus on reading, speaking and comprehension and a lesser focus on grammar. Use of appropriate resources and designing learning processes that focus on creating an immersive experience will be essential.
  - iii. Through an interdisciplinary, project-based approach, develop a curriculum for the sciences and the social sciences that focuses on their local context as well as directed towards building skills of observation, recording, analysis and expression. The science and social science syllabi also need to be rationalized to include topics/ concepts that are more relevant to the students
- Assessments for Classes 8 and 9 can be modeled on the format of continuous formative assessments, while Class 10 can go through a series of preparatory summative assessments
- Digital tools can be used for supporting the learning of students; digital resources can be shared through local community-led networks for students to access

### **Teacher development and community support**

- Support teachers with resources and demonstrations of some of these new pedagogies. Teachers must be allowed to develop teaching plans and strategies flexibly based on the requirements of the children; they need to be supported in this area. Consistent messaging of “lost time” and “loss” is unlikely to make the learning enjoyable for children and will limit teacher efforts.
- Creating a mentored learning program for teachers to support the transaction of the syllabus along these modified lines supported through a resource portal. Teachers need to be supported with resources as well as provided adequate time and space to respond based on their specific contexts
- Creating after-school enrichment / support centres in co-ordination with the schools can provide support for children to keep up with the learning requirements. This opportunity can be used to strengthen the nature of discourse around education. School Management Committees can support and oversee this.

### **Curricular resources for teachers**

Resources for teachers is being regularly updated on the resource portal [https://teacher-network.in/OER/index.php/Educational\\_resource\\_repository](https://teacher-network.in/OER/index.php/Educational_resource_repository) An illustrative approach for primary mathematics learning is provided in this document.

### Annex 1 – Possible approach for priority learning outcomes in primary mathematics

Broad Areas/Contents	Key Concepts	3rd Grade			4th Grade			5th Grade		
		Self-learning	Peer-groups	Grade level	Self-learning	Peer-groups	Grade level	Self-learning	Peer-groups	Grade level
Counting- Place Value, Comparison	Counting	Write 1-9	Quantity	3-digit numbers	Write 10-99	Quantity	4-digit numbers	Write 1-999	Quantity	5- and 6-digit numbers
			1-99			10-999			1-99	
	Concept of 10, 100, 1000	N	Concept of 10 and 100	N	N	Concept of 10 and 100	1000 concept	N	Concept of 10, 100 and 1000	5 and 6 digits
	2–3-digit Comparison (<, >, =, ascending, descending etc)	N	N	Y	N	Y	N	N	Y	N
	Place value	N	N	Y	N	N	Y	N	N	Y
	4 Digit comparison (< > =, ascending, Descending etc)	N	N	N	N	N	Y	N	N	Y
	5 Digit comparison (< > =, ascending, Descending etc)	N	N	N	N	N	Y	N	N	Y
	6 Digit comparison (< > =, ascending, Descending etc)	N	N	N	N	N	N	N	N	Y
Basic Operations (+, -, X, /)	Addition, Subtraction using materials available at home	1-2 digits	2 and 3 digits	N	1-2 digits	4 Digit	N	1-3 digits	Y	N
	Addition, Subtraction without Carry	1-2 digits	2 and 3 digits	N	1-2 digits	4 Digit	N	1-3 digits	5 and 6 Digits	N
	Addition, Subtraction with Carry	N	N	Y	N	N	Y	N	N	Y
	Multiplication	N	N	Y	N	N	Y	N	N	Y
	Division	N	N	Y	N	N	Y	N	N	Y
Fractions- Decimal numbers	Full, Half, Quarter, three fourth using materials	Y	N	N	Y	N	N	Y	N	N



	available at home									
	Meaning and types of Fractions	N	N	N	N	N	Y	N	N	Y
	Addition, Subtraction without LCM	N	N	N	N	N	Y	N	N	Y
	Addition, Subtraction with LCM	N	N	N	N	N	Y	N	N	Y
	Multiplication	N	N	N	N	N	N	N	N	Y
	Division	N	N	N	N	N	N	N	N	Y
Pattern	Pattern	Simple Patterns	N	Numerical Pattern	Simple Patterns	N	Numerical Patterns	Simple and number patterns	Patterns and types	Connection with Algebra
Shapes and Spatial understanding	2 D - Basic Shapes - Square, Triangle, Rectangle, Circle using materials in daily life	Y	N	N	Y	N	N	Y	N	N
	Drawing of 2D Basic Shapes	N	Y	N	Y	N	N	Y	N	N
	3D Basic Solids (cube, cuboid, Sphere, Cylinder, Cone)	Identification	Rolling, Sliding	N	Identification and Naming	N	Classification, describe based on properties	Identification and Naming	N	N
	3D Solids - Polyhedron	N	N	N	N	N	N	N	N	Classify, Describe Polyhedrons - Tetrahedrons, Pentagons,
	Network of 3D Solids	N	N	N	N	Network's 3D solids	N	N	Y	N
	Planar and Curved Surface	N	Y	N	Y	N	N	Y	N	N
	Edges, Vertices and Faces	N	N	N	N	N	Y	N	N	Y
	Circle - Centre, Radius, Diameter	Identifying circle from daily life examples	Drawing circle	N	Draw circle using circular objects	Construction using compass	N	Identify and draw circle using compass	N	Relation between radius and diameter

Measurement	Length, Area, Perimeter using Non formal units	N	Length	N	N	Area and Perimeter	N	N	Area and Perimeter	N
	Length, Area, Perimeter using standard Units	N	N	Y	N	N	Y	N	N	Y
	Volume, Capacity - Daily life materials	N	N	N	N	Using daily life objects	Formal calculation	NA	Using daily life objects	Formal calculation
	Time and Calendar Concept using Daily life materials	N	Understanding time, calendar	numerical problems	N	Understanding time, calendar	numerical problems	N	Understanding time, calendar	numerical problems
	Conversions of measuring units of length, Weight, liquid & Time	N	N	Y	N	N	Y	N	N	Y
Commercial Mathematics / Comparing quantities	Concept of Percentage using daily life materials/examples	N	N	N	N	Y	N	N	Y	N
	Calculation of Percentage numerically	N	N	N	N	N	Y	N	N	Y